

INSTITUTE OF EDUCATION, UCL
DEPARTMENT OF PSYCHOLOGY AND HUMAN DEVELOPMENT

Friends Like You: Friendships of Secondary School Pupils with ASD

September 2016

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A thesis submitted in partial fulfilment of the requirements of the Institute of Education, UCL, for the Doctorate in Professional Educational, Child and Adolescent Psychology.

I hereby declare that, except where explicit attribution is made, the work
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Word count (exclusive of appendices and references): 38,394 words

Abstract

Pupils with Autism Spectrum Disorder (ASD) are increasingly included in mainstream schooling in the UK, yet there exists many challenges for these pupils negotiating the process of inclusion. This study examined the understandings and perspectives of friendship in 10 Secondary school pupils with ASD who attended mainstream provision in one Local Authority in comparison with typically-developing peers.

A mixed-methodology comparative approach was utilised to examine friendships of pupils with ASD (n=10) and typically-developing peers (n=10). Self-reported friendship quality scales were compared, along with friendship motivation scales. A socio-cognitive mapping exercise was included to demonstrate the perspective of peers of pupils with ASD from their form classes. Pupils with ASD and their typically-developing peers were interviewed to gain qualitative data around friendships for comparison. Parental perspectives were investigated for both groups also.

Measures of friendship quality and friendship motivation did not significantly differ between participants with ASD and typically-developing participants and no pupils were found to be socially isolated. Pupils with ASD though were more likely to have less-central roles in classroom social networks. The friendships of pupils with ASD had many features in common with those of their typically-developing peers, but differences emerged in terms of the quantity and features of their friendships, with pupils with ASD having smaller friendship groups and friends who offers support and mediation for social experiences. Changes in friendship occur as pupils progress into Secondary school, with pupils with ASD feeling that they understand themselves better and are looking for friends who understand them in turn. The role of social media as a safe and controlled environment in which friendship interactions take place was discussed by pupils with ASD also.

These results have important implications for parents, pupils, and educational staff and offer a summation of the differential experience of friendship in pupils with ASD.

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1. Introduction

1.1 Study Background

Since the implementation of changes in legislation which promoted the inclusion of children with Special Educational Needs (SEN) in the 1990s (ie. DfES, 1997), an increasing number of pupils with Autism Spectrum Disorder (ASD¹) are being educated in mainstream settings in both England (Keen & Ward, 2004) and internationally (Dybvik, 2004). However, the capacity of schools to cater for these pupils does not seem to be similarly increasing, with it being described as a "complex and poorly understood area of education" (Humphrey & Lewis, 2008). One in five pupils with ASD will be excluded from school at least once (Barnard, Prior & Potter, 2000). Also, pupils with ASD are more likely to be bullied, report receiving less social support from parents, classmates and friends, and are at a significantly greater risk of developing mental health problems than other groups within mainstream school settings (summarised by Humphrey & Symes, 2010a). The nature of the Secondary school context then may, therefore, contribute to the disaffection and social exclusion of these pupils (Osler & Osler, 2002).

Friendship has been demonstrated as being useful for supporting social, cognitive and emotional development, contributing to overall wellbeing in typically-developing pupils (Hartup & Stevens, 1999). Children with high quality friendships tend to have more positive perceptions of school (Ladd, 1990), are less likely to experience bullying (Hodges, Boivin, Vitaro, & Bukowski, 1999), and perform better academically (Wentzel & Caldwell, 1997). Friendship then, is a significant protective factor in the lives of children and adolescents whilst attending school and will thus wield a considerable influence over the success of inclusion of children and young people with ASD in mainstream schools. Children and adolescents with ASD

¹ The term 'ASD' is utilised in this research as this is the term used in diagnostic manuals, DSM-5 (American Psychiatric Association, 2013) and ICD-11 (currently in Beta draft stage and due for full release in 2017, World Health Organisation, 2012).

educated in mainstream schools reported that friendships and peer interactions are of central importance to them (Connor, 2000; Humphrey & Lewis, 2008). However, these pupils are more likely than their typically-developing peers to experience considerable difficulties in developing those friendships and peer relationships that they crave (Fuentes et al, 2012). As such, it will be of fundamental importance to better understand the factors involved in the successful formation and maintenance of friendships for children and adolescents with ASD, and the roles of adults in supporting the development of these friendships.

A review of current research that compares the friendships of typically-developing children and adolescents and those with ASD suggested that consistent differences existed between these two groups (Petrina, Carter, and Stephenson, 2014). These differences are qualitative as well as quantitative, but details of the nature of these differences, in terms of perceptions of friendships and friendship motivation factors are not yet clear (Calder et al., 2013; Daniel & Billingsley, 2010; Kuo, Orsmond, Cohn, & Coster, 2013). Additionally, friendships and their functions change and develop as an individual ages (Gifford-Smith & Brownell, 2003), and there is a need to focus on friendships and how these appear at distinct stages of the lifespan (Petrina, Carter, & Stephenson, 2014).

Professionals, parents and carers, and pupils with ASD reported that good training on ASD for school staff, appropriate support for pupils with ASD, and a curriculum that emphasised the direct teaching of social understanding were all important to support children with ASD to make progress in schools (Jones et al, 2008). They stressed the importance of training for school staff, so that they develop a sound understanding of ASD and can interpret pupils' behaviours and understand the developmental trajectories of pupils with ASD, alongside their specific learning needs (Jordan & Jones, 1999).

It is evident that it will be important for Educational Psychologists to share their knowledge around the development and needs of pupils with ASD with school staff, and as a profession broaden our knowledge about ASD and how it relates to the experience of pupils in a mainstream educational setting.

1.2 Study Rationale

This study aims to delve further into the key facets of friendship for young people with ASD, providing a systematic investigation of their friendship experiences and perspectives to broaden understanding of how these differ from the typically-developing population. There has been little research that considers not just whether friendships of typically-developing pupils and friendships of pupils with ASD differ, but how these friendships may differ. Most existing research is focused on what deficits pupils with ASD seem to have in terms of friendships, rather than considering how their friendships may be different from their peers, and what these friendships mean to them. This research focuses on that distinction.

Existing research approaches will be extended in several ways to provide unique insight into the ever-developing picture of what friendships means to young people with ASD. This study focuses on a Secondary school population, as this is the time at which young people enter adolescence², and at which relationships tend to become more reciprocally affective and emotionally-intense (Rubin, Bukowski, & Parker, 2006). Existing research also tends to focus upon less specific groupings of 'children'.

The first aim of this current research was to combine qualitative and quantitative data to provide a thorough representation of the young people with ASD's views about their friendships. In much existing research the focus is purely on qualitative data which indicates that friendships are different in typically-developing pupils and

² 'Adolescence' is defined by the World Health Organisation as the period of human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 (WHO, 2014).

those with ASD, but it does not elaborate on how they differ. Combining quantitative and qualitative measures means that ratings of friendship factors can be examined in depth to locate their true meaning to pupils. This research gathers responses of both young people with ASD and their typically-developing peers on quantitative and qualitative measures in order to compare and contrast these.

The second aim of this research was to investigate friendship motivations as well as friendship quality, as at present little is known regarding how young people with ASD are motivated to initiate and maintain friendships, as opposed to their typically-developing peers. Only one other study (Whitehouse, Durkin, Jacquet, & Ziatas, 2009) has thus far compared the friendship motivations of young people with ASD and their peers, and this was the first to use qualitative data to explore this.

The third aim was to utilise information from other sources to verify reports given by pupils. Whilst studies have examined pupils with ASD's perspectives on their friendships or have examined perspectives of the parents of pupils with ASD on their child's friendships, only one has combined data perspectives from both groups (Calder et al., 2013). This research (Calder et al, 2013) was focused on Primary school populations and did not compare the responses of pupils with ASD and their parents with those of typically-developing pupils or their parents though. In order to clarify if and how perspectives of pupils with ASD and their parents differ from those of typically-developing pupils and their parents, this study interviews participants from both groups. Along with pupil and parent information, this study aims to use peer reports of friendship and group membership to determine the social inclusion of young people with ASD within the classroom. This was achieved using a socio-cognitive mapping technique (Cairns & Cairns, 1994).

The final aim of this study was to consider how the friendships of young people with ASD have evolved from Primary into Secondary school, particularly as Secondary is

seen as a time in which pupils' peer groups are less stable and peers are generally seen as less supportive (Connor, 2000; Humphrey & Lewis, 2008). The impact that transition from Primary to Secondary may have on their friendships was also considered. Again, the social development of pupils with ASD and that of their typically-developing peers were evaluated. As the pupils were now older and of an age in which they would increasingly interact and use technology with their friends (Carrington, Templeton, & Papinczak, 2003), this study also aimed to look at whether social media usage had any impact on the friendships of young people with ASD and their typically-developing peers.

1.3 Research Questions and Methodology

This study aims to address the following research questions:

RQ1: How do Secondary pupils with ASD rate the quality of their friendships compared to their typically-developing peers?

RQ2: How do Secondary pupils with ASD perceive friendship in comparison to their typically-developing peers?

RQ3: What motivates Secondary pupils with ASD to form and maintain friendships?

RQ4: Do Secondary pupils perceive that their friendships have changed from Primary to Secondary School, and is this true of both ASD and typically-developing populations?

RQ5: What purpose does social media serve in the friendships of Secondary pupils with ASD and does this differ from their typically-developing peers?

RQ6: How do parents of Secondary pupils with ASD perceive the friendships of their children, and how do these perspectives compare with those of parents of typically-developing pupils?

RQ7: To what extent are Secondary pupils with ASD perceived by classmates as being within friendships groups in the classroom?

This study examines these questions utilising a mixed methods design, with research questions 1 and 3 being examined through quantitative data on Secondary pupils' friendship quality and self-determination index score. Research questions 2, 3, 4, and 5 are examined through qualitative data in the form of semi-structured interviews with groups of Secondary School pupil's with ASD and typically-developing peers matched for age, school year, and cognitive ability level. Research question 6 is examined through qualitative data in the form of semi-structured interviews with parents of Secondary pupils with ASD and parents of their typically-developing peers. Research question 7 was examined using a socio-cognitive mapping exercise to demonstrate the friendship groups within the participants with ASD's classrooms to determine if they are included within friendship groups in these classes.

1.4 Thesis Structure

This thesis is delivered in five chapters. The second chapter offers a review of the current relevant literature and research surrounding the constructions and experiences of friendship in Secondary pupils with ASD and their typically-developing peers. Considering young people in either of these groups, this chapter investigates what may act as friendship motivation factors, how group memberships may differ between these groups, and what influence and support is offered by adults. Research into how friendships change as the young people develop and progress into Secondary school is also discussed. In this second chapter, the rationale for the research questions is explained, derived from the critique of current literature.

The third chapter outlines the methodology of this research, including the research design, procedure, participants, and measures used.

The fourth chapter examines the results of the quantitative and qualitative data gathered, pointing to themes that emerge from the semi-structured interviews and analysis of quantitative measures, offering comparisons between those of the ASD group and the typically-developing peer group.

The fifth chapter discusses the results found in chapter four, putting these in context and explaining how these develop and expand on existing research, along with offering directions for EP practice and suggestions for areas of possible future research in this area.

2. Literature Review

2.1 Overview

This chapter offers a critical review of existing research into the friendships of Secondary pupils, comparing the friendships of typically-developing pupils and pupils with ASD. Firstly, it defines the wider social context of inclusion of children and young people with Special Educational Needs (SEN) into mainstream schools, summarising how this relates particularly to young people with ASD. Subsequently, research into friendship motivation, group membership, friendships and transition into Secondary school, and adult support is reviewed.

The rationale for this current study and the research questions that emerge from critique of the current literature will be provided throughout and summarised at the end of the review.

2.2 Inclusion and ASD

The aim of inclusion in education is to provide social justice (Thomas, 2013) and a journey towards a just society in which all are perceived of fairly and equally (Koutsouris, 2014). In practice, inclusion can broadly be defined as the process of identifying, understanding and overcoming barriers to participation and belonging (Jones et al., 2008). Inclusion describes the process not only of integrating any child or young person into a mainstream school, but of offering the support they need in relation to an adapted curriculum and learning environment, where necessary (Batten, 2005).

Inclusion in this current form in the UK has its roots in the 1990s, with the 1994 *Salamanca Statement* (UNESCO, 1994) reflecting an international trend and push towards inclusion above mere integration (as explained above) which the UK government followed with *Excellence for All Children* (DfEE, 1997). This has been strengthened continuously in the UK through current legislation such as *Every Child*

Matters (DfES, 2004), *Support & Aspiration* (DfE, 2011), and the most recent revision of the *Special Educational Needs Code of Practice: 0 to 25 years* (DfE, 2014), all of which have continued to emphasise and strengthen the importance of the inclusion of all pupils within mainstream education, where possible and desired by parents.

Prior to the 1990s, the notion of placing children with SEN in mainstream schools in the UK arose from *The Warnock Report* (DES, 1978) and this was followed into later legislation to allow for integrated provision for pupils with SEN and for greater choice for parents. This led to an increase in the number of pupils being identified as having SEN and decrease in the number of pupils being educated in specialist provisions (Norwich, 1997). Due to progress made by the legislation and culture shifts that these have brought about, inclusion in the present day is focused on the four-pronged promotion of all pupils' presence, participation, acceptance and achievement (Humphrey, 2008). It is no longer aimed solely at children with SEN, but about ensuring that mainstream classrooms are accommodating to the needs of any pupil who attends them.

The impact that the process of inclusion has had on the education of pupils with ASD in schools has been significant. Prevalence rates of ASD amongst Primary pupils has been estimated at 1 in 80 (Barnard et al., 2002), and 70% of all pupils with ASD are now educated in mainstream schools (DCSF, 2008).

ASD are lifelong disorders which affect the way an individual communicates and relates to those around them (Batten, 2005), and can make it difficult for individuals with ASD to make sense of the world (Humphrey, 2008). ASD is considered a 'spectrum' disorder due to there being a broad range of difficulties associated with the same underlying disorder, and the most recent iterations of the diagnostic manuals used by health practitioners, DSM-5 (American Psychiatric Association.

2013) and ICD-11 (World Health Organisation, 2012) have incorporated the elements that previously constructed diagnoses of Autistic Disorder, Atypical Autism, and Asperger's Syndrome under the banner of ASD.

A 'triad of impairments' typifies the difficulties experienced by an individual with ASD, as they will face impaired social development, impaired language and communication skills, especially those around social communication, and a rigidity of thought and behaviour which limits imagination (American Psychiatric Association, 2013; World Health Organisation, 2012). As a result it can be expected that those with an ASD may find it a challenge to develop language, to develop peer relationships and engage in non-verbal interactions, may engage in stereotyped or repetitive behaviour such as fixations with particular behaviours, and are resistant to change (American Psychiatric Association, 2013; World Health Organisation, 2012). Additionally, more recently, sensory sensitivity has been included in the diagnostic category, and special obsessional interests are also associated with diagnoses of ASD (American Psychiatric Association, 2013; World Health Organisation, 2012).

The mainstream school environment is perceived to be beneficial for pupils with ASD, as they are regularly exposed to peer role models to assist them in developing academic, social and behavioural skills, and also have access to the general curriculum (Jones, 2013). However, this environment also raises a host of challenges for pupils with ASD, especially in Secondary school (Batten, 2005), as first pupils must navigate the transition from Primary school, into a new setting in which there is no longer the same consistency of teacher and classroom that existed previously, and where there are generally more pupils and an entirely different set of routines throughout the day, such as moving between classes and having several different subject teachers to interact with on a daily basis (Dillon & Underwood, 2012).

Despite the more progressive stance on inclusion, 21% pupils with ASD are excluded from school at least once (Barnard, Prior & Potter, 2000), a rate which is significantly higher than other pupils with SEN and twenty times higher than typically-developing pupils (pupils with no definable SEN). Furthermore, pupils with ASD are more likely to experience disaffection and social exclusion (Connor, 2000), are more likely to be bullied (NAS, 2006), and are at increased risk of developing mental health difficulties such as depression (Barnhill & Myles, 2001). The difficulty, it appears, is that despite schools having to increasingly cater for pupils with ASD, their capacity to do so may not be similarly increasing, with inclusion of pupils with ASD being described as a complex and poorly understood area of education (Humphrey & Lewis, 2008). It may indeed be the case that current practices within mainstream schools are contributing to the difficulties faced by pupils with ASD in mainstream schools (Osler & Osler, 2002).

In terms of research delving into the experiences of pupils with ASD in mainstream Secondary schools, there have been relatively few that have considered this issue at a general level, and which review the experiences of pupils with ASD in schools in the UK. Significant examples are discussed below.

Using a group of sixteen pupils from across the Secondary school age range, from Year 7 to 11, Connor (2000) interviewed individuals with a diagnosis of Asperger's Syndrome and explained that pupils with Asperger's Syndrome reported feeling limited in their social confidence and ability to interact with their peers. The pupils with Asperger's Syndrome also expressed a preference for fact-based work in school, and a preference for working alone and not being the centre of attention in class. Pupils with Asperger's Syndrome were able to describe some of their own idiosyncrasies and unique behaviours relating to their diagnosis too. One strength of this research was the use of interviews with the Special Educational Needs Co-ordinators (SENCo) of the schools involved, to provide a different perspective on the

experiences of pupils with Asperger's Syndrome in their school. The SENCOs pointed to the pupils' idiosyncrasies and social difficulties as factors which limited their social acceptance. Relatedly, they noted that these pupils may be susceptible to bullying, or to being misunderstood by their teachers for these idiosyncrasies and social differences.

Unfortunately, whilst this research (Connor, 2000) produced a lot of useful information regarding the qualitative experiences of Secondary pupils with Asperger's Syndrome, the research was non-comparative, and did not utilise the views of typically-developing pupils to contrast with those of the pupils with ASD. This is particularly relevant and important when dealing with a smaller group of participants, in order to assure validity of the research and that the reported experiences of the participants are unique to pupils with Asperger's Syndrome, and not just a standard Secondary school sample.

Similarly, qualitative data on a small group of Secondary pupils with ASD was gathered by Humphrey and Lewis (2008) in an attempt to make sense of their Secondary school experiences. Here, the authors reported that pupils with ASD's own perceptions of what the label applied to them meant and how it contributed to their development had a large influence on the way they made sense of their educational (and other experiences), with some pupils developing negative self-perceptions based on their ASD, and others who were accepting of it and felt it was simply part of their identity. Once more a key theme that emerged was around pupils' difficulties in their relationships with peers, such as fears around bullying and social isolation. Notably, in counteraction to these worries, some pupils reported that they were protected from these by their friendships with peers. Pupils also discussed their anxieties and stresses they associated with being in the mainstream school environment, and the ways in which they worked with teachers and other staff.

While this research offered a useful perspective into the experiences of Secondary pupils with ASD, it was also a non-comparative study, which means that it is not evident if and how exactly the insights of pupils with ASD differ from those of typically-developing pupils. It was also a small scale piece of research and thus it cannot be said with certainty that its findings represent those of the broader population of pupils with ASD.

Only one study thus far has compared responses of pupils with ASD to their typically-developing peers regarding their experiences in mainstream Secondary schools in the UK, using a multi-method approach (Dillon, Underwood, & Freemantle, 2014). In this study, a similar overall experience was described by both groups, but with conceptions of teachers group work, and peer groups being noted as a difference between the two. In contrast with typically-developing pupils, pupils with ASD spoke about the importance of feeling understood by their teachers, of the distractions caused by their peers and friends in class, and in the size of their peer groups and focus on those friendships (Dillon et al., 2014). Pupils with ASD tended to have smaller friendship groups and have close relationships with those friends, whilst typically-developing pupils have wider friendship groups with less emphasis placed on particular friends (Dillon et al., 2014). Unfortunately, whilst the authors matched pupils for age and year group, they were not matched for cognitive ability level, the likely effects of which are discussed in a section below. By focusing purely on the responses of the pupils involved in their research, Dillon et al (2014) were able to provide comparison between pupils with ASD and their typically-developing peers, but missing from their research are the perspectives of others such as parents to provide further insight and depth to the information provided by pupils. This could have been achieved by considering parental perspectives that could offer evidence of how the pupils' beliefs about school have developed since Primary school and how best to support these pupils.

One key theme which emerged in all the existing research was the importance of friendships with peers, and the difficulties that pupils with ASD experience regarding these. During adolescence, peers become increasingly significant in the lives of pupils with ASD (Humphreys & Symes, 2010b), and it is imperative to consider the dynamics between friends and the impact this has on the school experience (Dillon et al., 2014). For example, effects of bullying are likely to be mediated by the pupil having access to friends and significant friendships (Humphrey & Lewis, 2008).

Existing research into experiences of pupils with ASD in mainstream school then has largely tended to lack in the use of typically-developing controls, focusing solely on the responses of pupils with ASD, without comparing them to their peers. Multi-methods approaches which utilised quantitative and qualitative data were also infrequently chosen, as were the insights of parental perspectives to substantiate their child's reports.

The existing research has pointed to the need for further examination of friendships and social relationships of pupils with ASD, as this is noted repeatedly by pupils as an essential factor in their school experience, and crucial in the process of inclusion. What is particularly needed is an examination not just of superficial differences or similarities in friendships between these pupils ASD and their typically-developing peers, but of the underlying factors which prompt and drive friendships for individuals with ASD, at the Secondary school stage. In order to best include pupils with ASD in mainstream schools, it is clear that it will be necessary to develop our understanding of how friendships might look to that group, as friendship is evidently an important protective factor in the lives of all Secondary pupils, and one which can be vital to supporting a pupil with ASD.

2.3 Aspects of friendship

In examining the present evidence base, several aspects of friendship of Secondary pupils emerge as requiring further examination.

It appears that friendship motivation factors present a significant difference between the friendships of pupils with ASD and their typically developing peers (Calder et al., 2013). Also, there is a need to consider friendship progression as a child ages and transitions from Primary to Secondary school, for pupils with ASD (Petrina et al., 2014). Finally, the activity patterns of pupils with ASD and the function of these activities, particularly relating to video game and computer usage, requires deeper inspection (Carrington et al., 2003; Church et al., 2000; Kuo et al., 2013).

In this section each of these will be taken in turn and the current literature for each will be examined.

2.3.1 Friendship motivation

Motivation has been shown to relate to school performance and well-being (Walls & Little, 2005), as has friendship (Hartup & Stevens, 1999). However, research on friendship has largely focused on the cognitive, emotional and behavioural aspects of friendship functioning rather than on what is motivating the formation and maintenance of friendships (Ojanen, Sijtsema, Hawley, & Little, 2010).

In undertaking semi-structured interviews with parents and teachers of Primary pupils with ASD, it was noted that a key perceived difference between the friendships of this group and their typically-developing peers was in their motivation to form friendships (Calder et al., 2013). Individual differences in young people's motivation to form and maintain friendships may be a source of the variation in the degree and nature of the friendships of those with ASD.

In younger children, friendships tend to be characterised by superficial similarities such as age, race, or gender, whilst adolescent friendships become increasingly characterised by personality-related similarities such as the interests and attitudes of the individuals (Schneider, 2000). It has been suggested that friendship motivation between friends becomes similarly more important as children mature (Richard & Schneider, 2005).

Self-Determination Theory (SDT; Deci & Ryan, 1985, 2002) predicts that an individual's actions arise from factors that are either intrinsic (in which the reward is inherent to the individual) or extrinsic (in which the reward is set by others), and behaviours that are intrinsically-motivated are deemed more satisfying and conducive to well-being than those which are extrinsically-motivated (Ryan, Deci, & Grolnick, 1995). In examining friendship motivation then, using SDT frameworks, it would be hypothesised that friendships established for intrinsic reasons will lead to relationships with greater benefits than those which are established for extrinsic reasons (Ojanen et al., 2010).

As they progress through adolescence, typically-developing adolescents tend towards intrinsically-motivated friendships, as opposed to the extrinsically-motivated friendships that typify earlier friendships, in which children opt for friendships that will gain them acceptance from parents and relatives (Ojanen et al., 2010) (the influence of parents on adolescents' friendships is discussed in greater depth below). Extrinsic factors for establishing friendships did continue to be reported though, suggesting that appearance-related concerns, such as self-consciousness or social comparisons remained salient motivations (Ojanen et al. 2010).

At present, only one study has thus far examined friendship motivation in a population of pupils with an ASD. Whitehouse, Durkin, Jacquet, and Ziatas (2009), worked with a Secondary-School-aged group and used the Friendship Motivation

Questionnaire (FMQ; Richard and Schneider, 2005) to examine whether their participants who had a diagnosis of Asperger's Syndrome were more or less intrinsically motivated to form friendships than typically-developing peers.

Whitehouse et al (2009) found that participants with Asperger's Syndrome were less self-determined in their motivations to develop friendships than their typically-developing peers, meaning that their motivations came not from a desire to have fun with their friends but rather because of external factors such as the desires of their parents or teachers. However, intrinsic motivations were present, albeit at a lower level than their typically-developing peers. Whitehouse et al (2009) suggested that this may relate to having experienced social failures in the past, which led to a later disinterest and lack of motivation to develop friendships.

In this research though, Whitehouse et al (2009) did not specify any efforts made to match the participants with Asperger's Syndrome with the typically-developing peers, aside from chronological age, school year and gender. This method then did not take into account the possible effect cognitive ability may have on friendship motivation. Whilst existing research (Calder et al., 2013) suggested that cognitive ability did not effect friendship quality, it is not clear if this is true also of friendship motivation. Also, by focusing only on participants with a diagnosis of Asperger's Syndrome, it is not clear if this result is consistent throughout an ASD population. Whilst the FMQ provides quantitative data to allow for comparisons of the two groups of participants, it does not provide the greater depth that qualitative data will, in terms of expanding understandings of what factors may be underlying the friendship motivations of adolescents with ASD. This means that it hasn't been possible to examine the hypotheses around differential friendship motivations, or considerations of the way friendship motivations interact with other facets of friendship, and if and how these vary in ASD populations from typically-developing populations.

2.3.2 Friendships and the transition from Primary to Secondary school

Whilst several studies have examined the experiences of children and young people with ASD, and have acknowledged the need for longitudinal research that looks at the trajectory of friendships of this group as they progress throughout childhood into adolescence and beyond (Petrina et al., 2014), there have been few that examined how the process of transition from Primary to Secondary school is experienced by pupils with ASD, and how friendships and perceptions of friendships may vary throughout this progression.

The transition from Primary to Secondary school is an important and significant change in the lives of young people, and one that can be a cause of anxiety for them and their families, with friendships and friendship formation playing a part in this anxiety (Pratt & George, 2005). Coming as it does during the biological and development changes that accompany puberty, a phase at which young people become less inclined to seek adult support and put further emphasis on peer networks and friends (Hunter & Boyle, 2004), and at a time when friendships have to be re-established (Pellegrini & Bartini, 2000), it is evident that this transition can be a challenging one for all pupils.

Based on qualitative work with pupils in their final year of Primary school and first of Secondary school, Weller (2007) reported that social capital - the resources which individuals and groups gain from their social networks (Ridge, 2002) - is a key factor in the maintenance of social networks, as pupils draw upon a range of resources from past experiences of friendship. They are able to utilise the stable base of their Primary school friendship bonds, or their confidence in being able to make new friends, to expand their social networks appropriately. In turn, barriers to friendship caused by distance, school policy, or emotional/identity changes have ramifications for the longevity of social capital into later life. This research focused on Secondary

pupils in general though, with no distinctions made between groups such as pupils with ASD.

The capacities associated with successful Primary-Secondary school transition in typically-developing pupils are those in which pupils with ASD may experience impairment: social competence, flexibility, self-regulation, and academic attainment (Mandy et al., 2016). Barriers to successful Primary-Secondary school transition in typically-developing pupils are also common in pupils with ASD: peer victimisation and high anxiety (Mandy et al., 2016).

However, in researching the effects of the Primary-Secondary transition on pupils with ASD, there was not seen to be a significant increase in the levels of difficulty that pupils experience at school, as measured by levels of psychopathology, adaption, and peer victimisation (Mandy et al, 2016). Psychopathology and adaption constructs remained consistent across the transition, and peer victimisation reports actually decreased (Mandy et al, 2016). This research though did not draw on a typically-developing comparison group to identify if these trends are consistent with typically-developing peers, and would have benefited from the use of qualitative interviews with young people, their parents, or those working with them in schools to identify how successful their transitions had been, and what particular factors or processes may have assisted this to occur.

Contrary to the results of Mandy et al (2016), in examining the experiences of pupils with ASD transitioning from Primary to Secondary school in the UK, Dillon & Underwood (2012) undertook qualitative work with parents. Pupils with ASD were reported as finding the transition particularly challenging, and it was felt that it was important that pupils be able to draw on prior positive experiences, that schools put plans in place to facilitate transition, that they are able to draw on their own current hopes and ambitions, that communication between home and school is solid and

school staff understand ASD, and that peer support was crucial. This research though, by focusing only on parental perspectives, did not give a full picture of the experiences of Secondary school transition for pupils with ASD, offering only one perspective on the process. Also, as it only accessed the views of parents of pupils with ASD, it was not possible to compare these reports with responses of parents of typically-developing pupils.

2.3.3 Social Activity & ASD

Several authors have pointed to the frequency of media usage as a social activity undertaken by pupils with ASD (Carrington et al., 2003; Church et al., 2000; Kuo et al., 2013). In order to understand the role of media usage in young people with ASD, one must first consider patterns of usage (Kuo, Orsmond, Coster, & Cohn, 2014). It has been suggested also that future research into friendships of adolescents with ASD should 'catch up' with normative social participation and include investigation of usage of online forms of social interaction, particularly given a prevalent proclivity for computer use within that group (Shattuck, Orsmond, Wagner, & Cooper, 2011).

Given that impairments and difficulties in social skills and communication are integral elements of the diagnosis of ASD (American Psychiatric Association, 2013), media usage in adolescents with ASD should be examined in order to ascertain whether certain forms of media may be able to play a positive part in their friendships, and help to bridge the social challenges that they face (Benford & Standen, 2009).

In examining how adolescents with ASD use media (Kuo et al., 2014), which addressed frequency, amount of time, content of media usage, whom adolescents spent time with when using media, and the associations between media use and friendships. Adolescents with ASD were claimed to spend twice the amount of time

using computers and playing video games than their typically-developing peers, however this was speculative as the researchers did not include a typically-developing sample with which to compare. Instead they compared their findings to that of other published studies on media-usage-patterns in typically-developing adolescents (ie. Rideout, Foehr, & Roberts, 2010). Furthermore, adolescents with ASD who used computers for social purpose reported more positive friendships, (Kuo et al., 2014).

In order to compare rates of media usage amongst young people with ASD and typically-developing young people, Mazurek and Wenstrup (2013) had parents complete questionnaires regarding the media usage patterns of their children. Scores and rating for young people with ASD were compared with those of their siblings. In their sample, young people with ASD played video games more regularly and used social media less regularly than their typically-developing siblings (Mazurek & Wenstrup, 2013). This was the case also when comparing media usage amongst young people with ASD and young people who had “intellectual difficulties” (who experience “similar levels of adaptive impairment” (Mazurek et al., 2012: p.1759) but not necessarily social difficulties , as again those with ASD spent more time playing video games and less engaging in social media than the comparison group (Mazurek et al., 2012). Both of these studies relied on parent reports though, and did not access comparison groups of young people who were typically-developing and unrelated to the young people with ASD, or made any efforts to match comparison groups for age, gender (83.7% of ASD participants were male, 49.2% of typically-developing participants were male, in Mazurek and Wenstrup, 2013), or included measures of cognitive or language ability within either group.

It may be the case then that whilst young people with ASD could benefit from social media usage as a means of extending or enhancing their friendships (Kuo et al.,

2014), they are not doing so with the same frequency as typically-developing young people (Mazurek & Wenstrup, 2013).

In terms of social activities which adolescents with ASD most frequently engage in with their friends, playing video games was most common (Kuo et al., 2013). It has been suggested that this is due to video game activities relating to the symptomology of ASD, particularly of having repetitive and stereotyped interests (Kuo et al., 2014). Adolescents with ASD have themselves reported that these games act as a social bridge to allow them to fit in with peers (Winter-Messiers, 2007). Video-game-playing then may create a context for adolescents with ASD to socialise.

2.4 Friendships

2.4.1 In Typically-Developing Secondary pupils

For typically-developing children and adolescents, friendship is generally conceived of as a reciprocal relationship between two people, which both affirm (Parker & Gottman, 1989). These friends are generally individuals who have similar social and demographic characteristics to their own, in what Farmer and Farmer (1996) referred to as 'homophilic affiliation'.

Friendship quality has been conceptualised as consisting of three key dimensions: companionship, intimacy-trust, and closeness-affection (Buhrmester, 1996).

Companionship refers to co-operation in shared play and shared activities, such as "playing together" or "hanging out" (Howes, 1996). Intimacy refers to openness in sharing thoughts, feelings and expectations, as well as a stability and strength of friendship (Bukowski et al., 1994). Closeness relates to the strength of attachment between friends and draws on mutual liking and caring between friends (Bukowski et al., 1994).

Friendships play an important part in their social, cognitive, and emotional growth of young people (Bukowski, Newcomb, & Hartup, 1996; Newcomb & Bagwell, 1995; Schneider, 2000). In terms of social development, friendship provides opportunity to learn and use skills associated with effective interpersonal interactions (Newcomb & Bagwell, 1995). Friendships provide young people with experiences in displaying and regulating emotions (Parker & Gottman, 1989). In terms of cognitive development, friendship enhances the ability to problem solve through sharing of viewpoints and exchange of ideas (Newcomb & Bagwell, 1995).

Friendships offer a setting of intense social activity, with time spent together characterised by willingness to share, co-operate, and help (Newcomb & Bagwell, 1995). Common properties of friendships amongst typically-developing young people are similarity, equality (with friendship groupings tending to be horizontal in structure), mutual liking, closeness, and loyalty (Newcomb & Bagwell, 1995).

A notable trend as young people progress into early adolescence is that their friendships tend to be characterised by greater intimacy (Newcomb & Bagwell, 1995, Shulman, Laursen, Kalman, & Karpovsky, 1997) and stability (Hartup & Stevens, 1999).

It is theorised that friendship is used to meet the various social, cognitive, and emotional needs of young people, and this is the force that drives and motivates young people towards friendships (Richard & Schneider, 2005).

In typically-developing children, it is not just having friendships that is important but rather the quality of these friendships, in terms of support, companionship or conflict it provides to the child (Bukowski, Newcomb & Hartup, 1996). Friendship quality has been shown to be a protective factor against bullying (Bollmer et al., 2005), a predictor of later school adjustment (Ladd et al., 1996), and a precursor to feelings of loneliness and social isolation (Parker and Asher, 1993).

In younger children, friendships tend to be characterised by superficial similarities such as age, race, or gender, whilst adolescent friendships become increasingly

characterised by personality-related similarities such as the interests and attitudes of the individuals (Schneider, 2000)

The act of keeping and making friends, for typically-developing young people, requires a range of socioemotional and social-cognitive skills that develop throughout childhood, such as perspective-taking ability, affect recognition, communicative skills, self-regulation, understanding of intentions, desires and beliefs of others, and social problem solving skills, which develop over childhood (Rubin, et al., 1989). Individual differences around these skills exist within a typically-developing population of young people, but the general developmental perspective on how friendships change and differ is critical (Gifford-Smith & Brownell, 2003).

Given the profile of pupils with ASD necessarily include a difficulty in social interactions, it follows that these pupils may struggle with friendships more as they enter adolescence than they do in the earlier environment such as Primary School. Also, given the protective factors offered by the quality of friendships, and the significance of peer relationships during adolescence - which is the period where peer relationships take precedence over family relationships in terms of governing quality of life (Helseth & Misv er, 2010), it will be useful to examine the experiences of friendship and perceptions of friendship quality amongst Secondary pupils with ASD. The next section will explain theories around what factors related to ASD may be impacting upon friendships, then detail and critique existing research into friendships in Secondary pupils with ASD. Throughout this section, research which compares the experiences of pupils with ASD with those of typically-developing pupils will be discussed, which provides a thorough picture of the norms that exist in friendships of typically-developing pupils.

2.4.2 In Secondary pupils with ASD

Before going on to examine the current literature around friendships of Secondary pupils with ASD, it will be necessary to discuss perspectives on which elements of ASD may be influencing the friendships of people with ASD. The research around these perspectives informs research practice and methodology.

Factors Related to ASD that May Impact Upon Friendships

Several different theories have been proposed to explain why young people with ASD experience friendships differently from typically-developing peers, with the key hypotheses relating to cognitive ability, Theory of Mind (ToM), and the affective ability of those with ASD.

The cognitive ability view predicted that young people with ASD with higher cognitive functioning can use their cognitive abilities to compensate for their social deficits (Hermelin & O'Connor, 1985). In particular, it is hypothesised that the verbal abilities of young people with ASD will play a significant role in terms of their ability to interact socially with their peers.

Mazurek and Kanne (2010) report that more severe ASD symptoms are associated with lower IQ, and those with ASD and lower IQ had fewer reciprocal friendships, and that these were of lower quality. Bauminger et al. (2008) had earlier suggested that the reason for this effect may be that the students with ASD who are able to maintain friendship may be those with the greatest cognitive skills, which would also make them more aware of their own deficits, particularly in relation to their friendships which could lead to depressive symptoms. Alternatively, it may be that those children will be more motivated to initiate friendships, but lack the necessary social skills to maintain them, and are thus more likely to encounter negative peer experiences such as rejection or bullying (Ochs et al., 2001), which may lead to emotional distress.

The relationship between individual differences in children's cognitive ability and friendship quality was examined by Calder, Hill and Pellicano (2013), who assessed pupils with ASD who attended mainstream Primary school and their typically-developing peers to ascertain their cognitive and verbal abilities, then compared these with their ratings of friendship quality. This study examined a specific age group, of pupils aged between 9 and 11, although drew on a significantly smaller sample than Mazurek and Kanne (2010) or Bauminger et al. (2010), focusing on a set of 11 case studies. No significant relationship between pupils' general cognitive and verbal abilities and friendship quality was found in this research.

There is then an inconsistent body of research on the impact of cognitive ability, general and verbal or the quality of friendships of pupils with ASD. Given this inconsistent picture then, currently, it will be important that when comparing samples of pupils with ASD and typically-developing peers in terms of friendship perspectives and experiences, that these pupils be matched for cognitive ability. Otherwise, it may be the case that any measured differences are the result not of the ASD, but potentially of the participant's cognitive ability.

A further aspect of ASD that has been suggested as impacting on the friendships of individuals with ASD is that of Theory of Mind (ToM). The ToM view emphasizes the difficulty experienced by young people with ASD in understanding that other people have thoughts, desires, and feelings that differ from their own, which consequently makes friendships difficult for them (Bauminger et al., 2008). This hypothesis for ASD first emerged in the work of Baron-Cohen, Leslie and Frith (1985), and suggests that individuals with ASD are impaired in their ability to attribute mental states to others that differ from their own. Both Bauminger et al. (2010) and Calder et al. (2013) examined the impact of ToM ability on the friendship quality ratings of young people with ASD and found there to be no relationship between the two though. Current research then suggests that individual differences in ToM do not

necessarily play a role in determining the quality of young people with ASD's friendships, although at present there is no research that examines what effects ToM may have on reciprocity within friendships or how these relate to developing an understanding of the needs of others.

Further factors that have been suggested as potentially impacting upon the friendships of pupils with ASD are the executive functioning (EF) and affective view. EF refers to the cognitive processes that underlie initiation, planning, regulation, sequencing and completion of goal-directed behaviour (Shallice, 1988). However, there is at present considerable disagreement about the processes thought to be involved in EF, and no widely accepted conceptual framework (Ogilvie, Stewart, Chan, & Shum, 2011). The affective view suggests that people with ASD lack the basic ability to experience relationship-based emotions (Hobson, 2005), which will lead to difficulties in forming and maintaining friendships.

These two factors have at present not been examined in research on friendships of pupils with ASD, most likely owing to the considerable variations in the definitions of the terms themselves, and thus the robustness and validity of measures used to assess them will not be of appropriate value.

Current research into friendships of Secondary pupils with ASD

As noted above, young people with ASD are increasingly being included in mainstream classroom environments, and this has led to burgeoning research into the friendship experiences and peer relationships of pupils in these environments.

Problematically, despite research indicating that the nature of friendships changes as children grow older and progress into adolescence, from Primary into Secondary school (Newcomb & Bagwell, 1995; Weller, 2007), much research into the friendships of young people with ASD does not focus on particular age groups, instead utilising participants under the amorphous label of 'children', often without

reporting the age of participants beyond the mean age (ie. Bauminger et al., 2008; Bauminger et al., 2010; both of which drew on the same data set). Consequently, any differences between the friendship experiences of younger children and adolescents is lost. This is further compounded by the fact that much of the existing research into pupils with ASD uses relatively small sets of participants, within a fairly broad age range.

These problems are illustrated in a recent review of research into the nature of friendships in children with ASD by Petrina, Carter and Stephenson (2014). The authors reviewed 24 studies of school-age children with ASD and concluded that in comparison to their typically-developing peers, participants with ASD were likely to have fewer friendships, were less likely to see them outside of school, had friendships that were less stable (were of shorter duration), and were more likely to have friends who also had a diagnosed special educational need (SEN). Furthermore, it was reported that children and adolescents with ASD who participated in the reviewed studies experienced some difficulty in identifying and defining friendships, and that they reported lower levels of friendship quality with their best friend compared to their typically-developing peers.

However, when reporting these findings, Petrina et al. (2014) did acknowledge the variability in control measures used in different studies. Some of the studies featured did not compare young people with ASD to typically-developing peers, whilst some did. Of those, some of the studies matched peers by cognitive and/or verbal ability level, some only by age. Without consistency of control measures it is difficult to state the validity of the overall reviewed reported findings. Also, the papers included in the review access pupils from a wide age range, so it is unclear if the pictures of what friendships for young people with ASD look like are consistent throughout the lifespan, or whether they improve, deteriorate, or qualitatively change as the children grow older. This was acknowledged by Petrina et al. (2014),

who urged future research to take a longitudinal approach in order to study how friendships may change with age.

In their conclusion they note that while young people with ASD tend to have a smaller number of friends, they still report being satisfied with their friendships. Their friendships may not have the same features or measured friendship quality as that of typically-developing children, but this does not necessarily mean that these friendships cannot meet the needs of young people with ASD. This suggests that there is a need for research that investigates the qualitative differences in friendships for young people with ASD. Rather than focusing merely on friendship quality ratings, it will be important to consider in more depth what friendship means to young people with ASD and how that may differ from what it means to their typically-developing peers.

This is a consistent theme in the research into the friendships of pupils with ASD, that there is a focus on deficits rather than on building an understanding of what friendship means to pupils with ASD (Daniel & Billingsley, 2000; citing Bauminger & Kasari, 2000; Carrington et al., 2003; Church et al., 2000; as deficit-focused researchers). Much of the current research is characterised by a central consideration of whether the friendships of pupils with ASD are inferior to those of typically-developing pupils, instead of trying to focus on how their friendship may differ, qualitatively. What is missing from the current research, particularly as much is focused on quantitative methodology, is a developing understanding of the perceptions and experiences of pupils with ASD in terms of establishing and maintaining friendships. For example, Bauminger et al. (2008) utilised a model of friendship that relied on external constructions, implying that friendship could be quantified by a range of categories, and they interviewed mothers of pupils with ASD to investigate this. As this study focused purely on quantitative aspects of friendship it omitted more detailed explanations of pupils with ASD's feelings around

friendship or the factors that motivated friendship from both ASD and typically-developing groups. Without qualitative data that actually accesses the views of pupils with ASD, the hypotheses for the disparities in terms of several aspects of friendship are lacking depth and are often speculative.

In order to review the current literature in more depth, key individual research papers will now be critically reviewed. As it is often the case that the participants in these studies cover a wide age range, focus will be on those which specify whether they are examining a Primary- or Secondary-school aged sample. Firstly, research in Primary-school-aged pupils will be discussed, before focusing on research on Secondary-school-aged pupils. It should be noted that all papers discussed below were included in the review by Petrina et al. (2014).

With a Primary-school-aged sample, Chamberlain, Kasari and Rotheram-Fuller (2007) investigated how children (aged 7 to 11) with ASD function in the mainstream environment and found a mixed picture of the way in which these children were involved in social networks within the classroom, ranging from only a few weak ties and no reciprocal friendships to others that were a central part of social networks with a great deal of reciprocity. None were fully socially isolated. The children with ASD also reported levels of closeness, security and conflict that were similar to their typically-developing peers and with no greater experience of loneliness. Contrary to this, Locke et al. (2010) examined social networks within classes and found Secondary pupils with ASD experienced lower social network status than their typically-developing peers in mainstream school, with the pupils with ASD often being isolated or peripheral in the classroom.

While Chamberlain, Kasari and Rotheram-Fuller (2007) did match some of the children with ASD used in their study with typically-developing peers for the sake of comparison, these were matched only by age and gender, not by cognitive ability.

Also, while they amassed qualitative data from reports from teachers and parents of the pupils with ASD, this meant that direct experiences of pupils with ASD are not included, which could have offered greater insight into the outcomes of quantitative analysis.

In an investigation of the friendships of children with ASD, Calder et al. (2013) also used a Primary-aged sample, matching participants with ASD with children of the same age and cognitive ability level. They found, similar to Chamberlain et al. (2007), that children with ASD had variable friendship experiences, with some central and considered high-status in their classroom social networks and others having few links, with lower-status members of the class group, or on the periphery of their peer group and showing little interest in interacting with those peers. Again, none of the children with ASD were completely socially isolated. Additionally, through qualitative work with pupils with ASD, their teachers and parents, Calder et al. (2013) made note of friendship motivation being a key difference between pupils with ASD and other children.

Whilst Calder et al. (2013) did utilise qualitative as well as quantitative methods of research, qualitative data were gleaned only from participants with ASD, their parents and their teachers, meaning that it is not possible to compare the responses with those of typically-developing peers. As such, it is not clear if the friendship experiences described by Primary pupils with ASD were unique to those with ASD, or apply to Primary pupils in general.

While these multi-method studies offer a solid grounding and evidence-base for the Primary school friendship experiences of pupils with ASD in mainstream education, with it being noted that friendships change in nature as children progress into adolescence and Secondary school (Newcomb & Bagwell, 1995; Weller, 2007), it is

important to examine research into Secondary school experiences of pupils with ASD.

Attempting to build an understanding of the how Secondary pupils with ASD establish and maintain friendships, Daniel & Billingsley (2010) presented case studies of seven boys of 10-14 years old, all of whom attended mainstream school and had for the duration of their educational experiences. The boys with ASD suggested that establishing friendships was the most difficult part of the friendship process. All participants involved in the research noted that they had friends, meaning none were socially isolated, and five of the seven reported stability in their friendships as they had endured for several years). The participants did experience challenges in establishing friendships though, as they found it difficult to identify suitable friends, and then to initiate interactions or invitations with these potential friends. Possible factors which may affect identifying suitable friends which emerged were that the young people with ASD were attempting to observe the social hierarchy, and not talk to or initiate interactions with those they perceived to be above or below them, or that some young people with ASD were adopting a working model, in which they judged the likelihood of friendship with a peer based on whom that peer hung around with in school themselves. Both of these acted as potential arbiters of whether initiation of friendship may occur, and it was noted that this initiation may require prompting from an adult in school, although parental influence was not particularly noted. Shared interests and participating in common activities emerged as a key factor in friendships, as had been suggested in prior research (ie. Howard et al., 2006).

One limitation of this research (Daniel & Billingsley, 2010) is that they focused only on boys, so it is not clear whether the experiences described by their participants could apply to all young people with ASD, male and female, whilst other research

has suggested there are differences in friendship experiences of males and females with ASD (Kuo et al., 2013). The boys interviewed were all included in mainstream educational settings and had good "verbal and cognitive abilities", although no quantitative measures were taken to ascertain this. Also, as no matched peers were included, it is not clear the extent to which the reported friendship experiences are exclusive to pupils with ASD, or whether these are the perceptions of all Secondary pupils. Interviews are a self-report measure, and in order to add validity to these reports, it is beneficial to triangulate information either by utilising another person's perspective or by using quantitative data. Without doing either of these things, the validity of Daniel and Billingsley's work could be called into question.

While children with ASD have a desire for friendships and experience loneliness negatively (Bauminger & Kasari, 2000; Bauminger & Shulman, 2003), there have been few current pieces of research that have examined exactly what difference there is in this regard between typically-developing Secondary pupils and those with ASD which utilised mixed methodology. One notable recent study by Locke et al. (2010) compared the social-emotional relationships of these groups and compared their perceptions of experiences of loneliness and friendship quality. They indicated that adolescents with ASD experience greater loneliness and poorer friendship quality than typically-developing peers.

Locke et al.'s (2010) study though only focused on participants from one Drama class. They do not explain whether Drama is a mandatory or self-chosen subject in the school in which they conducted their research, thus it is not clear how generalisable the sample of pupils in a Drama class are to the standard school population. Similarly, as they only examined this one class, all participants were 14 years old, meaning that it is not possible to speculate with certainty whether or not the results found in their research could be true throughout Secondary school for

pupils with ASD, Furthermore, no attempts were made to match the pupils with ASD and their typically-developing peers by cognitive ability, diminishing the applicability of the results.

Kuo, Orsmond, Cohn and Coster (2013) compared parent and adolescent reports of friendships, and relationships between a number of friends and friendship quality in a population of Secondary pupils with ASD. Correlations between ratings on the Friendship Quality Scale (FQS; Bukowski et al., 1994) and pupils' self-reports of friendship characteristics (number of friends and characteristics of best friends) were found. Kuo et al. (2013) reported that having more friends was significantly associated with positive friendship quality and greater companionship within this friendship.

In terms of friendship activities, male adolescents with ASD primarily played video games with their friends, with this accounting for around 60% of all time spent with friends (Kuo, et al., 2013). 10-20% of their time was spent surfing websites too. This repeated earlier observations of social activity patterns of Secondary pupils with ASD (Carrington et al., 2003; Church et al., 2000). The least frequent friendship activities were hanging out with friends, art, listening to music, and reading.

As Kuo et al. (2013) omitted typically-developing peers with which to compare with the ASD group in their research, it is not clear whether the results gained and relationships between friendship quality and other factors in adolescents with ASD are consistent or inconsistent with those of a general population of adolescents. The research then does not necessarily reveal what may make the friendships of adolescents with ASD unique from their typically-developing peers, or establish if there are differences at all.

2.5 Role of parents in friendships of Secondary pupils with ASD

When considering an individual's development, Bronfenbrenner's (1979) ecosystemic perspective emphasises the importance of a child's environment and the pressures and interactions between people and the systems in which they function in terms of the impact these will have on the individual at the centre of that ecosystem - in this case the adolescent with ASD. As such, in order to build a fuller understanding of the individual at the heart of the ecosystem, it is significant to access the views not only of the adolescents themselves, but also of key figures in their lives, such as their parents.

The use of parental reports in investigation of needs of children and young people with ASD is important as parents' perceptions lend a different viewpoint on their child's experiences (Petrina, Carter & Stephenson, 2015), and the active involvement of parents of children with ASD in facilitating friendships has been demonstrated to be valuable (Frankel & Whitham, 2011).

In order to develop an understanding of the importance of friendship as an outcome priority to parents of children with ASD, Petrina, Carter, and Stephenson (2015) asked parents to rate and rank the importance of friendship development against other outcome priorities, using Primary-school-aged children. In parent ratings of importance, friendship was not significantly different from social skills and emotional development, but was rated as significantly higher in importance than intellectual and academic skills and physical and motor skills. When parents of children with ASD were to rank the outcomes by order of priority, friendship came third behind social skills and emotional development, and was not significantly different from ranking of intellectual and academic skills.

Despite the significance of their child's friendships to parents of pupils with ASD, few studies have examined parental perspectives on the friendships of this group.

Fewer still compare the parental perspectives of their child's friendship experiences of parents of those with ASD to parents of typically-developing young people.

Bauminger and Shulman (2003) compared maternal perceptions of the development of friendship in children with ASD and matched typically-developing children. Mothers of typically-developing children reported greater perceived quantity of their child's friendships, with more frequent meetings. For children in both groups, it was most likely that their friends would be in the same age range, although the pupils with ASD reported having friends who were younger or older more frequently. Pupils with ASD were also more likely to have a friend with a special educational need than their typically-developing peers. Although Bauminger and Shulman (2003) offer no explanation for this phenomenon, it may be that these relationships are formed during school time, when children with ASD may be working more closely with pupils with other special educational needs, or these pairings may be perceived to be at the same social level by their peers and thus motivated by others to become friends. This is particularly possible as the pupils with ASD in Bauminger and Shulman's sample attended mainstream schools, they did so in special education classes with some time each day spent in mainstream classrooms. This differs from the experiences of most pupils with ASD in UK mainstream schools and is more similar to the notion of integration rather than inclusion in mainstream provision

Bauminger and Shulman (2003) did not interview the children themselves to clarify the origins of these friendships, nor to offer their perspectives on their friendships, which could clarify or clash with the parental reports. Also, the sample draws on pupils with ages ranging from 8 to 17 years old, and thus it does not allow for closer inspection of how friendship experiences may vary as a child ages.

Differences between parental and adolescent descriptions of the friendships of adolescents with ASD may exist, as there are often discrepancies between the views of the two groups as to perspectives on the adolescent's friendships, giving different views as to the number of peers they considered to be the adolescent's friends (with parents listing more friends than the adolescents themselves did) and to the names of the friends (Kuo, et al., 2013). Parents believed that the relationship between adolescents with ASD and their friends lacked reciprocity, considering them to be friendships only if they included mutual interactions and emotional interchanges (Kuo, et al., 2013; Orsmond, Kraus, & Seltzer, 2004).

In Howard, Cohen and Orsmond's (2006) case study of an adolescent with ASD, the mother provided opportunity for friendship initiations and offering support and advice in negotiating friendships. This offered further evidence of the crucial role of parents and families in supporting friendships in young people with ASD.

Calder et al. (2013) and Chamberlain et al. (2007) looked respectively at the perspectives of parents of Primary and Secondary-school-aged pupils with ASD. They found in both that parents made efforts to support their child's social interactions, through structuring social interactions and activities, and arranging meetings outside of school. Chamberlain et al. (2007) also reported that parents taught social skills to their children to, which was noted previously in a case study by Howard, Cohn and Orsmond (2006). All of these studies though omit data from the parents of typically-developing pupils though, preventing comparisons between the experiences of pupils with ASD and their typically-developing counterparts, thus it is not clear the extent to which parental perspectives on the friendships of pupils with ASD differ from those of parents of typically-developing pupils.

2.6 Summary of research on friendships of Secondary pupils with ASD

Existing research indicates that while Secondary pupils with ASD do have friends and take part in many of the same friendship experiences as their typically-developing peers (Daniel & Billingsley, 2010; Dillon et al., 2014; Kuo et al., 2013; Locke et al., 2010; Petrina et al., 2015), they appear to experience friendship in a qualitatively different way. Pupils with ASD generally report lower friendship quality in terms of companionship, security-intimacy, closeness, and help (Bauminger et al., 2010; Bauminger & Kasari, 2000; Chamberlain et al., 2007; Locke et al., 2010).

However, there is evidence also that rather than being inferior to their typically-developing peers, pupils with ASD may simply be motivated to initiate and maintain friendships for different reasons or in different ways (Daniel & Billingsley, 2010).

Furthermore, there is evidence that parents play a key role in supporting and maintaining friendships of pupils with ASD, even at Secondary school level (Chamberlain et al., 2007; Howard et al., 2006; Kuo et al., 2013). From research, it appears that parents are able to provide a different perspective on the friendship trajectories of pupils with ASD from their children, which broadens understandings of how friendship may be understood and experienced by that group.

2.7 The current study

2.7.1 Research rationale

Existing research has indicated repeatedly that friendship and peer interactions is an integral part of the Secondary school experience of both pupils with ASD and their typically-developing peers (Dillon et al., 2014; Connor, 2000; Humphrey & Lewis, 2008). At present, few studies have utilised multi-method approaches in examining Secondary pupils' friendship experiences in mainstream context (Locke et al., 2010), drawing on comparisons with their typically-developing peers in order to allow a full picture of what may be unique about the experiences and

understandings of pupils with ASD. By systematically investigating the friendship experiences of mainstream-educated, Secondary-school-aged children with ASD, the present study will supplement present understandings and research evidence in several significant ways.

Firstly, this study aims to develop understanding of the friendship experiences of Secondary pupils with ASD by utilising a mixed methodology. Quantitative measures of friendship quality (Friendship Quality Scale (FQS); Bukowski et al., 1994) and friendship motivation (Friendship Motivation Questionnaire (FMQ); Richard & Schneider, 2005) are used to assess the quality of friendships that pupils with ASD have and what drives them to form and maintain friendships, in comparison to a typically-developing peer. These peers are matched the pupils with ASD in terms of age, school year, and cognitive and verbal ability (Bauminger & Shulman, 2003; Calder et al., 2013), so as to eliminate possible conflicting variables that may be causing friendship differences. Friendship motivation has never been studied in an ASD population using a cognitively-matched peer, previously.

Secondly, in order to provide richer and more detailed information regarding Secondary pupils' understandings of friendship, qualitative measures are utilised with participants with ASD and their matched peers. At present, qualitative information from pupils with ASD is scarce (Daniel & Billingsley, 2010; Carrington et al., 2003; Locke et al, 2010), and no studies have utilised interviews with both groups to allow comparison of qualitative responses. Without the matched peers to compare, it is not clear how unique the experiences the young people with ASD describe are or how these relate to their ASD.

This qualitative data will expand on the differences between pupils with ASD and their peers in terms of friendship quality and motivations, but also to develop an understanding of the function and usage of social media (video games, social

networking sites) as a social activity for these groups. At present, only one study has looked at media usage in Secondary pupils with ASD (Kuo et al., 2014) and it did not include qualitative data regarding how or why video games and computers were used as a social activities.

Furthermore, the changes in friendship as children progress from Primary to Secondary have been noted (Wentzel & Caldwell, 2007), but much current research does not focus particularly on either group or utilise longitudinal approaches (Petrina et al., 2014), instead speaking of 'children' in general, ignoring that the broad spectrum of friendship experiences throughout childhood into adolescence. Whilst longitudinal work is beyond the scope of this present study, changes in friendships will be examined through qualitative information from Secondary pupils with ASD and their matched peers reflecting on their own experiences of friendship through the transition to Secondary school and beyond.

Additionally, the perspectives of parents on the experiences of pupils with ASD in mainstream schools has been regarded as significant (Humphrey & Lewis, 2008) and thus this study will seek these different perspectives on the friendships of Secondary pupils with ASD, and what they see as being their own role - if any - in developing and maintaining those friendships in adolescence. Whilst the perspective of parents is regarded as important, few studies access this perspective, and only one so far (Bauminger & Shulman, 2003) compared the responses of parents of pupils with ASD to parents of typically-developing pupils. This research will be the first to focus on parental perspectives on Secondary pupils' friendships. Here, the information of parents will enhance the pupils' own perspectives on their development and friendship experiences.

Finally, in order to assess the inclusion of pupils with ASD in mainstream Secondary school classes, the perspectives of classroom peers are sought to provide reliable

information regarding friendships within a class (Cairns & Cairns, 1994). Socio-cognitive mapping (SCM) techniques are utilised (Calder et al., 2013; Chamberlain et al., 2007; Locke et al., 2010) to establish the friendship groups within a classroom and the pupils with ASD's status in those groups.

2.7.2 Research questions

The current study utilises measures of friendship quality, friendship motivation, and social networks status to provide quantitative data to establish differences and similarities between Secondary pupils with ASD and their typically-developing peers in these areas. Qualitative information from pupils and their parents will be used to build a thorough picture of the experiences of young people with ASD, what motivates them to establish and maintain friendships, how friendships have developed as the pupils have moved from Primary to Secondary school, their usage of social media in their friendships, and the role of adults in supporting them in their friendships, in comparison with their typically-developing peers.

This leads to the following Research Questions:

Research Questions

RQ1: How do Secondary pupils with ASD rate the quality of their friendships compared to their typically-developing peers?

RQ2: How do Secondary pupils with ASD perceive friendship in comparison to their typically-developing peers?

RQ3: What motivates Secondary pupils with ASD to form and maintain friendships?

RQ4: Do Secondary pupils perceive that their friendships have changed from Primary to Secondary School, and is this true of both ASD and typically-developing populations?

RQ5: What purpose does social media serve in the friendships of Secondary pupils with ASD and does this differ from their typically-developing peers?

RQ6: How do parents of Secondary pupils with ASD perceive the friendships of their children, and how do these perspectives compare with those of parents of typically-developing pupils?

RQ7: To what extent are Secondary pupils with ASD perceived by classmates as being within friendships groups in the classroom?

3. Methodology

3.1 Overview

This chapter outlines the methodology of the current research. It explains the ontology and epistemology that is the foundation of the research design, the participants who will take part, the measures and materials used in the research, and the research procedures and data analysis techniques used to provide insights towards answering the research questions.

3.2 Ontology and Epistemology

Researchers should begin the inquiry process by first identifying the philosophical assumptions about the nature of reality (ontology), and how they know what is known (epistemology), before going on to assert their values (axiology) and subsequent methodology (Creswell, Hanson, Clark Plano, & Morales, 2007).

This research aims to investigate the pluralistic, interpretive, open-ended, and contextualized (e.g., sensitive to place and situation) perspectives toward reality, from the outlook of multiple individuals (Creswell & Miller, 2000). A qualitative approach was necessary to enhance and expand the understanding of the friendship experiences of young people, beyond that which existing research has provided. The goal of qualitative research is not to explain but to attempt to gain understanding of the meaning that individuals have constructed from their own experiences (McPhail, 1995), and this underlies the use of qualitative research methods within this thesis. Quantitative data is gathered also, to provide a 'reality' less subjective than that of those provided by the individuals taking part in the research. This study thus adopts a pragmatic research approach, a paradigm that emphasises that there is a real world and that individuals have their own interpretations and understandings of that world (Mertens, 2010).

Epistemologically, this pragmatic stance means that the researcher studies what is of interest and value in a way which is most appropriate, which provides an underlying philosophical grounding for mixed methods research (Tashakori & Teddlie, 2003).

In order to maintain validity within this approach, reality will be represented from the perspective of the participants, and have these be credible to them (Schwandt, 1997). The underlying assumption of this research is that 'validity' refers not to the intrinsic truth of the data, but to the inferences drawn from them (Hammersley & Atkinson, 1983). Multiple perspectives on a theme are utilised to offer trustworthiness and authenticity (Creswell & Miller, 2000). This will be achieved by first establishing preliminary themes and categories and then searching through data for evidence that will disconfirm these themes, in an attempt to examine these multiple perspectives. These themes will be provided by the participants with ASD, their typically-developing peers, their parents and the parents of the peers.

3.3 Research Design

This current study adopts a mixed methods approach to answering the identified research questions. This approach allows analysis from both qualitative and quantitative bases, before merging the results together to create a broader final analysis (Creswell, 2014). Validity can be ascertained by comparison of qualitative and quantitative design, allowing for a critical approach to any emerging 'realities', and the possibility to search for disconfirming or negative evidence, which establish the validity of the accounts of those realities (Miles & Huberman, 1994).

The particular mixed methods approach adopted in this research is a Convergent Parallel mixed methods design, in which qualitative and quantitative data are gathered and analysed simultaneously for the data from either domain to then be

compared and related, leading to a final interpretation (Creswell, 2014). This design type is illustrated in Figure 1, below.

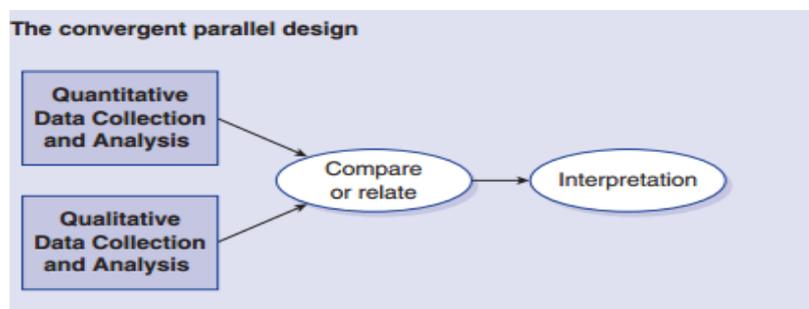


Figure 1: Typical pathway of convergent parallel design (Creswell, 2014)

Quantitative measures were adopted to address how Secondary-aged pupils with ASD rate the quality of their friendships compared to their typically-developing peers, to give evidence of possible differences in the motivations towards forming and maintaining friendships between pupils with ASD and their typically-developing peers, and to provide sociometric data around the centrality of the individual pupils in the social networks in the class. The aim of these quantitative measures is to provide objective figures to accompany the subjective experiences described in the qualitative data (Creswell, 2014).

Qualitative data were gathered through semi-structured interviews to address Secondary-aged pupils': perceptions of friendship, friendship motivation factors, perspectives on how friendships have changed since Primary school, and the role social media may play in present friendships. Qualitative data were analysed thematically and the themes that emerged from typically-developing Secondary school pupil data were contrasted with themes from pupils with ASD in order to locate similarities and differences. This was repeated in data from interviews of parents of the pupils with ASD and the parents of the typically-developing peers around how they perceive their child's friendships and what specific role they play in supporting the friendships of these adolescents. This research thus accesses

multiple perspectives and experiences to reveal commonalities or exceptions to themes that emerge in answer to the research questions (Creswell & Miller, 2000).

3.4 Participants

The inclusion criteria were firstly that any prospective participants would be placed in a mainstream Secondary School. Pupils from Years 8, 9, 10, and 11 were considered applicable for participation. Year 7 pupils were not considered as they would have very recently transferred into Secondary School, and thus would be likely to have a less stable peer group than that necessary for the socio-cognitive mapping exercise (Calder, 2011). Additionally, given their recent transition, they would not yet be able to provide reflection on if and how their friendships had changed since Primary school.

Participants with ASD had a clinical diagnosis of an Autistic Spectrum Disorder (Autism, Autistic Spectrum Disorder, Childhood Autism or Asperger's syndrome) by an appropriate professional who was not associated with this study, based on ICD-10 (WHO, 1993) or DSM-IV-TR (APA, 2000) criteria, and confirmed by parents during the consent process. This led to the exclusion of one pupil identified by one of the schools as a prospective participant, as they did not have a formal diagnosis of ASD.

Finally, participants had to be willing to discuss their friendship experiences with the researcher and undertake the quantitative measures. Potential participants who met the above criteria had the research explained to them and were given a pupil information sheet (see Appendix 1) to allow them to decide whether they were going to consent to take part.

As the parents of participants were also interviewed they also had to be willing to discuss their child's friendship experiences. An information sheet and consent form were circulated to parents also (see Appendix 2 and 3).

As each Secondary school pupil with ASD was matched with a typically-developing peer for the purposes of comparison, these were chosen based on a similar chronological age (same year-group), level of cognitive ability (assessed on the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999), as explained further below), and where possible the same gender and ethnicity as the pupil with ASD they were matched with. Their parents also had to be willing to discuss the pupil's friendships with the researcher.

As information regarding diagnosis of children known to the Educational Psychology Service was not held on a searchable database within the local authority in which the research took place, participants were identified by approaching the Secondary Schools within the authority and requesting their involvement, as well as help in identifying potential candidates. Of 5 Secondary schools which were approached, 2 were able to take part. This was an example of opportunity sampling.

Participants were recruited from 2 separate mainstream Secondary schools in the same local authority. More detailed information on both schools derived from recent OFSTED reports (2013) are contained in Appendix 4.

A total of 12 potential participants with a diagnosis of ASD were identified, however two pupils declined to take part. 10 participants with a diagnosis of ASD thus agreed to take part, along with 10 typically-developing peers. 8 of the 10 pupils with ASD were male, reflecting the prevalence and rate of male and female incidence in the wider population (Taylor, Jick, & MacLaughlin, 2013). Typically-developing peers were selected by asking schools to select a pupil of similar chronological age and cognitive ability who was in the same academic year as the participant with ASD, but did not have a diagnosis of ASD.

No significant differences were found between groups in terms of the chronological age of participants, $t(18) = -.457, p = .653$.

All participants with ASD were White British, although one of the participants who declined to take part was of a Mixed ethnic background. This may be reflective of the challenges that members of minority ethnic groups face in terms of getting a diagnosis of ASD, relating to perceived underlying assumptions from schools around cultural factors relating to behaviour or due to delays in speech or development being attributed to the young people speaking another language as their first language (Slade, 2014). Also, awareness and understanding of ASD in people's communities may contribute to this challenge in recognising and diagnosing ASD (Slade, 2014).

An additional 251 participants took part in the research during the socio-cognitive mapping (SCM) exercise. These were the form classmates of the Secondary pupils with ASD who were participants in this research. They too received information sheets and consent forms the week prior to the data being gathered (see Appendix 5), so they could opt out of taking part if they or their parents desired. No participants declined to take part in the SCM task.

3.5 Measures

3.5.1 Quantitative Measures

Wechsler Abbreviated Scale of Intelligence (WASI)

Wechsler Abbreviated Scale of Intelligence (WASI) is a means of offering a short and reliable independent test of intelligence, normed across the lifespan from 6-89 years of age (Axelrod, 2002; Ryan & Brown, 2005). It consists of four subtests: Vocabulary and Similarities tests, which yield a Verbal Scale IQ (VIQ) a rating of the individual's verbal intelligence, and Block Design and Matrix Reasoning tests which provide a Performance Scale IQ (PIQ), a measure of the individual's non-verbal reasoning abilities. A Full Scale IQ (FSIQ) is generated from results of all four

subtests (Axelrod, 2002; Ryan & Brown, 2005), which provides a general intelligence score.

The WASI was adopted in this current research as means of assessing adolescents' general cognitive ability to ensure that the Secondary pupils with ASD and typically-developing Secondary peers have levels of cognitive ability. This was necessary as a control measure to ensure that any variations in friendship quality or motivation between pupils in the ASD group and typically-developing group were not explainable by virtue of cognitive ability differences, in VIQ, PIQ, or FSIQ.

The WASI was administered and scored in line with procedures denoted in the assessment manual. While the WASI was not standardised on a population of people with ASD, Wechsler scales such as the WASI are used routinely in research with people with ASD (ie. Carothers & Taylor, 2013; Calder et al., 2013; Minshew et al, 2005; Siegel, 1996).

In order to ensure a matching of cognitive ability level between both groups, scores on Full scale ability, Verbal ability, and Performance ability were compared. The results of these are displayed in Table 1 below.

As evidenced in Table 1, no group differences were found in terms of participants' verbal ability, performance ability, or full-scale cognitive ability.

Any group differences found in the experience of friendship cannot thus be explained by differences in cognitive ability between pupils with ASD and their typically-developing peers, or by the differing age of participants in either group.

Table 1. Descriptive statistics for the ASD and typically-developing groups' WASI scores.

	Group		Group Differences
	Pupils with ASD (n=10)	Typically-developing pupils (n=10)	p-value
Verbal ability scores			
M (SD)	102.70 (18.37)	101.10 (12.13)	0.821
Range	69-132	89-119	
Performance ability scores			
M (SD)	102.20 (18.61)	98.80 (17.79)	0.681
Standard Deviation	18.61	17.79	
Range	63-123	68-125	
Full scale ability scores			
M (SD)	102.60 (17.84)	100.00 (16.00)	0.736
Range	73-126	77-125	

Friendship Quality Scale (FQS)

Participants completed the Friendship Quality Scale (FQS), developed by Bukowski, Hoza, and Bovin (1994). The FQS is a self-report measurement instrument designed to assess the quality of young people's relationships with their best friends according to five aspects of friendship: companionship, conflict, help/aid, security, and closeness.

The 23-item version of the FQS was selected due to its brevity and to prevent participants becoming fatigued. This shorter version of the scale was also used in previous studies working with young people (Calder et al., 2013; Bauminger et al, 2008, Chamberlain et al., 2007; Bauminger & Kasari, 2000;). Participants thus rated the 23 items on 5-point Likert scale, with 1 being 'not true at all', and 5 being 'very true', with scale scores being generated by taking the mean rating the child gives on each item within each scale. The five subscales presented adequate internal reliability (Cronbach α co-efficients between 0.71 and 0.86; Bukowski, Hoza, and Bovin, 1994)

While it was not initially developed for specific usage with young people with ASD, the FQS has been a successfully completed measure of friendship quality in children and adolescents with ASD (Whitehouse et al, 2009; Bauminger et al, 2008, Chamberlain et al., 2007; Bauminger & Kasari, 2000).

The Likert scale was enlarged to use as a visual prompt when administering the FQS to prompt understanding, and questions were presented verbally, with repeated reminders of what the Likert scale represented, and an example item was given at the outset to confirm the child's understanding of what the scale meant and how to deliver their response. These were administered in the form of a Powerpoint presentation, so that questions could be read as well as heard, and so that only one question was dealt with at a time.

Independent samples t-tests were carried out on each of subscale scores from the FQS, comparing the responses of the pupils with ASD and their typically-developing peers. These are discussed in Chapter 4.

Friendship Motivation Questionnaire (FMQ)

The FMQ is a measure designed to be used with preadolescents and early adolescents which indicates their desire for friendships (Richard & Schneider, 2005; originally devised as the Friendship Motivation Scale for Children, FMSC). It provides a score derived from self-reported responses to statements related to four subscales: intrinsic motivation, identified regulation, external regulation, and amotivation (an absence of self-determination). Essentially, the FMQ aims to determine the extent to which individuals develop friendships for intrinsically-motivated reasons. For example, responses to the FMQ indicate whether the individual seeks friendship for intrinsic reasons, such as the pleasure they get from interacting with friends, or an extrinsic reason, such as appealing to teachers/parents who encourage friendships. The FMQ has been used in prior

study of the friendship motivations of adolescents with ASD (Whitehouse et al, 2009).

The FMQ consists of twelve statements, which participants respond to on a 4-point scale (1 representing '*not a lot like me*' to 4 representing '*exactly like me*') indicating how true they consider the statement to be in relation to the broader question of "*Why do you want to have friends?*" After completion, participants' scores on each subscale were used to generate a self-determination index (SDI) score which indicates the extent to which the respondents' friendships are motivated by intrinsic factors using the following method outlined by Richard and Schneider (2005):

$$SDI = (2 * \text{intrinsic motivation}) + (1 * \text{identified regulation}) - (1 * \text{external regulation}) - (2 * \text{amotivation})$$

Higher scores indicate greater self-determined/intrinsic friendship motivations (scores range from -9 to 9). The scale shows good test-retest reliability ($r = 0.7$) and internal consistency (Cronbach's $\alpha = 0.75$).

Akin to the process detailed above for the FQS, the FMQ was delivered via Powerpoint presentation with one statement per slide and an attached Likert scale to remind participants of what the numbers on the scale represented. Explanations of what numbers represented were given regularly during the completion of the scale, particular in the shift in direction that accompanies the amotivation statements.

An independent samples t-test was used to examine group differences on self-determined friendship motivation.

Socio-Cognitive Mapping (SCM)

The participants in the study and the pupils in their form classes completed the SCM exercise (Cairns & Cairns, 1994). SCM is an approach used to identify peer groups

and social structures within a context, in this case a mainstream Secondary School class.

The SCM analysis was conducted according to procedures outlined by Cairns, Garipey, Kindermann, and Leung (1997). To identify these peers groups, participants and their classmates were provided with a blank sheet with boxes on it and asked to "*Write down groups of friends in your class. These can be 2 or more people. People can be in more than one group. Think about who hangs around together a lot in class, at breaks, or at lunchtimes. You can include yourself if you are in a group*" (see Appendix 6 for an example of the SCM sheet given to pupils).

These reports were then used to construct a 'recall' matrix, in which all the groups named by respondents are listed. Finally, the recall matrix is transformed into a 'co-occurrence' matrix which identifies the number of times a pupil in class is identified by peers as a member of a group with other pupils in the class. This matrix then provides a profile of the friendships of each participant.

Correlations were applied to the co-occurrence matrix, and pupils whose profile were significantly correlated with 50% of the members of a peer group were considered to be involved in that group, with the centrality of each member of that group to the group then considered based on the frequency of nomination of an individual by others. Based on categorisations by Farmer and Farmer (1996), four levels of social network centrality were considered: nuclear, secondary, peripheral, or isolated. Nuclear centrality refers to those who are high-centrality in a high-centrality group, secondary centrality refers to those with medium-centrality in a high-centrality group or high- or medium-centrality in a medium-centrality group, peripheral centrality refers to those with low-centrality in a high-or medium-centrality group or who is a member of a low-centrality group, and isolated individuals are those who are not identified as a member of any group. Based on frequency of

group member nominations, and on the assumption that individuals and groups named most often are central to a network, each pupil was then given a classification as nuclear, secondary, peripheral, or isolated within that classroom network.

In SCM data, 'Nuclear' refers to pupils being nominated at a high frequency within their peer cluster, and who are members of peer clusters that are nominated at higher frequency than the clusters of others in their class. 'Secondary' refers to pupils who are nominated at an average frequency within their peer cluster, and who are members of peer clusters that are nominated at an average frequency within the context of that classroom. 'Peripheral' refers to pupils who are nominated at a low frequency within their peer cluster, and who are members of a cluster of peers that is nominated with lower frequency than others in their class (Farmer & Rodkin, 1996). 'Isolated' is used to describe pupils who are not nominated by their peers as being a member of any peer cluster.

This exercise was completed in one morning session during each class's standard registration time.

In the present study, a computer programme developed by Anthony L. Aston at the University of North Carolina was employed for the computation of the data.

After completion, the status of the Secondary pupils with ASD were compared with that of their classmates to ascertain the typicality of their status with the sample. For example, if they have Secondary status, is this generally characteristic of pupils in the sample, or is it more or less so. Also, an independent samples t-test was conducted to compare the number of friendship group nominations received by the pupils with ASD with the rest of their classmates.

3.5.2 Qualitative Measures

Semi-Structured Interviews with Secondary pupils

Semi-structured face-to-face interviews were carried out with all participants with ASD (n=10) and all typically-developing peer participants (n=10). Secondary pupils with ASD and their typically-developing peers were asked open questions about what friendship means to them, the activities they partake in with their friends and their satisfaction with their current friendships (see Appendix 7 for full pupil interview schedule). These questions are asking 'What' not 'Why', as recommended by Stiles (1999), so as to seek what information the participants had, but not to substitute participants' interpretations of their experiences with researcher's interpretations. A verbal questionnaire has been used with adolescent populations with ASD in previous research (Daniel & Billingsley, 2010; Howard, Cohn, & Orsmond, 2006; Carrington, Templeton, & Papinczak, 2003).

The question schedule was adapted from the 'Friends and Marriage' items of the Autism Diagnostic Observation Schedule – Generic (Lord et al., 2000; modified for Calder et al., 2013), and participants were allowed and encouraged to elaborate on their answers as much as they felt willing to do.

An additional question was added to the schedule to investigate social media (SNS and online video gaming) usage and its relationship with friendship experiences of the participants in this research, both those with ASD and their typically-developing peers.

There are limitations in the use of semi-structured interviews with young people with ASD due to the levels of social anxiety and verbal communication difficulties which can be associated with the condition (Beresford et al, 2004). In order to lessen anxiety, participants were all fully briefed on the purpose of the research, and had met the researcher previously, to introduce the research and hand over information

documents and consent forms, as well as when administering the quantitative measures. The reliability of the information gained can be confirmed by triangulating with the quantitative data and the responses of parent interviews (Calder, 2011).

Each interview was recorded, in audio form, and later fully transcribed. Audio recordings were also taken of the pupils as they complete the FQS and FMQ, as spontaneous conversation related to the questions and statements of these measures offered additional qualitative data. See Appendix 8 for an example of transcribed pupil interview. Interviews with Secondary pupils with ASD ranged in length from 15 to 25 minutes, while interviews with typically-developing Secondary pupils ranged in length from 13 to 18 minutes.

Semi-Structured Interviews with Parents

The semi-structured interviews with parents of Secondary pupils were used to provide a broader perspective of the friendship experiences throughout the lifespan and to offer alternative or confirmative viewpoints on the pupils' own responses to the interview. These parent interviews were conducted with the parents of all the Secondary pupils with ASD (n=10) and all of their typically-developing peers (n=10).

Parent interviews were based on the Early Childhood Friendship Survey (Buysse, 1993; modified for Calder et al., 2013), which included questions about what activities are carried out with friends, the number of friendships, friendship quality, and what kind of adult input is required to sustain the friendship. Parents are also asked if they think their child's friendships have changed from when they were in Primary school, and in what way (Creswell et al, 2007) (see Appendix 9 for full parent interview schedule).

These interviews were conducted over the telephone to provide convenience for the parents who had agreed to take part. Parent interviews were recorded in audio form, and later fully transcribed (see Appendix 10 for an example of transcribed

parent interview). Interviews with parents of Secondary pupils with ASD ranged in length from 15 to 54 minutes, while interviews with parents of typically-developing Secondary pupils ranged in length from 11 to 39 minutes.

Analysis of qualitative data

Qualitative data were analysed using the thematic analysis approach of Braun and Clark (2006). This is a 'data-driven' approach in which themes are derived from the gathered data rather than those of pre-existing conceptions and research (Braun & Clark, 2006).

The following phases were followed in the thematic analysis of data in this study (Braun & Clark, 2006):

1. Familiarisation with the data: Transcribing, reading, and re-reading the data, taking notes of initial ideas.
2. Generating initial codes: Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes: Collating codes into potential themes, gathering data relevant to each potential theme.
4. Reviewing themes: Checking if themes work in relation to coded extracts and the entire data set, generating a thematic 'map' of the analysis.
5. Defining and naming themes: Ongoing analysis to refine the specifics of each theme, and the overall story of the analysis, generating clear definitions and names for each theme.

6. Producing the report: Final analysis, with quotes selected to represent each theme and subtheme, relating back to the research questions.

In order to ensure reliability in terms of the coding and classifying of themes, themes were reviewed, analysed and defined in collaboration with the research supervisor. This provided inter-coder comparison and discussion. Also, themes were discussed in research supervision sessions, and exceptions and alternative constructions sought in order to ensure validity.

In this research, the number of passages of data that are coded are observed as an indicator of interest in particular codes, but not reported, as counting codes is a quantitative measure of magnitude and runs contrary to the ethos of qualitative research (Creswell, 2002). Counts also place equal emphasis on all codes and disregard the fact that passages coded may represent contradictory views (Creswell, 2002).

3.6 General Procedure

All data were collected in the schools which the adolescents attended, in private rooms. Measures were administered in the same order for all participants.

Participants with ASD were identified by the Secondary School Special Educational Needs Co-ordinator (SENCo), and pupils and their parents approached for consent. Once these pupils had consented to take part, the school was approached to select the typically-developing peers. These were to be in the same academic year, the same age, be ideally the same gender and ethnicity as the pupil with ASD they were matched with, and be approximately correspondingly cognitively able (selected by academic level in English).

On the first visit, pupils completed the WASI, which took approximately 30 minutes to complete. These were then scored in order that it was ascertained that the pupils

with ASD and the typically-developing pupil were cognitively matched. On the second visit, pupils completed the FQS (which took approximately 5 minutes), and then the FMQ (approximately 5 minutes), in order to build rapport before conducting the semi-structured (approximately 10-15 minutes).

Parental interviews were conducted over the telephone on a separate occasion.

3.7 Ethical Considerations

Before commencing with data collection, ethical consent was gained from the Department Ethics Committee at Institute of Education, University of London, following their ethical guidelines and procedures (Institute of Education, 2010). See Appendix 11 for the completed Ethical Approval Form for this research.

Details about this project was shared with prospective participants - parents, their Secondary pupils - via information letters personalised by the role of the potential participant (Parent, Pupil) that provided a transparent outline of the research, its purpose, and what would be required of them as participants. This was done in order for participants to be able to make decisions regarding full, informed consent. These letters also explained that participants were able, during the data-gathering phase, to freely withdraw or modify their consent at any given time, in line with guidance from the British Psychological Society (BPS, 2010). All participants were provided with contact details of the researcher and offered the opportunity to contact him if any further details or clarification were required.

When gaining participant's consent, students and their parents were only included if both parties consented to take part. Also, in order to ascertain that all participants fully understood what would be expected of them in the process of being involved in the data gathering, they completed a checklist on the consent form, and understanding was checked before any data gathering took place, and repeated

checks were made throughout to ensure that participants continued to consent (recommended by Boynton, 2005).

As the topic of friendships may potentially lead to distress for participants, this was noted in the pre-data-gathering briefing, with it being explained to participants that they would be able to talk with the researcher in his capacity as a Trainee Educational Psychologist, with responses not being recorded or noted, if they became distressed or uncomfortable with questioning. This was offered to cover any risk of distress or harm to the participants (BPS, 2010).

In order to preserve the privacy and confidentiality of participants, any data gathered around them is reported anonymously, as dictated in the UK's Data Protection Act (1998).

3.8 Piloting

All measures used in the study were piloted with a Year 9 adolescent with ASD and their parent. The piloting procedure was used to give clear information about the appropriateness and accessibility of the materials used in the research, and the time the procedure would take.

Due to the timings of the different measures, as noted above in the section 3.5, and the length of time of one period in a Secondary School it was decided that the measures should be delivered on two separate occasions. On the first visit the WASI was administered to build rapport and pupil confidence, and on the second visit the friendship measures (FQS, FMQ) were administered along with the semi-structured interview. All tasks were appropriately accessible for the pilot pupil who participated.

A further observation was that during completion of the FQS and FMQ, the participant was quite open in referring to friends and friendship experiences, and thus it was decided that in future, discussion around these should be recorded

alongside the semi-structured interview. Notes had been taken during the FQS, but recording ensured detail and context was not lost, to provide a broad illustration of the participant's thoughts and feelings around friendship.

When administering the FQS, the participant was able to read ahead to the next statements, and would read ahead of the administrator, which could have led to potential errors in recording of responses. As such, it was decided that the FQS and FMQ would be converted into Powerpoint presentation form, so that each statement could be administered one at a time, and in a controlled manner.

4. Results

4.1 Overview

This chapter presents analyses of the quantitative and qualitative data gathered to respond to the research questions addressed in this thesis. Quantitative analysis is presented first, addressing research questions 1, 3, and 7 through analysing and comparing scores on the Friendship Quality Scale and the Friendship Motivation Questionnaire of pupils with ASD and their typically-developing peers, and through the Socio-Cognitive Mapping exercise. Next, qualitative analysis is presented which addresses research questions 2, 3, 4, 5, and 6 through thematic analysis and comparisons of interview data from pupils with ASD and their typically-developing peers, and the parents of pupils in both of these groups.

4.2 Quantitative Analysis

4.2.1 Friendship Quality Scale (FQS)

The data from the FQS were used to answer research question 1:

RQ1: How do Secondary pupils with ASD rate the quality of their friendships compared to their typically-developing peers?

To complete the FQS, participants were asked to consider a 'best friend' and respond to the statements on a scale with that friend in mind. All of the ten pupils with ASD were able to name a 'best friend' whom they would consider when completing the scale. In the typically-developing group, only one pupil identified one friend from their friendship group as a 'best friend', and others completed the scale with two or three friends in mind. A summary of scores on the FQS subscales is presented in Table 2 below.

Table 2. Summary of scores on the FQS subscales for both groups.

	Pupils with ASD (n=10)	Typically-developing pupils (n=10)
Friendship Quality Scale (FQS) Scores		
FQS Companionship		
Mean	3.08	3.55
Standard Deviation	0.89	0.68
Range	1.50-4.25	3.00-4.50
FQS Conflict		
Mean	2.35	2.13
Standard Deviation	1.16	0.97
Range	1.00-4.25	1.25-4.00
FQS Help		
Mean	4.02	4.04
Standard Deviation	0.71	0.53
Range	2.80-4.80	3.40-4.80
FQS Security		
Mean	3.34	3.30
Standard Deviation	0.79	0.65
Range	1.80-4.20	2.20-4.20
FQS Closeness		
Mean	4.06	4.00
Standard Deviation	0.71	0.75
Range	3.00-4.80	2.80-5.00

Table 3. Results of independent sample t-test on FQS subscale scores of ASD and typically-developing groups.

FQS Subtest Scores	Independent t-test results
Companionship	t(18) = -1.313, p = .206
Conflict	t(18) = .472, p = .642
Help	t(18) = -.071, p = .944
Security	t(18) = .123, p = .903
Closeness	t(18) = .184, p = .856

Independent samples t-tests were carried out on subscale scores from the FQS and are displayed in Table 3. No significant differences were found between the scores of the pupils with ASD and their typically-developing peers on any of the FQS subscales. The results for Companionship, Conflict, Help, Security and Closeness indicate a non-significantly-different level of friendship quality rating across the groups.

In comparison with typically-developing peers, pupils with ASD reported their friendships as not significantly different in terms of closeness or security, with no difference in levels of conflict, no difference in levels of companionship, and their friends no less or more helpful.

4.2.2 Friendship Motivation Questionnaire (FMQ)

The data from the FMQ were used to answer research question 3:

RQ3: What motivates Secondary pupils with ASD to form and maintain friendships?

To complete the FMQ, participants had to respond to statements that gave answers to the question of "Why do you want to have friends?". The statements provide scores on four subscales of friendship motivation: intrinsic motivation, identified regulation, external regulation, and amotivation.

A self-determination index (SDI) score for each participant was calculated using the method described in Chapter 3. This score represents each participant's global motivation towards friendship formation and maintenance, and those with higher SDI scores on the FMQ are considered to have greater self-determined friendship motivation than those who obtain lower scores on the FMQ (Richard & Schneider, 2005). A summary of scores on the subscales of the FMQ and calculated SDI scores is presented in Table 4 below.

independent samples t-tests examined group differences on self-determined friendship motivation, as measured by the FMQ. The results of these independent samples t-tests are displayed in Table 5.

In terms of overall SDI, the ASD group reported lower self-determined friendship motivation, but this was not at the level of statistical significance, $t(18) = -1.009$, $p = .327$. Statistically, pupils with ASD are no less self-determined than their typically-developing peers in their desires to develop friendships.

Table 4. Summary of scores on the FMQ for the ASD and typically-developing groups.

	Pupils with ASD (n=10)	Typically-developing pupils (n=10)
Friendship Motivation Questionnaire (FMQ) Scores		
Self-Determination Index (SDI)		
Mean	5.10	6.17
Standard Deviation	3.16	1.10
Range	-2.67-8.00	4.66-7.67
Intrinsic Motivation		
Mean	3.27	3.53
Standard Deviation	.68	.24
Range	2.00-4.00	3.33-4.00
Identified Regulation		
Mean	3.10	3.33
Standard Deviation	.65	.50
Range	2.00-4.00	2.76-4.00
External Regulation		
Mean	1.53	2.17
Standard Deviation	.45	.80
Range	1.00-1.67	1.00-3.33
Amotivation		
Mean	1.50	1.03
Standard Deviation	.72	.10
Range	1.00-3.33	1.00-1.33

Table 5. Results of independent sample t-test on FMQ scores

FMQ Scores	Independent t-test results
SDI	t(18) = -1.009, p = .327
Intrinsic Motivation	t(11.113) = -1.161, p = .270
Identified Regulation	t(18) = -.910, p = .375
External Regulation	t(18) = -2.175, p = .043
Amotivation	t(9.374) = 2.015, p = .073

As evidenced in Table 5, no differences were noted in terms of Intrinsic Motivation, Identified Regulation., or Amotivation ratings between pupils with ASD and their typically-developing peers. However, pupils with ASD reported significantly lower scores on the External Regulation subscale, suggesting that they are less likely to engage in friendships for external reasons such as pressures in the environment, rewards, or to avoid punishment than their typically-developing peers.

Further investigation of the friendship motivations of Secondary pupils with ASD is undertaken in the Qualitative analysis below.

4.2.3 Socio-Cognitive Mapping (SCM)

Data from the SCM exercise were used to answer research question 7:

RQ7: To what extent are Secondary pupils with ASD perceived by classmates as being within friendships groups in the classroom?

SCM data were gathered from the form classes of the pupils with ASD. One pupil had to be omitted from the ten participants with ASD as they did not attend form class, instead registering individually in the school's SEN base. The SCM procedures resulted in the identification of 55 peer clusters within the 9 classes, incorporating 260 pupils altogether. The number of peer clusters per class ranged from 4 to 9 (M = 6), whilst the size of the clusters per class ranged from 2 to 10

students ($M = 5$). The SCM procedures result in the classification of each person as Nuclear, Secondary, Peripheral or Isolated in the network.

Table 6. SCM data for pupils with ASD.

Participant	Number of other pupils in group	Individual centrality within group	No. of peer nominations
Pupil 1	1	Secondary	2
Pupil 2	4	Peripheral	2
Pupil 3	6	Secondary	17
Pupil 4	4	Peripheral	1
Pupil 5	9	Nuclear	18
Pupil 6	3	Peripheral	2
Pupil 7	5	Nuclear	22
Pupil 8	6	Peripheral	1
Pupil 9	4	Nuclear	23

Table 6 displays the network centrality outcomes for the 9 pupils for whom SCM data were gathered, along with the size of the group they were ascribed to, and the number of peer nominations they received.

As displayed in Table 6, none of the pupils with ASD in this research were Isolated within their classroom, and in total only 2 of the 260 pupils who appeared in the data across the 9 classrooms did emerge as Isolated, meaning that more than 99% of all surveyed pupils were identified as being members of a peer cluster.

Three of the nine pupils with ASD for whom SCM data were gathered were considered to have Nuclear network centrality, meaning they have high-centrality in a high-centrality group. Two pupils were considered to have Secondary status, meaning they had medium-centrality in a high-centrality group or high- or medium-centrality in a medium-centrality group. Four pupils with ASD were ranked as having Peripheral status, meaning they had low-centrality in a high-or medium-centrality

group or were a member of a low-centrality group. None of the participants with ASD were ranked as being isolated, meaning all had received at least one group nomination from their classmates.

Table 7. Distribution of social network centrality within classes of each pupil

Class	N	Individual Pupil Centrality			
		Nuclear	Secondary	Peripheral	Isolated
Pupil 1	31	24 (77.42%)	5 (16.13%)	2 (6.45%)	0 (0%)
Pupil 2	30	19 (63.33%)	6 (20.00%)	5 (16.67%)	0 (0%)
Pupil 3	32	22 (68.75%)	7 (21.875%)	3 (9.375%)	0 (0%)
Pupil 4	28	21 (75.00%)	6 (21.43%)	1 (3.57%)	0 (0%)
Pupil 5	31	21 (67.74%)	5 (16.13%)	5 (16.13%)	0 (0%)
Pupil 6	29	22 (75.86%)	5 (17.24%)	2 (6.90%)	0 (0%)
Pupil 7	25	25 (100%)	0 (0%)	0 (0%)	0 (0%)
Pupil 8	26	17 (65.39%)	4 (15.38%)	3 (11.54%)	2 (7.69%)
Pupil 9	28	16 (57.14%)	9 (32.14%)	3 (10.72%)	0 (0%)
Total	260	187 (71.92%)	47 (18.08%)	24 (9.23%)	2 (0.77%)

Table 7 illustrates general distributions of social network centrality within the class of each of the pupils with ASD.

Comparing the individual centrality of the pupils with ASD in this research with the distribution of pupil centrality more generally within the classroom setting reveals that three of the pupils (5, 7, and 9) who were regarded as having Nuclear network centrality are amongst 71.92% of their peers. Two of the pupils (1 and 3) were regarded as having Secondary network centrality so are considered amongst 18.08% of their peers. Finally, the four pupils (2, 4, 6, and 8) who were considered Peripheral to the friendship groups in class are amongst 9.23% of their peers. Of the Secondary pupils with ASD in this research then, seven of the nine were not graded as having the Nuclear centrality status awarded to 71.92% of their peers,

demonstrating that pupils with ASD are less likely to be perceived by classmates to be part of the central friendship groups within that class.

In order to compare the number of friendship group nominations received by pupils with ASD and their typically-developing peers, an independent samples t-test was performed. A significant difference was found in the number of friendship group nominations received by the pupils with ASD (mean = 9.78) from their typically-developing peers (mean = 16.44), $t(252) = -2.643$, $p = .009$. Pupils with ASD received less friendship group nominations than their typically-developing peers.

To return to the research question, variation between individuals with ASD occurs in terms of the extent to which they are perceived by classmates as being within friendships groups in the classroom. While some pupils with ASD will take on a nuclear role within the friendships groups, many will instead take on more marginalised secondary or peripheral roles. Pupils with ASD receive less nominations of belonging to friendship groups than do their typically-developing peers.

4.3 Qualitative Analysis

Semi-structured interviews conducted with Secondary pupils with ASD and their typically-developing peers, and the parents of Secondary pupils with ASD and parents of their typically-developing peers were analysed thematically using the Braun and Clarke (2006) method, as outlined in Section 3.6 in Chapter 3. Pupil and parent data were analysed separately and to address separate research questions, with comparisons being made of the themes that emerge from the analysis of data from pupils with ASD and the themes that emerge from the analysis of data from typically-developing pupils. Comparisons were also undertaken when analysing the themes that emerge from data from parents of pupils with ASD and themes that emerge from data from parents of typically-developing pupils. Themes have been

sub-divided into more detailed categories and sub-categories. Themes identified from pupils' data are presented in Figures 2-5. Themes identified from parents' data are presented in Figures 6-8. For each reported Theme, there is first provided a summary of that theme and its sub-categories. Quotes to support and illustrate the sub-categories are provided in the discussion of each theme. Where necessary, pupil names have been changed when they arise in quotes.

For each of the themes included, it should be noted that while they are divided by whether they are common themes for pupils with ASD or typically-developing pupils, it is rarely the case that these themes are entirely exclusive and they do not apply to every member of either group. They represent the most common responses and themes therein.

4.3.1 Interviews with Secondary pupils

Interviews with Secondary pupils with ASD and their typically-developing peers were compared and four major themes emerged which provided answers to research question 2, 3, 4, and 5.

Perceptions of friendship development and maintenance

Research question 2 is addressed firstly:

RQ2: How do Secondary pupils with ASD perceive friendship in comparison to their typically-developing peers?

In addressing differences in the perceptions of friendship between pupils with ASD and their typically-developing peers, one key theme emerged which separated the two groups, and this pertained to the process and purposes of friendship. Whilst every pupil interviewed reported having friends, differences emerged between pupils with ASD and their typically-developing peers in the way in which they described how their friendships were developed and maintained. These distinctive

perspectives on friendship are displayed in Figure 2.

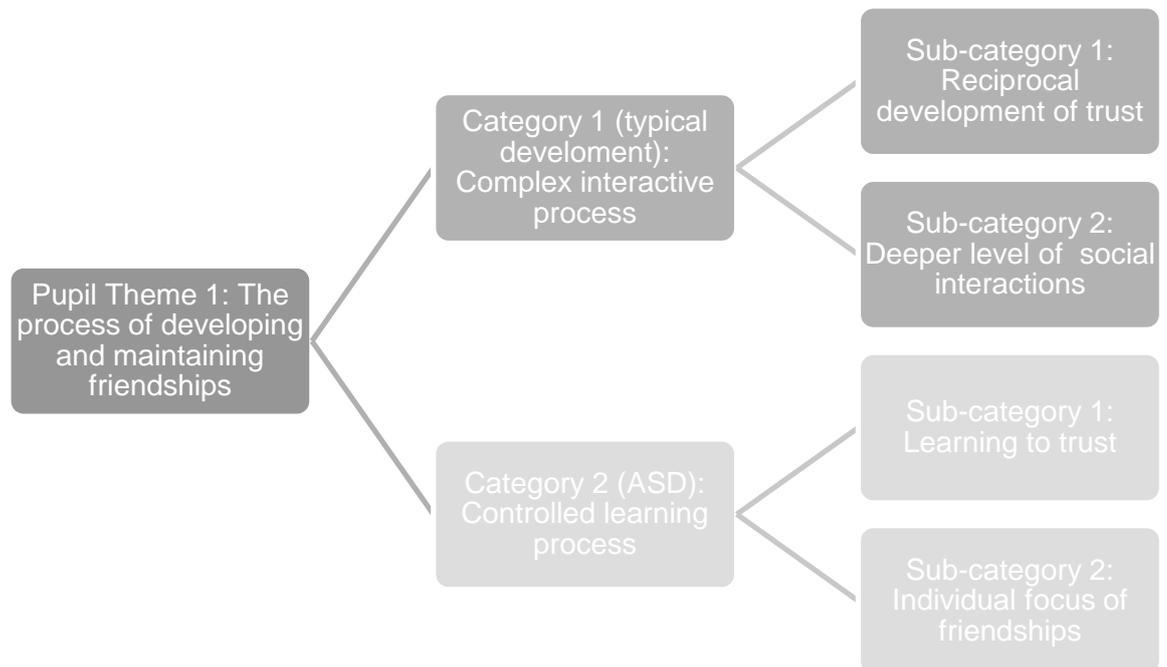


Figure 2. Pupil Theme 1: The process of developing and maintaining friendships

The primary distinction that emerged in terms of friendship reports pertains to the notion of a 'best friend', as every single participant with ASD named one person who they perceived to be their 'best friend', whilst the typically-developing pupils did not. Instead, typically-developing pupils (with one exception only) explained that they did not have a 'best' friend, but rather a group of friends. In response to a "Do you have a best friend?" question, pupils with ASD named one particular person, whilst typically-developing pupils gave answers such as:

"Nah, we're all very good friends," (Typically-developing pupil)

"Like, loads of friends, but I don't really, I don't call people my best friend."

(Typically-developing pupil)

For typically-developing Secondary pupils then, friendship is a complex interactive process, drawing on multiple friendships within a broader group of friends.

Conversely, for Secondary pupils with ASD, friendship is a controlled learning

process, in which one particular individual is the focus of the friendship. For both groups, friendship is an opportunity to learn, in practice, the social skills required to develop and maintain friendships, but accessed through different numbers of friends and with differing levels of dependency between them and their friend(s).

The complex interactive process which emerged as representative of friendship for typically-developing pupils drew on two sub-categories. The first of these sub-categories pertains to the reciprocal development of trust. For most of the typically-developing participants, they spoke of a reciprocal supportive relationship with their friends, in which trust was shared and they relied on each other. They gave support to their friends when it was needed, and received support in return. This mutually beneficial relationship was an important facet of friendship development and maintenance and a key factor in terms of allowing the pupils to recognise that the relationship they had with someone was in fact a friendship.

One participant illustrated this in their comment that:

" I obviously can't tell the future but they tell me a lot of stuff that they probably wouldn't tell other people and I help them with their little problems like they help me with mine. And we stick up for each other, and we're there for each other, I like to think no matter what and I don't really like to put things before them if I have the ability to [...] It's this sense that, I'm sort of happy with, we're both happy with each other and that sort of just makes the whole thing happy." (Typically-developing pupil)

Whilst another, in describing what a friend is, explained:

"Someone who's like just there for you or can make you happy if you're sad. Someone who cheers you up [...] And that like, if they needed someone to talk to they'd come to me and stuff." (Typically-developing pupil)

The second sub-category of the complex interactive process that typifies typical development and maintenance of friendships is a deeper level of social interactions. This too functions to develop friendships and friendship skills and is effectively a form of social learning (as initially described by Bandura, 1977) in which the participants are actively engaging in a constant iterative process of refinement of friendships and the skills needed to take part in friendships.

This social focus of friendship of typically-developing pupils is represented by deeper friendship engagement than their peers with ASD and a continued interest in growing their friendship circle. The typically-developing Secondary pupils interviewed had all visited the houses of the friends that they named, and/or had their friends visit their house. This was not the case with the pupils with ASD, where only half of those interviewed had either visited the houses of their friends, or had their friends visit their house, and participants made comments such as:

"Nah, I don't like people coming to my house," (Pupil with ASD)

"Yeah. I don't really go round to other people's house. I don't really feel safe. I just like my own house, which is nice." (Pupil with ASD)

Also, the urge for social contact and larger, more complex social groupings was displayed as several of the typically-developing pupils expressed a desire to grow their friendship group beyond its current state:

"I think I'm happy with the number of friends I have. Doesn't mean that I won't make more friends [...] yeah, I would say I'm always looking for more." (Typically-developing pupil)

This desire for more friendships was presented in specific practical terms, as one typically-developing participant explained the need to be able to forge new

friendships if there is a reason why the social role played by current friends can't be filled for any reason, like when their friends are absent:

"Cus I'm not friends with everyone in the school and like if I get in argument with one of my friends I can just go to them and they'll work with me, even if I haven't kind of been in their group before, like. If let's say Amy and Claire isn't in one day I can go to Emily's group like they won't be like 'Go away', they'll just be like 'Ok'."

(Typically-developing pupil)

None of the participants with ASD expressed a desire to expand their friendships groups, with all explaining that they were happy with them as they were.

For the Secondary pupils with ASD, friendships were developed and maintained in a different way from their typically-developing peers. As stated above, pupils with ASD engage in a more controlled form of social learning than their peers, operating in smaller groups of friends, and with a focus on one particular individual as a 'best friend' from whom to learn.

The controlled learning process of pupils with ASD draws on two sub-categories which separate it from the complex interactive process of typically-developing Secondary pupils. Firstly, the level of reciprocal trust was mentioned by only two of the pupils with ASD, with the rest of the participants making no mention of what they could offer as a friend to others, and instead focusing on learning to trust their friend. Learning to trust their friends was a crucial part of the friendship, hence many of the participants with ASD spoke of their friends as someone who would support them. The way in which they identified and were assured that someone was a friend was that the individual would support them when called upon or needed. For pupils with ASD, the interpretation of trust and support was likely to be unidirectional, with the support being provided by the friend for the pupil with ASD, and not the other way around.

An example of the unidirectional process of learning to trust others as an element of the controlled learning process that represents formation and maintenance of friendships in pupils with ASD comes from these participants' descriptions of their friends:

"Well I hang around with them most of the day. I can talk to them about things, like private things. And I can rely on them to keep my secrets or if I needed something then they'd try to help me." (Pupil with ASD)

"Like, if you get in trouble, you're going to need to have a friend. Or if you get lost, you're going to need a friend to call to come pick you up. Like just stuff like that. Things that people need that people who aren't your friends won't do. If you went to a stranger 'Oh can I have a lift to my house?' they'll go 'No.' Obviously you're not going to that but like they don't know where your house is and they don't like you because you're not their friend." (Pupil with ASD)

These responses are typical of the pupils-with-ASD group, as they demonstrates what the friends can do to support the pupil with ASD, but offer no example of what the pupil can do to support their friends.

The second sub-category that makes up the controlled learning process of friendship development and maintenance for Secondary pupils with ASD is the individual focus of friendships. This has been noted above as the primary distinction between friendships of Secondary pupils with ASD and their typically-developing peers, as the pupils with ASD have identified a 'best friend' and have smaller friendships groups than their peers. When questioned, pupils with ASD reported fewer friends than their typically-developing peers, and were more likely feel there needed to be a limit on the number of friends they had. Whilst noted above that several typically-developing pupils expressing an interest in expanding their circle of

friends, several of the pupils with ASD instead explained that they felt they did not want to have more friends than the small number they currently had:

"I think you only need one or two. You don't need loads and loads, because that makes it not very special." (Pupil with ASD)

"I hate people surrounding me. I like just talking to a friend like two on one, like they're standing next to me or we're just like talking, like there. But then I don't like it when there's a big crowd, like everyone talking to you. I just feel like punching them all [...] Because I can't hear what everyone's saying, I can't see anything." (Pupil with ASD)

Friendship motivation factors

Another theme which emerged from interviews with Secondary school pupil develops results from quantitative data discussed above and pertains to research question 3:

RQ3: What motivates Secondary pupils with ASD to form and maintain friendships?

Key differences were observed in the categories that explained friendship motivation factors for Secondary pupils with ASD and their typically-developing peers, with both groups seeking out friendship for different purposes. This Theme is illustrated in Figure 3 (overleaf). Broadly, the typically-developing pupils were motivated to form and maintain friendships so that they were able to experience companionship and sought out friendships that they found enjoyable and related to things that they enjoy doing. For Secondary pupils with ASD, their friendships tended to be motivated by an urge to have someone to look out for them, to discuss their interests with, and to offer advice and talk through their experiences.

In typically-developing pupils, friendship is sought to fulfil a need for companionship, a desire to do things not alone but in a group. It appears that the act of friendship is a motivating factor and desirable because having friendships and spending time in the company of others is rewarding.

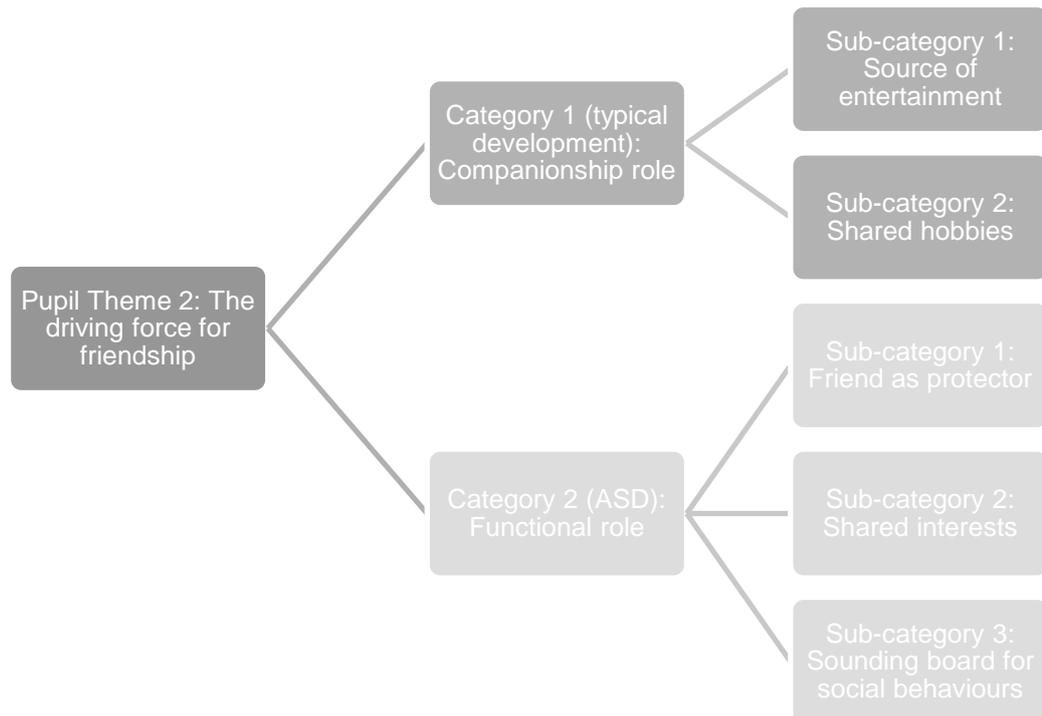


Figure 3. Pupil Theme 2: The driving force for friendship

"It's, I mean humans are - to get a little philosophical here - humans are social animals. I mean, we have cities, we have countries. If you didn't have friends, it sort of, I feel it would be a gaping hole in you that you can't fill. It's just those reactions and those actions with one another that really, it makes friends important. I don't think you can live your life without a single friend and be happy." (Typically-developing pupil)

This companionship also works as a shield against loneliness and boredom, that it is more desirable to do things with a companion or companions than to do them alone:

"I think people are friends because if you don't have a friend you can get really lonely and it gets really dull and boring because you've never got anything to do with your friends. I mean you could just go on a console to play online and stuff, but it's just, it's different to have a friend that you can meet up with every day because it gives you something to do. It gives you someone to speak to and just be friendly with. [...] So the motivation for friendship I just say is so you can have someone to be around and someone to do stuff with." (Typically-developing pupil)

Further to the companionship category is the sub-category in which typically-developing Secondary pupils see their friends as a source of entertainment. The word 'fun' was used repeatedly by typically-developing pupils when discussing their friends and friendships, and was used by every single typically-developing participant. However, this word did not occur repeatedly in the interviews of pupils with ASD, instead being used by only one pupil. Typically-developing pupils who are motivated to form friendships based on finding their friends to be fun and to want to spend time with them as time spent together is entertaining for them:

"Yeah, very important because otherwise you wouldn't be able to, well it would be quite boring, your life. Because if you're on your own like, if you're on your own you can't do much stuff. And it's not as fun if you don't have anyone there with you."
(Typically-developing pupil)

"I'm not really bored if there's friends I can talk to. And now I go out quite a lot as well, with people I know." (Typically-developing pupil)

When analysing the themes that emerged in the interviews of typically-developing Secondary pupils and Secondary pupils with ASD, it was common for participants in both groups to discuss the importance of shared interests in a friendship pairing or group. However, a distinction that became clear was that for the typically-developing group these interests tended to manifest not just in a shared frame of reference and interest, but in actual active engagement and interaction with that interest, usually from attending out-of-school clubs, and centred around sports, with pupils naming basketball, football, and swimming. This was particularly true for male participants. The pupils would all have friends that they knew from school who took part in these hobbies with them, as well as friends who attended other schools but whom they knew through their shared hobby.

In discussing what their friends are like and what they do together, typically-developing Secondary pupils commented that they were:

"Quite active. Most of them like doing sports with me. Yeah [...] Like talk about sports, play sports. Yeah. Walk around really." (Typically-developing pupil)

"We usually play sports together. Either football, basketball, just generally different sports. Sometimes we talk and we just, yeah. Sports and talk and we play games and we go swimming. We go to have lunch outside." (Typically-developing pupil)

Here both the factors that draw the friends together and what they do together is the common ground of the shared hobbies.

Secondary pupils with ASD do not talk about having fun with their friends or taking part in shared activities with them, instead focusing on the functions their friends serve. Pupils with ASD are motivated to form and maintain friendships so that their friends may act as protectors, so that they may have the opportunity to share their

interests, and to use their friends as a sounding board with which to discuss social behaviours.

The first sub-category of functional friendships that Secondary pupils with ASD seek is that of the friend as a protector. Pupils with ASD, unlike their typically-developing peers, often used words such as "safe" and "nice" when describing their friends or desired friends, and spoke of the importance of having a friend who would look out for them and be able to defend them from difficult situations or prevent them from coming into harm. Much like the process of developing trust that typified friendships of Secondary pupils with ASD's perceptions of friendships, this motivation to have a friend who would be able to protect them was unidirectional, and none of the pupils with ASD suggested that they would be able to provide reciprocal protection for their friends in return.

In discussing the threat of bullying, one pupil with ASD commented:

"Well my friend knows what to do if I get bullied. She knows how to deal with it."

(Pupil with ASD)

This pupil also explained that their friend and they were able to "*interact with each other safely.*" (Pupil with ASD)

This motivation to have a friend who would be able to fulfil the function of protector may also be seen as having the friend take on the role of a parent in situations in which parents are not present:

"They're really nice. If you're ever in trouble they'll like help you. If you need help.

Cus parents can't always help you. And sometimes - I know this sounds kind of weird - but sometimes you just need your friends to lie for you." (Pupil with ASD)

As described above, it was common for all Secondary schools pupils interviewed to talk of the shared interests that they and their friends shared as a friendship motivation factor. While the typically-developing pupils tended to engage in activities with friends and could be said to share a hobby though, this was rarely the case for the pupils with ASD. The pupils with ASD spoke of having shared interests with friends, but did not seem to engage with these pursuits beyond simply sharing an interest in them:

"We talk about the same stuff. They share my jokes. And, yeah, we share our opinions. We've got close interests." (Pupil with ASD)

"Well, I went to church with one of them when I was really, really young like 5 years old and our parents thought 'why not have us go round to their house for one time'. [...] and then we both found 'oh look we play the same game', and then we got together on Skype, and then he introduced me to friends from his school and we kind of have a bit of a friend group online now." (Pupil with ASD)

The final function of friendship that motivates Secondary pupils with ASD to form and maintain friendships is that they can use their friends as a sounding board for their thoughts, beliefs and ideas. The pupils with ASD are motivated to have friends so that they have access to a listener who can confirm what they hear or offer an alternative opinion and guide the pupil to the correct line of thought or behaviour. This was a notion that emerged in almost all of the interviews with pupils with ASD, but only in a small number of the interview with typically-developing pupils. Once more, here the pupils with ASD spoke about the benefits that their friend would provide for them, but did not acknowledge that they could offer this service to their friends in return:

"I know that the main thing I'm worried about I can ask them, talk to them about it. And you know I have someone else who I can talk to." (Pupil with ASD)

"Just so that you can make decisions and have someone else's view on something and they can tell you their view and that might change your mind and you might make a more sensible decision. " (Pupil with ASD)

Friendship progression from Primary to Secondary school

An equal number of both typically-developing pupils and pupils with ASD talked about how they had developed a better understanding of themselves as they have grown older and progressed from Primary into Secondary school. This led to another theme from pupil interviews, which provided answers to research question 4:

RQ4: Do Secondary pupils perceive that their friendships have changed from Primary to Secondary School, and is this true of both ASD and typically-developing populations?

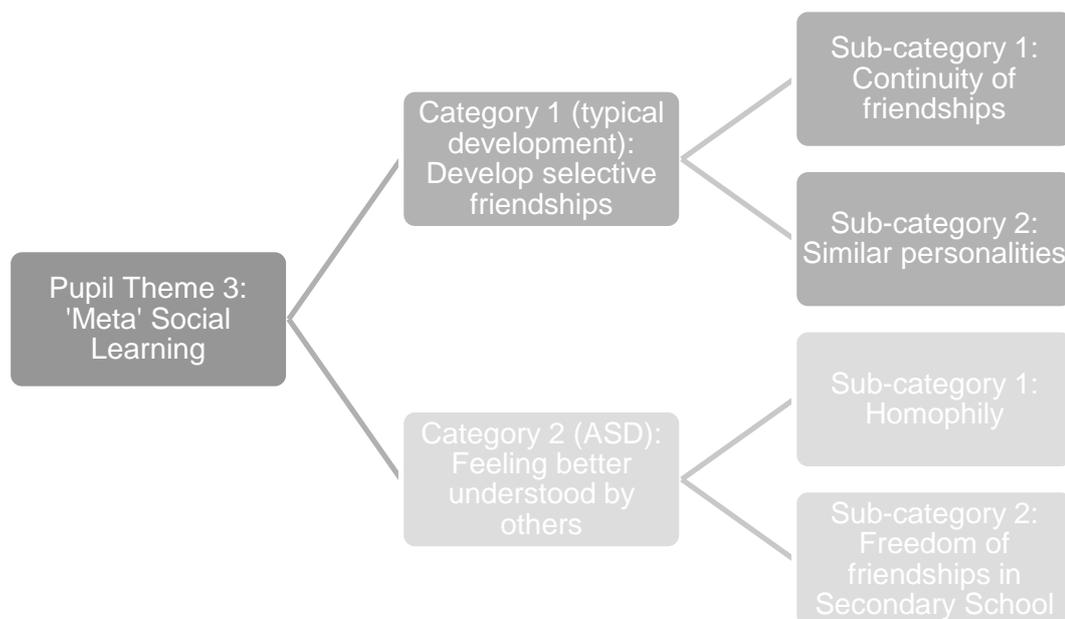


Figure 4. Pupil Theme 3: 'Meta' Social Learning

This theme is displayed in Figure 4.

The theme is referred to as 'meta' social learning, as the pupils now demonstrate a better understanding of self and are thus more self-aware and able to reflect on their own social learning than they were when in Primary school. This deeper level of social interaction experienced by typically-developing pupils was further exemplified by the typically-developing participants frequently speaking of the importance of the length of their friendships.

As noted above, this better understanding of self was equally commonly evident in interviews with typically-developing Secondary pupils:

"Yeah I used to like, I had a lot of friends in Primary but like sometimes I'd do silly stuff, but now I'm like more grown up so like I know like my own actions," (Typically-developing pupil)

and pupils with ASD:

"I've gotten a lot more support. I have grown up a bit and I've kind of understood what people mean a bit more, and I've gotten into less arguments and that kind of thing." (Pupil with ASD)

For typically-developing pupils, this ability to take a more metacognitive approach to friendships now that they were older meant that they could use their knowledge of self to develop more selective friendships. Primary school friendships were seen as being more superficial and general, but given time, where these friendships had continued on into Secondary school, they had increased in depth of friendship. This continuity of friendship and enhancing of the depth of the friendship meant that the typically-developing pupils were able to use their knowledge of self to choose friends not just who had similar interests or hobbies to them (a friendship motivation factor, as noted above), but who had similar personalities.

The importance of continuity of friendship was noted by many of the typically-developing participants, but was not raised by any of the pupils with ASD in their interviews. It was observable also when pupils were asked the length of their friendships with their current friends. Almost all typically-developing pupils had current friendships that had existed since Primary school, with the exceptions being in pupils whose families had moved home or who had went to a Secondary school that no-one from their Primary school had come to. A few of the pupils with ASD described having current friends who had been their friends since Primary school, but most talked of friends they had only known since beginning Secondary school. There was a great range of answers provided here with one pupil with ASD even listing as a friend another pupil whom they had been friends with since just two days earlier. In summary, it appears that typically-developing Secondary pupils continue their friendship from Primary and build on them, whilst pupils with ASD are more likely to start afresh in Secondary school.

In these examples, typically-developing Secondary pupils describe the importance of continuity of friendships:

"Well, my Primary school friends I don't think I've changed with them, we're still kind of we, we do the same thing, we muck about a bit and it's all the same childhood relationship we have so it's kind of fun. And yeah, with the people at Secondary school, it's, I can, I sort of do the same things with my Primary school friends but because I've known my Primary school friends for longer I do it more often and they're more of a friend than the new people." (Typically-developing pupil)

"I think just knowing each other for a long time creates like a bond between them and as I said, I think interests are a big part of it. Sense of humour can be. And so, if you don't like talking to someone else it's not going to be very enjoyable. 'Cus it's all about enjoying yourself with other people." (Typically-developing pupil)

Typically-developing pupils also demonstrated an improved ability to understand themselves by speaking of their friendships now going beyond sharing an interest with their friends and expanding into friendship with those who had similar, complimentary personalities to their own. The typically-developing pupils are honing their friendships to be with those best suited to be friends with them in terms of personalities, and their insight in acknowledging this is evidence of a progression from Primary school:

"I don't know, just find who else would be suited towards me as a person."

(Typically-developing pupil)

This typically-developing pupil talks of the way in which friendships were driven by a shared interest when the pupils were younger, but now this is not the case:

"If say you don't relate to them or you don't like the same thing it can brush off quite easily rather than say if you're younger, in say Primary school, if they don't like the same thing as you, you can be a bit hostile towards them I guess just because they don't like the same thing. Whereas now it's not really like that." (Typically-developing pupil)

Instead, their friendships are now driven by similar personalities, as they have the skills to go beyond superficial friendships built entirely upon shared interests, even though this will be a key factor in motivating the initial development of friendships, as described above in terms of factors that motivate pupils to form and maintain friendships.

For Secondary pupils with ASD, they described that they are now more better at understanding themselves, just as typically-developing pupils did, but they use this ability to reflect on their friendships to note that they now feel better understood by

others than they did in Primary school. This was observed by nearly all of the pupils with ASD but only two of the typically-developing pupils.

One pupil with ASD described how their friendships have improved as they can better regulate their behaviour and their friends can better manage their responses to that behaviour and understand the pupil's needs:

"Yeah, it still happens a lot, but nowhere near as much and my friends have become a little bit more respectful of that and we kind of just forget about it and move on." (Pupil with ASD)

"I find them, they're very, I can talk to them if I'm sad or I have something to talk about. They're very understanding. They, you know, I see them in the library a lot, they go outside and have fun a lot as well, and I can rely on them, I guess." (Pupil with ASD)

This touched on previously discussed thematic elements of friendship of pupils with ASD, of their friends being able to protect them and of the development of trust with a friend.

Pupils with ASD's perception of their friends as being more understanding now they are older and in Secondary school was divided into two-subcategories. This improved peer understanding was achieved by homophily, the experience of finding 'like' friends (McPherson, Smith-Lovin, and Cook, 2001), in this case those who also have social difficulties (Campbell and Marino, 2009).

The pupils with ASD reported that their current friends understood them better because they were more like them. One of the pupils with ASD addressed very directly that they felt a core strength in their friendship with their 'best friend' was due to the fact that their friend could understand and relate to them well because

they had experienced similar social difficulties. The challenges that both faced brought them together:

"I have troubles with social situations, but he kind of does, but like not on the Autism spectrum, but because he's gay, and he finds it hard to, he's, I think that kind of, it makes it easy to talk through both our problems in public. You know, generally, just socially it's harder for both of us and I think we can find it easier to talk to each other." (Pupil with ASD)

The structure of Secondary schools in which pupils are able to interact with a wider range of people and thus have greater opportunity to form friendships was discussed as an additional factor which meant that pupils with ASD were able to become friends with peers who were better at understanding them. This was noted by a few of the pupils with ASD, but none of the typically-developing pupils, possibly primarily because they were generally continuing existing friendships from Primary school:

"I mean, like, there's more people like me. Because in Primary school there's like quite a small community of people." (Pupil with ASD)

"Yeah, it's different now, 'cus we've got a lot more classes that we're in together. And we communicate a lot more, 'cus now we've got phones. So we can just like talk and it's much easier cus we're a lot older and we're a lot more responsible to go see each other." (Pupil with ASD)

Pupils with ASD explained that these opportunities to meet more like-minded people and to spend time with wider groups of peers meant that pupils were able to source friends who better understood them. This ability to identify peers who better understood them was possible due to the improved understanding of themselves which pupils with ASD had also noted as a skill they had developed as they had

grown and progressed from Primary to Secondary school. The pupils with ASD feel their friends better understand them now and this is aided by greater opportunity for meeting those with similar interests or who have similar difficulties to them.

Social media and friendship

Discussion with participants around their usage of social networking sites (SNS) and online gaming addressed research question 5:

RQ5: What purpose does social media serve in the friendships of Secondary pupils with ASD and does this differ from their typically-developing peers?

The emergent theme around social media usage is displayed in Figure 5.

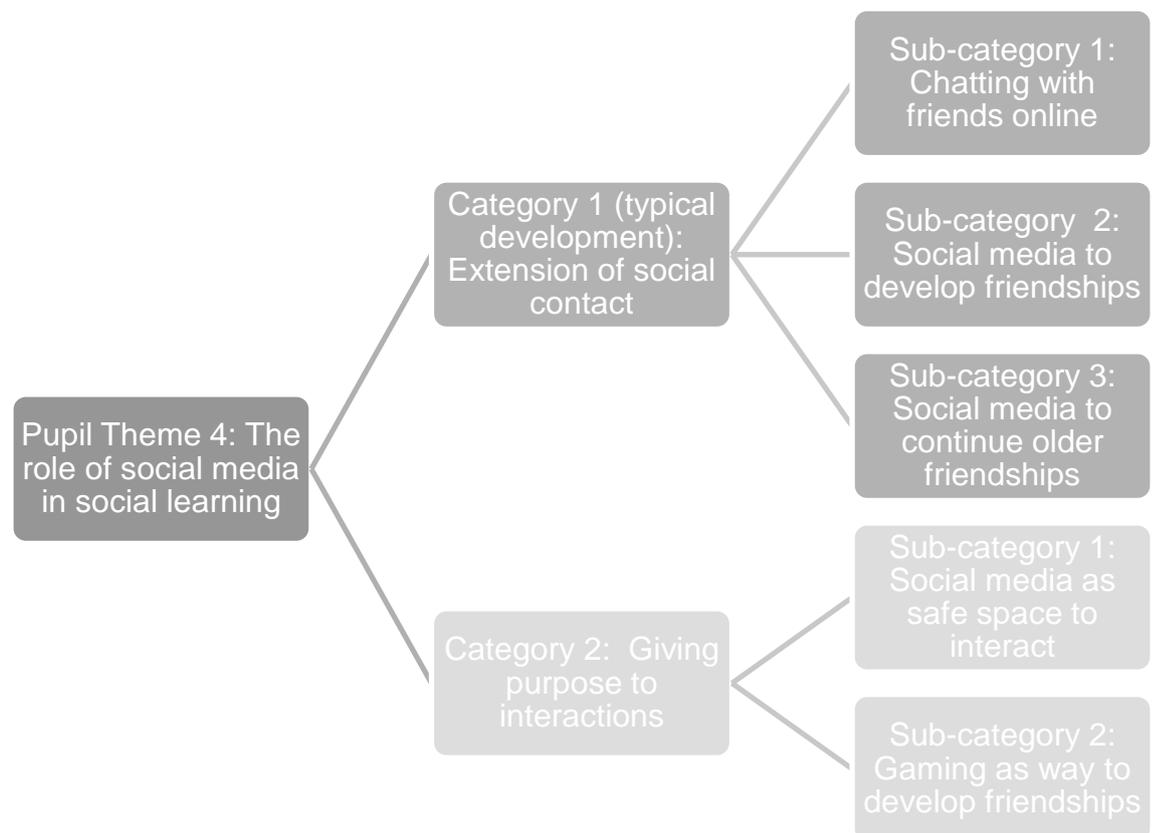


Figure 5. Pupil Theme 4: The role of social media in social learning

For both groups it was common for participants to use social networking sites and play games online with their friends. SNS mentioned by pupils (ordered by

frequency of mention) were Facebook, Instagram, Snapchat, WhatsApp and Twitter. Games were played online via Xbox Live, Playstation Network, or through PCs, with Skype being used to chat whilst playing the games. The role of social media (SNS and online gaming) differed between the Secondary school pupil groups. For typically-developing pupils, social media usage was generally reported as a casual endeavour, used to extend standard social contact. For pupils with ASD, the social media gave purpose to their interactions, as it was reported as a safe space to take part in interactions with their peers. Whilst typically-developing pupils reported using social media to develop friendships with others, pupils with ASD generally did so when gaming, not through SNS. Pupils with ASD were also less likely to use SNS than their typically-developing peers, as all of the typically-developing children reported using SNS, but several of the pupils with ASD did not. Explanations given by the pupils themselves included asserting that their parents would not allow it, that they didn't see the point in SNS, or that they had been banned by the sites themselves. Pupils with ASD also often reported that they did not see the point in using SNS.

Typically-developing Secondary pupils explained that the role of social media in their lives was to extend their social contact. This was achieved through chatting with friends through social media, through developing friendships with peers, and by providing a forum to continue friendships with friends who they may no longer see in school or at home.

All of the typically-developing pupils spoke of using social media to chat with their friends, but only two of the pupils with ASD did so. This chat was used for functional purposes such as organising friendship experiences or extending existing interactions:

"Just to talk to them about what's happened or if we're going to meet or anything."

(Typically-developing pupil)

"Yeah because it means we don't have to go over to each other's house and we can chat til like 8 o'clock whereas I wouldn't be able to stay over at their house to like 8 o'clock. So I'm able to play with them and have fun doing what we like." (Typically-developing pupil)

Using social media was also a way for Secondary pupils to develop their friendships, with several typically-developing pupils reporting that it had been useful in helping them *"get to know each other more"* (Typically-developing pupil). This was not reported by any of the pupils with ASD.

Social media also provided a way to invite new people to events and include them in the group, creating potential new friendships:

"it just helps organising meet-ups and things and then you get to know other people better. 'Cus say if you're organising something and then you say 'Oh if you have anyone else to invite, you can', they might invite someone you don't know and then you meet them and you make a new friend just through that." (Typically-developing pupil)

Three of the typically-developing pupils also described how social media helped them to stay in contact and continue friendships with friends who they did not see any more:

"Well, yeah, because I like, say Amanda she went to my Primary school and we like, we don't meet up with each other we just like talk on Snapchat." (Typically-developing pupil)

"There's some friends who I don't see who is in school. Most of them I send messages to them a lot, like Blackberry messenger. Instagram as well. And I use Snapchat quite a lot as well." (Typically-developing pupil)

None of the pupils with ASD spoke of using social media to continue or maintain prior friendships.

For Secondary pupils with ASD it seemed the primary role of social media in their friendships was to provide an underlying purpose to their interactions with their friends. As noted above, this group did not talk about engaging in companionship or communication simply for their own sake. Here, social media serves provides a context for interactions, and that can be as a safe space to communicate with their peers, or in the case of gaming, as a way to develop friendships.

Four of the pupils with ASD spoke of social media providing a safe space for them to interact with their peers. This was not raised by any of the typically-developing pupils.

One pupil described SNS as being a less complicated place to talk through their problems with their friends:

"Because I don't really have to say it to their face." (Pupil with ASD)

Whilst another elaborated on this to explain that talking online, as it does not require the immediacy of verbal communication meant that they had time to think and consider their response in more detail:

"I like talking in person more, but sometimes when I want to talk about something specific it gives me more time to think about what I'm going to say if I talk online."

(Pupil with ASD)

Taking part in online gaming was equally common in both typically-developing pupils and pupils with ASD, although only with male participants. The typically-developing pupils reported that they would only play these games with pre-existing friends from home or school, but two of the pupils with ASD had met new friends through their gaming communities, first online and then meeting in real life, including attending gaming conventions with their friends.

For the pupils themselves, they stated that the co-operative element of the games they play online with their friends, in which they all must work as a team, aided them in developing their friendships with those they played with:

"When we're playing the game, it's really helpful, because the same situations that happen at school happen there, but I've got friends to back me up there if I make the wrong decision. Which is also really helpful. And they respect that I don't always quite understand what other people mean, because the game is designed so that it's pretty much impossible not to be a massive jerk. Half of winning the game is to be as small a one as possible." (Pupil with ASD)

Also, as the game is a controlled environment, in which the player can opt in or out and can control the noise levels, amount of interaction necessary, the pupils with ASD felt they were better able to take part and interact with their peers:

"Yeah, so when I was pressing a specific keyboard key or you can have it as a space bar if you want to, or anything you prefer, and then you just click it and you'll be able to speak. And then when you let go of it they can't hear you. And that's why I feel comfortable more? 'Cus if I knew like, I realise I'm talking too much. [...] if I don't want to really talk I don't have to 'cus it's like I can choose to talk if I want to." (Pupil with ASD)

The ability to take part in a co-operative, challenging, purposeful activity in which they were able to exert control and makes choice over the environment and their involvement meant that the pupils with ASD had been able to develop their friendships with both existing and new friends.

4.3.2 Interview with parents

As well as providing additional information and evidence around the themes that emerged from pupil interviews, interviews of the parents of Secondary pupils with ASD and their typically-developing peers were compared to address research question 6:

RQ6: How do parents of Secondary pupils with ASD perceive the friendships of their children, and how do these perspectives compare with those of parents of typically-developing pupils?

Parents were able to provide an overview of their child's friendships throughout their childhood and early adolescence, both in and out of school. They were able to add further detail and alternative perspectives to what was said by their children. By comparing the themes emerging from interviews with parents of Secondary pupils with ASD with those of the parents of the typically-developing pupils, it was possible to locate where the differences lay in perceptions of friendships and what perspectives and concepts may be unique to pupils with ASD and their families. Three themes were identified, and these related to the function of friendships, their parental worries, and their thoughts on supporting the friendships of pupils with ASD. A discussion of each theme follows.

Functions of friendship

When discussing their child's friendships at school, notable exceptions emerged in what purpose parents believed friendship served for their child. This theme is illustrated in Figure 6.

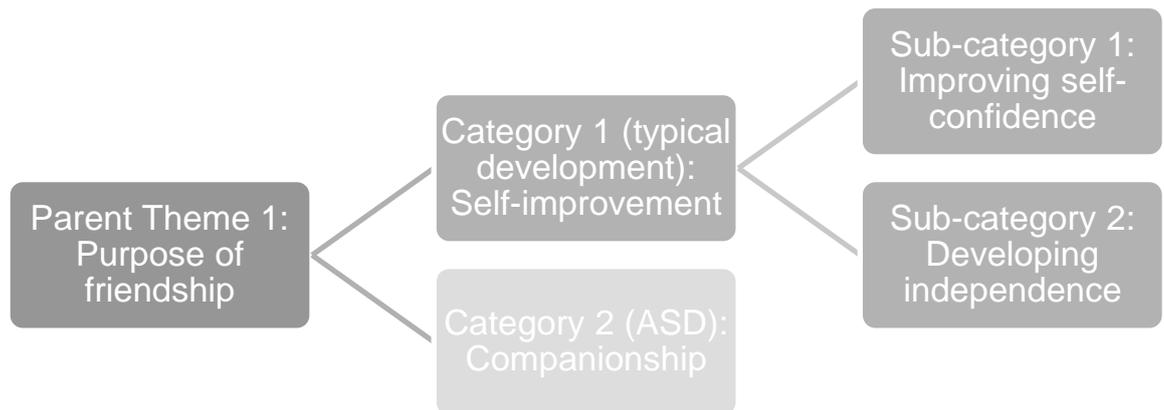


Figure 6. Parent Theme 1. Purpose of friendship

Parents of typically-developing pupils tended to speak of how their child was able to improve themselves through friendships. Group membership and the responsibilities that go along with this were seen as the greater purpose of friendship for typically-developing pupils. They were motivated to make friends and become part of a group as they experienced benefits from the co-operation and social learning that this involves. This was explained by parents as being what their children get from their friendships:

"I think it gives him self-confidence. He likes being part of a group." (Parent of typically-developing pupil)

"He's happy, he enjoys it. I suppose it gives him confidence as well." (Parent of typically-developing pupil)

Parents of all pupils felt that they were now less receptive to parental involvement in their friendships but while most of the parents of typically-developing pupils felt that their child's independence had been improved by their friendships, only three parents of pupils with ASD felt this was the case:

"They're now at an age where they don't want us to accompany them, so they go out and do these things." (Parent of typically-developing pupil)

"They're growing up and they have to break that spell, because they're moving on with that journey of life. They've got to do it when they come to work, make new friends, so I suppose that's why it's different. At school he's travelling there and back and it's giving him confidence." (Parent of typically-developing pupil)

Parents of pupils with ASD found it more difficult to name what they thought their child got out of friendship or what motivated them to have friendships. The parents of all pupils with ASD except one did feel that their child did want to have friendships, but they found it difficult to suggest why their child wanted them. The parents themselves all noted that they wanted their child to have meaningful friendships. The parents of the typically-developing pupils did struggle to answer questions around friendship motivation and purpose also, but they mostly acknowledged that this was because they had never thought about it before, or had cause to. The parents of pupils with ASD had considered it, but could not think of an answer.

The one function that friendship served for Secondary pupils with ASD, from parents' perspectives, was companionship. This is in opposition to the reports of the pupils' themselves, as the pupils with ASD did not generally state that they were driven by any urge to have companions or be around people, which suggests a schism between how the pupils with ASD see their friendships, and how these are seen by their parents:

"I think he gets the same things out of friendship that you or I do. He likes contact, he likes making people laugh." (Parent of pupil with ASD)

"He gets a lot out of his friends actually. He really relies on them. During the holidays when they're not around he gets bored. He relies on them and the things they do together. His friends are really important to him, they mean a lot to him."
(Parent of pupil with ASD)

Despite their beliefs that their children sought friendships to experience companionship, it was common for parents of pupils with ASD to note that their child enjoyed the company of others but often struggled to interact with others when there was no blatant purpose to the interaction. "*Chit-chat*" and "*conversation just for the sake of conversation*" (Parent of pupil with ASD) were things that Secondary pupils with ASD often found challenging, and this may act as a barrier to companionship.

Parental anxieties around friendship

In speaking on their child's friendships and the difficulties that these friendships may bring, a theme emerged relating to parental worries about their child's friendships.

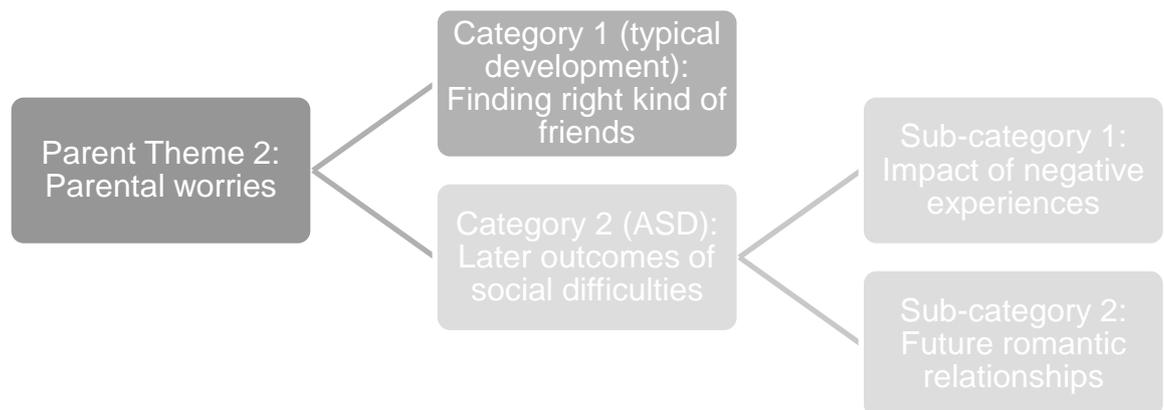


Figure 7. Parent Theme 2. Parental Worries

This theme is displayed in Figure 7.

A clear distinction was observed here in terms of the worries of parents of Secondary pupils with ASD and parents of typically-developing pupils. Every parent of a pupil with ASD explicitly stated that they worried about their child's friendships and the impact of their child's social difficulties, with only one of the parents of the typically-developing pupils having worries at the time of interview, although others had felt worried at other times.

The category of parental anxiety that was most common in interviews with parents of typically-developing Secondary pupils was worries that their child would end up with the wrong kind of friends. They considered it important that their child find friends who would be supportive and not lead them to get into trouble at school. This was a category reported by all of the typically-developing pupils' parents, but was only reported by two of the parents of pupils with ASD:

"Keep the ones away that - I don't know - when you get one that will pick on someone, it will then end up a group of them and then they'll all start being horrible."
(Parent of typically-developing pupil)

"Try and get him to the ones [referring to potential friends] who will be reasonable, and want him to go as well." (Parent of typically-developing pupil)

For parents of Secondary pupils with ASD, their worries revolved around the impact their child's social difficulties will have on their later friendship and broader life outcomes. This category was divided into two sub-categories: worries around the impact of negative social experiences, and worries around future romantic relationships.

Most of the parents of pupils with ASD spoke of the ways in which their children's negative social experiences had influenced the child's friendships. Two of the

parents of typically-developing pupils spoke of difficulties their child had experienced, but they felt that their child had managed to get over these and learned from the experiences, so they were no longer worried about them.

The effects of negative social experiences described by parents of Secondary pupils with ASD related to their child's response to experiences of rejection and failures to make friends in the past:

"He went through a phase when he was much younger of thinking everyone was his best friend, and they didn't want to be friends with him. Which was difficult." (Parent of pupil with ASD)

"He seems to just change in his head one day, that they've done something that he doesn't like and he's decided 'That's over'." (Parent of pupil with ASD)

These parents felt that their children now engaged less regularly in trying to make friends as they were afraid of rejection and didn't have the social skills to prevent it from happening again.

One bad experience with a friend can be enough, and they would then no longer be friends with that person. This was a factor which prevented continuity of friendships, as noted above as being a factor which allowed typically-developing children to develop and enjoy their friendships as they grew older. As this pupil with ASD was preventing themselves from experiencing continuity of friendships, they were not able to experience whatever benefits that come with this. Parents of pupils with ASD feared that their child's negative experiences would lead them to become socially-isolated and unhappy.

Three of the parents of pupils with ASD discussed their worries about their children's future when they went on to have romantic relationships. None of the

parents of typically-developing Secondary pupils described having any concerns around this.

For one of the parents of pupils with ASD, this was a source of great worry:

"It's scary, thinking about when he's older, when he meets a partner and that."

(Parent of pupil with ASD)

This was because they did not feel that their child was able to commit fully to their friendships or that they were really all that interested in them, and the parent felt this pattern may replicate in their relationships with romantic partners.

Another of the parents of Secondary pupils with ASD felt that the difficulties their child had in reading social situations would make having a romantic relationship particularly challenging:

"He's very interested in how to have a girlfriend. It's an extra complication [...] It's all those things normally you'd learn as a 12 or 13 year old boy or girl, and it's all bit messy and horribly embarrassing and all the rest of it. If the rest of your life is messy and horribly embarrassing anyway, then is there anything you can do to just make that bit easier? I think it's particularly about this reading nuance thing, which is incredibly hard." (Parent of pupil with ASD)

The parent spoke of the importance of media in helping their child learn how to behave, socially, and that this was a particular worry for them as it would be likely the child would be exposed to pornography when older, and this would raise difficulties in terms of their understanding of consent and how romantic relationships should function in reality, as opposed to in the media.

Supporting friendship of pupils with ASD

The final theme which emerged from interviews with parents of Secondary pupils with ASD and their typically-developing peers is unique as it was the only theme in

which it was not possible to compare the parents' response by their grouping. This was not achievable because parents of typically-developing pupils did not think that it was possible or necessary for themselves or schools to support their child in their friendships. This was not the case with Secondary pupils with ASD though, as they were still more likely to experience some sort of support from their parents or an adult in school to help them with their friendship. All of the parents of pupils with ASD felt that they still had to support their child, and half of the parents believed that school staff had influenced their child's friendships.

The theme from parent interviews surrounding supporting Secondary pupils with ASD is displayed in Figure 8. In this figure, all categories refer to pupils with ASD.

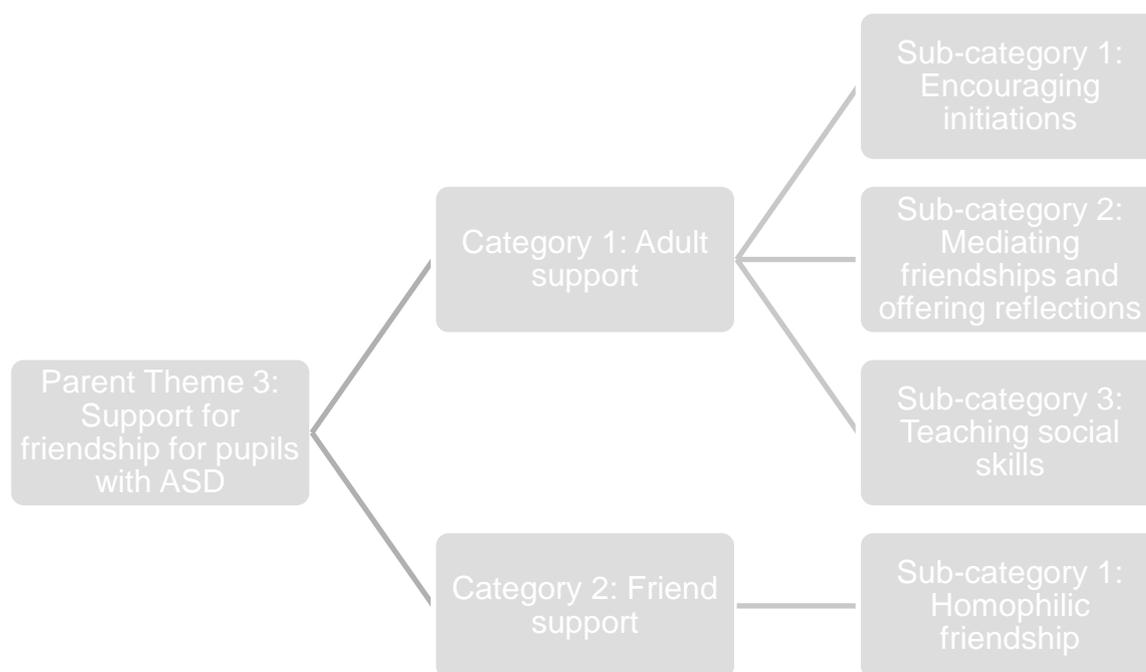


Figure 8. Parent Theme 3: Support for friendship for pupils with ASD

Parents of pupils with ASD explained that the friendship support that Secondary pupils with ASD would benefit from came from adults and their friends themselves. The adult support that pupils with ASD benefited from came in three forms, according to parents of pupils with ASD. The adults would encourage initiations,

mediate friendships and offer reflections and perspectives on friendship experiences, and teach social skills.

It was reported by almost all of the parents of pupils with ASD that their children did not tend to initiate interactions with friends or initiate ideas for friendship experiences such as arranging meetings or contact outside of school. The pupil with ASD is willing to make friends or take part in friendship activities, but would not be the one who would begin a friendship or suggest mutual social activities:

"They'd have to approach him, he wouldn't approach them." (Parent of pupil with ASD)

"I often say to him, 'I think you ought to text Lewis, to say hello. If you don't text people they stop eventually.' I do try to encourage him to text people." (Parent of pupil with ASD)

Several of the parents of pupils with ASD spoke of the importance of having an adult to mediate the friendships of their children. They were the ones who would provide this service at home, and those who felt their child had access to this in school were able to name one key adult who the pupil had a trusting relationship with who could provide this support. It was notable also that in schools, this support tended to be delivered in a quiet, calm, and less strenuous environment outside of the standard classroom environment. For example, pupils received this support in the Special Educational Needs Resource Base, or in a private study room.

The type of mediation that parents described providing for the pupils with ASD could be in the form of direct, immediate supervision and involvement of an adult:

"When she has had friends over, I've realised I've needed to be close by. At times, I've needed to intervene and get the two to be involved together, to prevent her taking over and doing her own thing." (Parent of pupil with ASD)

Or in a separate context, in which the pupils would not necessarily be aware of parental involvement, and which takes place after the pupils were unable to resolve the situation themselves:

"He'll storm off. Sometimes they'll even for days not talk to each other, and we have to talk to parents to resolve it, to get it back to normal." (Parent of pupil with ASD)

Half of the parents of Secondary pupils with ASD interviewed felt that the social support that schools had provided previously had been satisfactory, with the other half commenting that they wanted schools to provide more social skills training for pupils with ASD. Even pupils with ASD whose parents were generally comfortable with how their child was managing in their friendships explained that they felt this would be beneficial:

"He's quite happy in isolation [...] but I don't think there'd be any harm in someone helping him understand the values of friendship and strengthening friendships."
(Parent of pupil with ASD)

As described previously, Secondary pupils with ASD were reported as finding it difficult to see the purpose of some conversations or social interactions, and did not seem to see interaction as a pleasurable experience in and of itself. As such, one parent suggested that it would be useful to teach their child how to 'hang out' and converse just for the sake of conversing:

"She needs the art of chit-chat [...] That's an important skill for her and we're still working on it." (Parent of pupil with ASD)

Several of the parents of Secondary pupils with ASD reported that friends could be very useful in supporting the pupil and helping them navigate their friendship experiences. Several parents reported this phenomenon, and every one of those parents explained that the supportive friend was someone who was 'like' the pupil

with ASD, in that they too were 'different' and have been through negative social experiences but had managed to learn from these. This is homophily, which pupils with ASD themselves highlighted as an element of how they now felt better understood in Secondary school as opposed to Primary:

"He gets a sense of talking to someone who understands and enjoys talking about the same things that he does. I think he gets out of it a sense that there's somebody else who's different he can talk to." (Parent of pupil with ASD)

Parents of pupils with ASD's descriptions of homophilic friends offering support to pupils with ASD is similar to the notion of a friend as a sounding board, which was a motivating factor for pupils with ASD to form and maintain friendships. This social learning via the instruction of friends was explained by a parent of a pupil with ASD, detailing prior occasions in which this homophilic friendships support had helped the pupil with ASD navigate a confusing situation:

"He's had a couple of problems in school where he's inadvertently upset people without meaning to, because he couldn't read the situation well, and I know he talked to Lewis and he was very supportive of him, and told him what he thought about the situation and I think he found that very helpful." (Parent of pupil with ASD)

Three of the parents of pupils with ASD explained that they had in the past taken their child to clubs designed specifically for pupils with ASD to seek out this homophilic friendship, but they did not feel this had been successful, instead, one explained that it need not be ASD that the pupil has in common with their potential friend, but simply that they have had similar experiences as each other and thus can relate to what the other tells them:

"They don't all necessarily have Autism, but they have other issues that set them apart from other people." (Parent of pupil with ASD)

5. Discussion

5.1 Overview

This study aimed to examine the friendship experiences and perceptions of pupils with ASD in mainstream Secondary school settings and how these may differ from those of typically-developing pupils. A mixed methodology framework was utilised to compare the experiences and perspectives of pupils with ASD who attended mainstream Secondary schools with their typically-developing peers. These comparisons concerned quantitative measures of friendship quality, and qualitative reports of friendship experiences and perceptions of friendship. The friendship motivations of each group were compared using quantitative and qualitative measures. Qualitative data from each group were also used to clarify differences in perspectives around the development of friendships from Primary to Secondary school and of the usage patterns of social media as a social activity. Peer perceptions of the inclusion of pupils with ASD were explored to demonstrate the pupils' status in friendship groups in the class.

Through interviewing parents of Secondary pupils with ASD and their typically-developing peers, evidence of the differences between those groups in terms of perceptions of friendship were noted and advice for supporting pupils in their friendships was provided.

This chapter provides a discussion of the main findings from this present study, providing answers to the research questions along with considerations of the study's strengths and limitations. Suggestions for future research that would extend the findings of this research are provided, along with explanations of the implications for Educational Psychology (EP) practice based on these findings.

5.2 Perspectives and experiences friendship of Secondary pupils with ASD

5.2.1 Perceptions of friendship

The Friendship Quality Scale (FQS; Bukowski et al., 1994) was administered to Secondary pupils with ASD and their typically-developing peers to compare ratings of friendship quality. None of the differences between pupils with ASD and typically-developing pupils ratings on the FQS subscales met the level of statistical significance. However, this was by no means unprecedented, and there is a generally inconsistent pattern of significant/non-significant differences reported across studies into friendship in young people with ASD for these different friendship subscales (Petrina et al., 2015). For example, the differences in FQS scores between pupils with ASD and their typically-developing peers may only present in the help and closeness subscales (Calder et al., 2013), or in other studies may only present in the companionship subscale (Chamberlain et al, 2007). The only consistency is that pupils with ASD score higher in conflict ratings and that this has never been shown to be statistically significant (Petrina et al., 2015).

In comparing the FQS results gleaned in this study against those of other studies that used the FQS to compare the friendship quality of pupils with ASD and typically-developing pupils, no clear patterns emerged. In the studies that looked at Primary-school-aged pupils, the only ratings that consistently correlated with those in this study were ratings on the Conflict subscale, which were similar across all studies not just in the way that they did not significantly differ between groups, but that they were fairly consistently scored across studies. This suggests that levels of Conflict tends to be consistent across both pupils with ASD and typically-developing pupils, and remains consistent from Primary into Secondary school. The Help subscale ratings in the current study were higher than those seen in prior Primary research. This may be due to pupils feeling more helped or being more aware of the help afforded to them by friends, as they get older.. This could not be said of the

other subscales though, but nor was there a pattern throughout the other studies. On the Companionship subscale, this study was similar in scoring to Bauminger et al (2008), but both groups scored higher in the research of Bauminger and Kasari (2000) and Calder et al (2013). On the Closeness subscale, Bauminger et al (2008) reported similar scores to this study, but both groups scored higher than in this research in Bauminger and Kasari (2000), and the typically-developing children reported higher scores in Calder et al (2013). Finally, In terms of the Security subscale., both groupings in Bauminger et al (2008) and Calder et al's (2013) research scored higher than the current study, and the typically-developing pupils scored more highly in Bauminger and Kasari (2000). This uneven pattern of results demonstrates that despite a consistent message from prior research that young people with ASD experience friendships of lower quality than typically-developing peers, there is not a lot of consistency within these results in terms of subscales scores, as well as differences, and meta-analytic work be useful in terms of comparing scores across a broader range of research. The uneven pattern may be informed by general inconsistencies in terms of age or cognitive ability level in the participant groups in the current body of research.

It was not possible to compare the FQS results here more directly with those of Locke et al (2010), which also examined friendship quality amongst Secondary-school-aged pupils, as specific scores are not reported, only the outcomes of statistical analyses of these. This prevents deeper examination of the possible differences in results of that study and this, which looked at similarly-aged pupils. Notably, whilst Locke et al (2010) did report that Secondary-aged pupils with ASD experienced friendships of lower quality than their typically-developing peers, this was true on only two of the FQS subscales,.

The results in this present research then suggest that pupils with ASD do not experience friendships of significantly lower quality than their typically-developing

peers. However, there may be an explanation for this, despite it appearing to contradict prior research. In focusing on a 'best friend' as the FQS does (Bukowski et al., 1994), pupils with ASD may be advantaged, in that qualitative data gathered from this Secondary school sample indicated that typically-developing pupils at this stage of development did not consider themselves to have a 'best friend', but rather saw themselves as part of a wider friendship group. This was not the case of the pupils with ASD, who tended to have intensive relationships with one other person, their 'best friend' within smaller friendship groups. This was also observed in prior research (Dillon et al., 2014; Kuo et al., 2013).

Qualitative data revealed that the friendships of pupils with ASD and of typically-developing pupils did differ though. The friendships of both groups were different, in terms of the size of the friendship group, the intensity of friendships within that group, and the continuity of friendships. For example, one pupil with ASD named a friend who they had only been friends with for two days. It may be that the quantitative measures and scales used are not sufficiently sensitive for working with ASD populations, despite having been used in prior studies, as they do not provide sufficient detail and insight around the answers which participants provide.

The semi-structured interviews provided much insight into the perspectives of pupils with ASD, in comparison to their peers. All pupils involved in the research were able to reflect upon their friendship experiences and discuss their perceptions of friendship. Social learning emerged as a significant factor in the process of friendship formation and maintenance, but in different ways. For pupils with ASD, friendship is experienced with an individual 'best friend' and a small group of friends for them to learn from.

In describing the friendships of typically-developing young people, Dunn (2004) explained that it was possible for young people to belong to groups without having

particular close friendships. This was observed in the typically-developing pupils in this study, although did not seem true of the young people with ASD, who had their friendship needs met by smaller groups with one particular best friend.

This matches with the findings of prior research (Dillon et al., 2014; Humphrey & Lewis, 2008), in which pupils with ASD explained that larger group environments were stressful due to the overwhelming sensory and cognitive input involved. Given the diagnostic criteria for ASD requires that individuals have difficulties in social communication and sensory integration (American Psychiatric Association, 2013; World Health Organisation, 2012), it could be anticipated that those with ASD will struggle in larger groups, with them being too noisy, distracting and unpleasant to experience for those with ASD. This relates also to the phenomena in ASD of monotropism and monoprocessing (Lawson, 2011), in which an individual with ASD is only able to focus or process information from one source at a time, and can struggle to shift their attention to others. Polytropic behaviour allows many things to be attended to at the same time, and is characteristic of the larger friendship groups of typically-developing pupils. In contrast, typically-developing pupils tend to have larger friendship groups, meaning their learning takes place in a deeper and more complex way. In many ways, this is akin to Vygotsky's (1978) 'Zone of proximal development', in which learning must take place close to the learner's existing frame of reference and knowledge, so that they may be able to broaden these. If the learning experience is too challenging or far from what the learner already knows or can manage, they will not be able to bridge the gap and cannot learn, and this may be the case with large friendship groups for a pupil with ASD. Also, this preference for a best friend in pupils with ASD may relate to symptomology also, as the obsessional behaviour which is the norm in ASD (American Psychiatric Association, 2013; World Health Organisation, 2012) may be driving the more intense individual friendships.

Alternatively, This trend for pupils with ASD to utilise friends as a means to extend their learning and social development is not dissimilar from that of their typically-developing peers, as they too seem to use friends as a secure base from which to experience activities that extend their interpersonal skills (Newcomb & Bagwell,1995). What this research suggests though, is that young people with ASD do so in smaller groups, or with one particular figure forming the secure base.

Both conceptions and manifestations of friendships evolve as young people grow older (Newcomb & Bagwell, 1995). During the school-age period, friends are used to provide behavioural norms and facilitate the skills required for the regulation of emotion (Parker & Gottman, 1989). At this age, reciprocity, equality, co-operation are key foundations of typical friendships, with intimacy becoming an essential element during early adolescence (Newcomb & Bagwell, 1995).

Another crucial difference in the friendships of Secondary pupils with ASD and their typically-developing peers is the way trust is developed within a friendship, and perceptions of ways in which friends support one another. For typically-developing pupils, friendship is characterised as a reciprocal process in which friends are there to support one another in a reciprocal manner. For pupils with ASD, their explanations were of the importance of their friend being someone who could support them, but with no reference made to offer support in return. They perceived a unidirectional flow of support, in which the pupil with ASD was learning to trust their friends, but the opinions of the friend were not considered. This notion of the friend as a supporter emerged in the work of Humphrey & Lewis (2008) also. The building of trust and the importance it played in the friendship experiences of pupils with ASD was potentially illustrated by the fact that it was less common for pupils with ASD to visit their friends' houses or have their friends visit them at home than it was for their peers. Whereas every typically-developing pupil had been to their friends' house and had their friends visit them, this was not the case with the pupils

with ASD. One pupil with ASD explained that "*I don't really go round to other people's house. I don't really feel safe. I just like my own house*", an explicit demonstration of the way feelings of trust interfere with potential friendship experiences for pupils with ASD.

Perhaps the key finding from this area are that friendships of Secondary pupils with ASD are not poorer than those of their typically-developing peers, but different.

5.2.2 Friendship motivation

This study also utilised mixed methodology to compare the friendship motivations of Secondary pupils with ASD and their typically-developing peers. The Friendship Motivation Questionnaire (FMQ; Richard & Schneider, 2005) was used to provide a self-determination index (SDI) score that would give an overall picture of how motivated the pupil was to form and maintain friendships. It also provides subscale measures of intrinsic and extrinsic motivation factors. No significant difference was noted in terms of SDI between pupils with ASD and their typically-developing peers. This implies that pupils with ASD are equally as self-directed in their desire to have friends.

This is in contrast to the work of Whitehouse et al. (2009), who found pupils with ASD to be less intrinsically motivated in their friendships than their peers, with lower SDI scores. Both groups in Whitehouse et al's (2009) study rated themselves as less intrinsically motivated in their friendships than in the present study, with the ASD group being markedly lower. The reason for this distinction may be that the groups in the present study were matched for cognitive ability levels, or may be a reflection of the heterogeneity within the samples in both studies, which utilised a low number of participants. It may also have been caused by Whitehouse and colleagues' focus purely on pupils with Asperger's Syndrome. By focusing on pupils with ASD who are higher-functioning (Ozonoff, South & Miller, 2000), and by not

matching for cognitive ability levels, it may be the case that the participants in the prior research are cognitively aware of their difficulties in social interactions, and thus less self-motivated to form friendships than peers.

The one subscale in terms of friendship motivation in which the ASD and typically-developing groups differed was that of external regulation, with pupils with ASD scoring lower than their typically-developing peers. This suggests that pupils with ASD are less likely to engage in friendships for external reasons such as peer pressure, offers of rewards from others, or to impress others (parents, peers, etc) (Richard & Schneider, 2005). This is contrary to expectations and findings from prior use of the FMQ with young people with ASD. The findings in this current study demonstrate that pupils with ASD are less likely to be motivated by instructions of others, which may be due to being less empathetic (American Psychiatric Association, 2013), and often dislike being the centre of attention, which the FMQ takes as being one of its barometers of extrinsic friendship motivation. A desire to have friends has been noted in many other studies into the friendships of pupils with ASD also (Calder et al., 2013; Daniel & Billingsley, 2010; Dillon et al. 2015), implying that pupils with ASD are compelled to have friendships for self-directed reasons. One suggestion made by Whitehouse et al. (2009) was that it was possible that the lack of intrinsic motivation noted in their sample of pupils with ASD was due to earlier negative friendship experiences demotivating the pupils. Pupils with ASD in the current research though did not experience significantly greater amotivation than their typically-developing peers though, which suggests they do not feel incompetent in their friendships, and that they do perceive themselves as having control over the outcomes of friendship (Richard & Schneider, 2005). It may be the case that this is why pupils in Whitehouse and colleagues' sample were less motivated to initiate friendships, but as their research took place in Australia, perhaps inclusive practice in schools there were different to that of UK schools,

where this present research took place. It may be that their participants had begun to experience the learned helplessness that accompanies successive failures as a result of those practices.

Qualitative information around the differences in what motivates pupils to form and maintain friendships demonstrated that the driving force behind friendship formation for typically-developing pupils was to fulfil the companionship role. Friends act as sources of entertainment for the individual, and these friends are generally people who share hobbies with the pupil in question. For pupils with ASD, friendship plays a more functional role, as friends are seen as protectors who can look out for them and ensure they are not the victims of bullying (Little, 2002), who share interests, and who use friends as sounding boards to talk through and navigate social situations.

Pupils with ASD's desire for friends with similar interests to their own has been noted previously (Bauminger & Shulman, 2003; Carrington et al., 2003; Howard et al., 2006) and was very close to what was expressed by typically-developing pupils also. However, the reason why the typically-developing pupils' responses were coded as 'shared hobbies' instead of 'shared interests' was that there was often a process of active engagement with the interest. Mostly, the typically-developing pupils would discuss taking part in sporting activities with their friends, but this was not the case in the pupils with ASD, who seemed to be motivated to have friends who had shared interests but where engagement with that interest was limited to talk about it. This may relate to the obsessional aspect of ASD, in which pupils are intensely passionate about a given interest, and thus would be motivated to have friends who they could discuss their interests with. Pupils with ASD maybe disinclined to take part in sporting activities that typified many of the friendships of their typically-developing peers also due to the sensory experience of taking part in team sports being overwhelming for them.

The experience of friendship or companionship as a fun experience was common amongst the typically-developing Secondary pupils, but pupils with ASD did not talk of friendship this way. It may be simply that pupils with ASD do not consider friendships to be fun, but rather a necessary part of their lives as it serves a function for them in terms of support and having someone to talk through things with. However, nearly all pupils with ASD in this study did express that they were happy with their friendships and their friendship quality and friendship motivation ratings did not differ significantly from their typically-developing peers, meaning that they do seem to enjoy their friendships and seek them out for intrinsic reasons. This may relate to the social difficulties that pupils with ASD face, as they can find it difficult to understand and interpret social scenarios (American Psychiatric Association, 2013; World Health Organisation, 2012), and the implicit function of friendship - to provide companionship which is entertaining and can serve as a gateway to taking part in social activities together - is not apparent to them.

Again though, the message that becomes clear from this evidence is that friendships of Secondary pupils with ASD are different from those of typically-developing pupils, but they are similarly motivated and interested in having friends. It is not about a deficit, or lower standard of friendship, but a different experience.

5.2.3 Friendship development from Primary to Secondary school

Through interviews with Secondary pupils, this study was able to establish the different themes that characterise the friendships of pupils after they have made the transition from Primary school. Both groups discussed having greater understanding of themselves, a factor that has been noted in previous research (Connor, 2000). This ability to understand themselves and reflect on and plan their learning, in essence to be 'meta' and to make their own choices regarding friendships and regarding the friendship experiences they took part in, manifested in different ways in each group though, Pupils with ASD felt better understood by others, meaning

their friendships were typified by having access to a wider circle of potential friends in Secondary school, as opposed to the limited group they had in Primary. They also noted a preference for homophilic friendships, friendships with others who they perceive to be 'like' them. As such, the friendships that were noted by pupils with ASD were often those they had only formed since beginning Secondary school. Meanwhile, typically-developing pupils use this ability to be meta to be selective in forming their friendship groups, reflecting on their existing friendships to continue those which they felt were valuable and worthwhile, based on picking those who have similar personalities to their own. Most of the friendships of typically-developing pupils then were extended and refined friendships established in Primary school, in which the friendships with those who fit best with that pupil.

There seems then a common theme in both groups, as pupils are using their greater self-awareness and metacognitive skills to seek and solidify friendships with others that they are suited to, be that those who have similar personalities whom they have known for a long time and 'get them' (typically-developing pupils), or for those that they have cherry-picked from a larger group who are 'like' them (pupils with ASD). It may be the case that homophily represents the same thing to pupils with ASD as the interest in friends with similar personalities to their own does for typically-developing pupils. It is not clear whether perhaps homophily is a less-sophisticated version of the similar personality notion, perhaps like a prior developmental stage. Longitudinal research that focuses on friendships of pupils with ASD and their typically-developing peers at intervals over a period of years would demonstrate whether this is accurate. Alternatively it may be that the two are superficially similar but represent different outcomes, with 'similar personalities' being people whose personalities are complimentary to the pupil's own and thus the friendship experiences they generate are positive, whilst 'homophily' functions as a mode of social learning, in which a pupil who has experienced similar difficulties to a pupil

with ASD is able to help that individual to navigate social situations. This is similar to the notion of Vygotsky's (1978) zone of proximal development, with the homophilic friend being close-in-social-knowledge to the pupil with ASD and thus able to reflect on their own experiences to aid the pupils with ASD (Campbell & Marino, 2009). It may also be that when pupils with ASD feel their friends understand them, by virtue of having been through similar experiences, they feel better understood, and so have to worry less about being able to be understood by others, which can be difficult if you find social communication a challenge. The broader theme in the friendships of Secondary pupils with ASD seems to be the notion of the friend as someone who supports and guides the pupil through their social difficulties.

There exists a notable difference in the friendships of Secondary pupils with ASD and typically-developing peers, in terms of friendship continuity and length, and the way they relate to friends and reflect on what bonds them with their friends.

However, again, this difference does not necessarily mean that pupils with ASD's friendships are poorer than those of their peers, as pupils' friendship quality ratings were no different from their peers, and they generally report satisfaction with their friendships.

5.2.4 Social media usage

As noted in previous research, use of social media (social networking sites (SNS), online video games) were common social activities undertaken by almost all of the pupils in the study (Carrington et al., 2003; Church et al., 2000; Kuo et al., 2013; Kuo et al., 2014). Facebook, Instagram, Snapchat, WhatsApp and Twitter were all used, and games were played online via Xbox Live, Playstation Network, or through PCs, with Skype being used to chat whilst playing the games. Comparisons of semi-structured interviews with Secondary pupils were able to reveal the differential role that social media usage plays for typically-developing pupils and their peers with ASD.

For typically-developing pupils, social media extends their current social interactions from school into the home environment, as they chat with friends via SNS or whilst playing games, and may be able to utilise social media to continue older friendships with friends who they no longer see at school or even develop friendships, much like they described happening as they grew older, by providing a space to arrange social events or "*get to know each other more*". For pupils with ASD, in contrast, social media was a place that gave function to social interactions and in an environment in which they are able to exercise greater levels of control. This matches with predictions from Mazurek and Wenstrup (2013), who suggested that social media may offer users with ASD the opportunity to enhance their social interactions, as it is a more controlled and predictable environment than face-to-face interaction. Online gaming and SNS were seen as activities which provided a safe space to interact with peers. There is a clear purpose to the interaction when gaming, and social competition and connection have previously been noted as motivators for video game play in typically-developing children (Olson, 2010). This will be true particularly of young people with ASD as they may find the structure and prompting of video games, along with the reinforcements that come as part of the game, to be motivating and appealing, particularly given their difficulties in functional symbolic play (Mazurek & Wenstrup, 2013). Also, the additional time which is afforded to communicate via SNS means the pupil no longer has to process a lot of information in 'real time', meaning they can consider more carefully their responses to interactions with peers in a format that does not require attention to nonverbal cues, gestures, facial expressions or vocalisation (Walther, 2007).

It has been suggested that young people with ASD are particularly interested in video games as they tend to have strengths in visual perceptual skills (Shah & Frith, 1993; Mazurek & Wenstrup, 2013).

Prior research has pointed to the amount of time spent playing video games amongst young males and females with ASD as being problematic (Mazurek & Wenstrup, 2013). This being defined as spending more time playing video games than with friends or family, thinking life would be boring without video games, thinking about video games even when not playing, feeling upset when not able to play, looking forward to the next gaming session, and having trouble disengaging or stopping him/herself from playing, and is seen as being detrimental because it means that more time is spent engaging in game playing than engaging with friends or in other pro-social activities (Mazurek & Wenstrup, 2013). It is notable in this current research that participants with ASD were able to suggest ways in which online multiplayer video games could act as a social tool, and one which was supportive of their difficulties in social interactions. Young people with ASD were less likely to play video games with friends either online or in the presence of others (Mazurek & Wenstrup, 2013). This suggests that although this online play could be socially useful for young people with ASD, it is not used as commonly as it is in typically-developing groups. However, one could argue that this is imposing a neurotypical mindset, and indeed, given that the majority of the young people with ASD in this research reported happiness with their friendships, it could be argued that attempting to persuade those with ASD into more 'pro-social' play could be unnecessary, or not respectful of their wishes or opinions.

In many ways, the way pupils with ASD described the experience of playing video games online was akin to the way typically-developing pupils describing being a member of a club or sports team, as it involves co-operation, planning, and teamwork. The crucial difference though is that the video games take place in a controlled environment, in which the pupil with ASD is able to decide when and where they talk, when and where they listen, and can focus wholly on the world of the game. Similarly, SNS and written word communication are no less ambiguous

than verbal statements, but without having to read non-verbal cues during conversation, there are less worries. Pupils with ASD using social media are in control of their interactions in a way they aren't on other occasions, as they leave the game or site, put down their phone or switch off their computer, even mute or block others when they do not feel able to interact.

As noted above, playing video games provides a structure and purpose to the interactions, which makes them meaningful. This may also explain why SNS usage, whilst still common amongst pupils with ASD, is viewed differently than it is by typically-developing pupils. To pupils with ASD, use of SNS may appear to be pointless. Moreover, if a pupil has experienced negative or challenging social interactions during the time of their day when it is necessary to do so (during school hours), then it is unlikely they would seek this out in their own time. This is exemplified in quotes from pupils with ASD, as one pupil noted that the benefit of gaming was that it reduced the cognitive burden of interaction, "*I like the fact that I can do something with the group and have input whilst at the same time not have to put in all the input.*" Meanwhile, another pupil with ASD, when referring to friendships in general, talked about needing a time of peace away from friends, "*I think friends need a bit of privacy now and then. They shouldn't be together all the time.*" Examinations into self-expression on social media has indicated that young people with lower sociability were aided to express themselves, whilst those with higher sociability used social media as a means to continue socialising when physically away from their friends (Shapiro & Margolin, 2014). This is akin to the results from this study, with the many of the typically-developing pupils using social media as an extension of their 'real world' friendships, and pupils with ASD using social media as a safe or controlled way to take part in social interactions.

Social media has also been shown to be a useful aid to including young people who have potentially experienced social isolation due to their sexuality, race, illness, or

other reasons (summarised by Lloyd, 2014), and it appears that it may thus also offer support to young people with ASD.

It appears that the characteristics that distinguish adolescents offline shape their online activities (Davies, 2012), but there are ways in which social media can alleviate some of the difficulties that typify social interactions for pupils with ASD.

5.2.5 Inclusion in classroom social groups

The socio-cognitive mapping (SCM) exercise was utilised to examine the social inclusion of pupils with ASD in their form classes, using nominations of friendship groupings to assess the groups that exist within the classroom and the status of each pupil within their friendship grouping. This was an ethical way of examining peer perspectives on inclusion of individual pupils, as class mates did not have to comment on any particular pupil.

A heterogeneous picture of inclusion of pupils with ASD in classroom social groups emerged, as some pupils were rated as having nuclear group membership, although the majority had secondary or peripheral membership. None of the pupils with ASD were considered to be isolated, and all received at least one nomination of group membership from a classmate. The numbers of nominations of group membership were statistically significantly lower for pupils with ASD than their peers, which indicates that pupils with ASD are less likely to be seen by their classmates as having groups of friends within the classroom setting, or of being part of social groups within that class.

The SCM findings in this study triangulate with the earlier discussed findings from qualitative interviews, as pupils with ASD reported having smaller friendship groups than did their peers, which explains the lesser number of group membership nominations. Also, as this exercise focuses on only one of the pupil's class groups within Secondary school, it may be that the pupil in question is only a peripheral

member of the in-class groupings, but they have nuclear membership of a group of their choosing outside of class. This is given credence by the fact that for some of the pupils in the sample, classmates noted that they have "friends in different form classes", acknowledging that they do have some friends in school, just not in their form class. The SCM rankings were consistent with the reports of friendship group sizes given by the individual pupils with ASD during the interview phase also.

In the area of inclusion in class social groupings then, pupils with ASD are once more markedly different from their typically-development peers, as they are not necessarily interested in being part of a wider group of friends, and prefer or can manage with a decreased number of social interactions (Shattuck et al., 2011).

5.3 Parental perspectives on friendships of Secondary pupils with ASD

5.3.1 Perceptions of friendship

Interviews with parents provided crucial information about the friendships of pupils with ASD, and were able to offer developmental perspectives on how these had changed over time. Whilst most parents reported that their child had friendships with a small group of peers, some did report that they did not feel that their child's friendships were 'real' and that they lacked reciprocity. This is consistent with the findings of prior research (Kuo et al., 2013; Orsmond et al., 2004).

In terms of the purpose of friendships, parents of typically-developing pupils saw friendships as space for self-improvement, as a means to develop independence and improve the pupils' self-confidence, facilitating the entry into adulthood. This was not the case with pupils with ASD's parents' reports though. Here a surprising result was obtained, as parents believe that companionship was the reason pupils with ASD form and maintain friendships. Interestingly, this was in conflict with the reports of the pupils with ASD themselves, in which companionship was not suggested as a factor that influenced them to form friendships. It may be the case

that pupils with ASD hadn't the social understanding to reflect on why they were driven to friendships, and so were not aware that they were seeking companionship. An alternative hypothesis though is that pupils with ASD do desire companionship, but the challenges they experience in terms of social communication prevent it occurring, so they no longer feel that this is something they can have. Alternatively, it may be that the parents gave this answer as this was what they would expect out of friendship or feel a desire to experience. This could be possible, as many parents of pupil with ASD struggled to answer questions around what their child got out of their friendships. Measures of friendship motivation and friendship quality between the pupils with ASD and typically-developing peers may not be significantly different suggests this may not be the case though. Longitudinal research that follows a group of young people throughout their childhood and adolescence would provide more insight into the variations in experiences of friendship for pupils with ASD throughout the lifespan (Petrina, et al., 2014).

Every surveyed parent agreed that friendships have changed in the transition from Primary to Secondary school, and all seem to think their child understands themselves better. As the number of friendships and the level of independence and autonomy in friendships that the pupil has increases, this may mean that ASD pupils' friendships have improved from Primary, but they still require and have required more support than their typically-developing peers.

The nature of parental anxieties around their child's friendships was also distinct between the parents of pupils with ASD and parents of typically-developing pupils. For typically-developing pupils, their parents worried mostly around the types of friendships their child would have, and whether or not these would be the 'right' kind of friendships, with others who were positive role models and who would influence their child to make constructive choices. They feared that their child would end up making friends with a destructive influence, who misbehaved and led their child into

trouble. For parents of pupils with ASD, their anxieties concerned the outcome of early social difficulties. They worried about the later impact of negative social experiences, such as rejection and failure to form friends, and how this may influence later friendship choices. Relatedly, some of the parents of pupils with ASD spoke of their concerns around later romantic relationships in their child's life, given the earlier negative social experiences and the lack of formal education around romantic relationships.

This difference in reports of parental worries may be the result of expectations on the part of parents of pupils with ASD, as they will not be anticipating their child to have many friendships, it may seem unnecessary to them to worry that their child's friendships will not be of optimum standard, when they are already worried about negative social experiences and how to avoid rejection and isolation. In fact, it's possible that in their eyes, a 'bad' friend would still be preferable to no friend at all.

5.3.2 Supporting pupils' friendships

Along with the information around their perceptions of friendships discussed above, parent interviews in this study helped shared the parents' perspective of what support was required for the child in mainstream Secondary school. While all parents were asked questions around this, it was only the parents of pupils with ASD who gave an answer, with parents of typically-developing parents either acknowledging that this was not necessary, or saying they would not know how to approach supporting their child's friendships, now.

One finding of this research relevant to supporting Secondary pupils with ASD in their friendships that has not been noted by other researchers is that parents of pupils with ASD are still able to support them as they develop into adolescence (Bauminger & Shulman, 2003; Chamberlain et al., 2007; Howard et al., 2006), however this was not the case in this example, as parents in both groups said they

had to work increasingly covertly to support their children in their friendships. In their child's earlier years they were able to do so with ease, but now their children have grown they are resentful and unreceptive to parental intervention. This is true of both pupils with ASD and their typically-developing peers. This suggests then that it will be important for other adults to support young people through their school and friendship experiences, or to facilitate interactions and friendships with peers that will be positive for that young person.

Two key ways to support pupils with ASD were suggested, one focusing on adult support, the other the support of a friend. For the adult support, it was suggested that they encourage the pupil to initiate interactions, that they offer time to mediate friendship experiences and offer reflections on negative experiences, and that there is explicit teaching of social skills to pupils with ASD, to help them understand and manage social experiences. The teaching of social skills emerged as a parental suggestion in the work of Calder et al. (2013) also, whilst Bauminger and Shulman (2003) noted the need for mediation and support from others for Secondary pupils with ASD to develop and maintain friendships.

The supportive peer would be one selected based on homophily; the other pupil will be 'like' the pupil with ASD, and have been through negative social experiences of their own and learned from them, so they can pass this knowledge on to the pupil with ASD. Homophily was raised as an element of friendship by pupils, regarding their ability to choose their own friends now they have become more self-aware as they have grown older. in Secondary school. Parents of pupils with ASD were more aware of the homophilic aspect of friendships even that their children were, and urged strongly that homophily is not effective when the paired-homophilic-pupil also has an ASD. They felt it best if the other pupil had difficulties, but not identical difficulties to their child, as it meant that neither could support the other.

5.4 Strengths and limitations of the present study

5.4.1 Strengths

This study utilised a mixed methods approach to examine friendships of Secondary pupils with ASD. The validity of the data were strengthened by use of multiple perspectives, accessing pupils with ASD, their parents, their typically-developing peers, and their peers' parents, as they could then verify or contradict the reports of others.

This was the first study of its kind to access qualitative data from typically-developing pupils and their parents alongside those of pupils with ASD and their parents in order to compare these alongside the comparisons of quantitative data, meaning it was able to offer unique perspective and a fuller picture of what makes the friendship experiences and perceptions of Secondary pupils with ASD distinct from their typically-developing peers.

The sample size, while small, was comparable to other studies that utilised mixed methods or qualitative methodology (Calder et al., 2013; Daniel & Billingsley, 2010; Locke et al., 2010). Given the richness and depth of information gleaned from the multiple perspectives gathered in this research, this allowed for a robust and complete understanding of the friendships of the participants in the study. By conducting this study in only two mainstream Secondary schools in the same local authority, there was a reduction in the effects of group variance, as contextual factors were very similar for all participants. While it could be argued that drawing on a dual school sample reduces generalisability of findings, and this limitation is acknowledged, there is no reason to presume these schools were exceptionally different from other mainstream provisions, based on demographic information. This means the school and its pupils would likely face the same challenges and opportunities as do other mainstream Secondary schools in the UK.

5.4.2 Limitations

One limitation of this current research is the use of just two schools as sources for locating participants. Whilst there is evidence that both schools broadly conform to standard school demographics, it was noted that one school had a higher than average level of pupils with SEN who required additional support. It may be then that the school staff are particularly familiar and trained in supporting pupils with ASD, which was responsible for the largely positive friendship experiences pupils reported in Secondary school. Unfortunately, larger scale work, taking part in more than one local authority or throughout the UK was beyond the scope of this research, this would lead to a potentially more representative sample, and should be considered in future research. It was however common to other research into pupils with ASD, particularly those that utilised qualitative methodology (Calder et al., 2013; Daniel & Billingsley, 2010; Humphrey & Lewis, 2008; Locke et al., 2010).

The sample size could also be considered a limitation, as discussed above in the Strengths section (5.4.1).

Most measures in this research were self-reports by the pupils with ASD. Although this is viewed by the researcher as a strength, it can be perceived of as a limitation, as it draws on the pupils' own perceptions and memories. Parental reports did conflict with some of the information given by their children, but this meant that alternative perspectives were acknowledged, and multiple constructions of reality given credence. Use of socio-cognitive mapping data provided perspectives of classmates and helped in building a picture of the pupils' friendships in school also. Semi-structured interviews used with young people with ASD have been critiqued as they may be effected by social anxiety and communication difficulties of participants (Beresford et al., 2004) and by 'masquerading' (Carrington et al., 2003), in which pupils with ASD are aware of their difficulties and mask their deficits by giving misleading information that presents them as more socially successful than

they actually are. Use of typically-developing pupil interviews in this research may counteract this though, as there is no reason to presume they would not do the same thing, necessarily. Also, the verbal intelligence levels of both groups were not statistically significantly different.

The quantitative measures utilised in this study may also be a limitation. Whilst the measures used were all selected as they have been used previously in research on young people with ASD, they were not developed for use with this group, and so may lack the sensitivity as a measure to accurately glean the opinions and perspectives of an ASD group. This may explain the inconsistent findings in research that has adopted these measures. In the case of the WASI, it also was not standardised on an ASD population.

Additionally, although the FQS has been used across several studies, it may not be the most useful measure of friendship quality amongst Secondary school pupils, as it puts an emphasis on a 'best friend' for its questions, thus measuring dyadic relationships. This dyadic relationship seems less relevant for typically-developing pupils at Secondary school level, as they may belong to groups without having particular close friendships (Dunn, 2004).

One of the aims of the change in diagnostic criteria in DSM-5 (American Psychiatric Association, 2013) was to highlight the heterogeneity within ASD (Lenroot & Ka Yeung, 2013), and this heterogeneity was evident in this research, as a broad range of scores across the quantitative measures was recorded. This was true of both groups, but particularly of the pupils with ASD. Given the smaller sample size in this research, this will have had a bearing on the analysis of the data. However, analysis of the data shows no significant differences in age or WASI scores between the two groups. Also, recurrent commonalities and themes did emerge from the qualitative data, suggesting that though heterogeneous, there were characteristics and

features of friendships of pupils with ASD that were distinct from their typically-developing peers and these were accessed in this research.

Future research could be undertaken utilising structured observations of friendship to further verify information given by pupils and their parents (suggested by Petrina et al., 2014), however this too presents potential limitations as to how accurate this snapshot of observation may be (Calder, 2011). Longitudinal, in-depth, ethnographic research drawing on self-report measures may be one way to alleviate these limitations.

A further limitation is that participants in this research may not be wholly representative of a wider population of mainstream Secondary pupils with ASD, as students who consented to take part may represent only those who are motivated to demonstrate positive results when questioned around friendships. While it is ethical and appropriate to facilitate informed consent of participants before beginning research, this may lead to a situation in which those who were less confident or who had negative experiences of friendship, such as social isolation, opted out of the research. One pupil who was contacted to take part said that they did not want to be part of the research due to the socio-cognitive mapping exercise, which suggests this may be the case. However, only two contacted participants declined to take part, and all pupils with ASD in the schools in the appropriate age groups (Years 8 to 11) were invited to participate, so this is not likely to be a significant limitation.

All pupils included in this ASD sample in this research had a diagnosis of ASD, but one possible limitation is that there will be pupils within schools who do not have a formal diagnosis but do fit the criteria and demonstrate many of the characteristics of ASD. This was noted by the school staff who supported locating participants for this research. However, given the common themes that emerged from qualitative difference between the two participant groups varied greatly, despite them being

matched for age, school year and cognitive ability, it is fair to suggest that these differences were attributable to the diagnosed elements of ASD.

5.5 Future research

The results of this study generated several potential avenues for future research relating to the friendships of young people with ASD.

Firstly, given that the current body of research evidence has looked into the friendships of Primary pupils (Calder et al., 2013), Secondary pupils (the present study, and more non-specifically into the friendships of children (e.g. Bauminger et al., 2008), there is now a need for a longitudinal research study that will follow a set of pupils with ASD and their typically-developing peers throughout their childhood, assessing them regularly during the study to pinpoint their experiences and perspectives at given times, plotting a trajectory and course of their friendships throughout their life. This type of longitudinal research is recommended also by Petrina et al. (2014) in their review of the current literature into friendships in children with ASD. Further to this, in order to go beyond utilising self-reports only as a way to glean information on the friendships of young people with ASD, ethnographic research undertaken in natural settings utilising direct observations over time to compliment the multiple perspectives of key figures will give a better understanding of factors such as the development of close peer relationships, friendship continuity, and friendship reciprocity. Longitudinal research that carries forth beyond school into adult life would be useful also.

Secondly, emergent in this research, perhaps because of its focus on adolescent pupils with ASD, is that considerations of the romantic relationships of pupils with ASD is missing from current research, and has been under-researched (also noted by Kuo et al., 2013; Stokes, Newton, & Kaur, 2007). This has emerged as a point of concern for parents of Secondary pupils with ASD, particularly relating to the way in

which relationship skills may be learnt by this group, as it adds a layer of complexity to existing social communication difficulties. Future research that investigated the opinions of Secondary pupils with ASD to develop a useful package of social learning opportunities and could then be trialled would be a constructive step to helping to alleviate the anxieties of parents of pupils with ASD and help support the pupils themselves.

The next area of future research emergent from this current study relates to the participant groups. When selecting potential schools from which to recruit participants for this research, one was rejected as it was not a fully inclusive mainstream school, but instead had a separate base for pupils with ASD, with specialist staff. Future research that examined and compared the friendship and social experiences of pupils with ASD who were educated in schools which had specialist units with those who were educated in standard mainstream settings will aid in understanding the process of inclusion of pupils with ASD, and ways in which friendships are selected and maintained. This would be particularly relevant given the noted preference for homophilic friendships which emerged in this research, and the fact that parents felt that homophilic friendships with other pupils with ASD were unsuccessful.

As this study made initial steps to understand patterns and purposes of social media usage by Secondary pupils with ASD, future work should expand upon this and make it a central focus of research, incorporating the quantitative measures of Kuo et al. (2014) and qualitative approaches used in this current study. This is a developing area of research in general populations also, and it is important that the potential importance of social media in the friendships of pupils with ASD continues to be attended to. The impact of psycho-education of pupils with ASD into the functions and benefits of using SNS or video games as tools to develop friendships in a safe and controlled way should be considered as a particular focus for

research. Furthermore, as social media usage has been proposed as a both a potential positive or negative factor in the lives of young people with ASD, it would be beneficial build on this research and that of Lloyd (2014) to examine links between ASD, social media usage, and mental health.

One additional key implication for future research is that Secondary pupils with ASD who participated in this research almost universally reported satisfaction with their friendships, a trend noted in the Primary cohort of Calder et al. (2013) too. In this present thesis, pupils reported qualitatively and quantitatively that they are content with their friendships. As such, future research should attempt to shift focus from the present deficit-centred hypotheses and instead attempt to build a greater understanding of what makes friendships of young people with ASD unique and different from their peers, but not necessarily worse. The additional systemic pressures applied by research that focuses on their impairments is likely to do little to lessen any difficulties they are experiencing, and instead subtly enforce conformity to a norm which they are not interested in or able to attain (Daniel & Billingsley, 2010).

5.6 Implications for Educational Psychology practice

The findings of this study offer an alternative perspective to existing research which focuses on the deficits of friendships in pupils with ASD in comparison to their typically-developing peers. In this study, Secondary pupils with ASD did not rate themselves as experiencing significantly lower quality in any of the key markers of friendship that their peers, nor did they report friendship motivations that were of lower levels of self-determination than their peers. Findings from this research contribute to a broadened understanding of the factors involved in formation and maintenance of friendships in pupils with ASD, what motivates them to become friends, how friendships have developed as pupils moved from Primary to Secondary school, and how social media usage may be able to effect their

friendships. This information arose in comparisons with the reports of typically-developing peers, meaning it demonstrates the unique aspects of each of these for pupils with ASD, and establishes how friendships tend to differ within that group. This information offers a distinctive contribution to the evidence base of Educational Psychology, enhancing EP knowledge about how to support pupils, families, and schools around issues of friendship in pupils with ASD. Recommendations are given subsequently for future EP practice:

Firstly, whilst this study acknowledges that friendships of pupils with ASD are qualitatively different from those of their typically-developing peers and that they mostly report satisfaction with their friendships, this may not always be the case. In situations in which the pupils are unhappy with their friendships, it may be beneficial to offer direct support to pupils with ASD. To ensure that pupils with ASD are supported in their understanding of friendships, EPs could consider offering psychoeducation around the benefits of friendships for pupils with ASD, and the benefits of being a reciprocal supportive friend for your friends. Also psychoeducation that centres on why people seek friendship just for companionship and what function friendship may serve as entertainment could be beneficial in supporting those who are finding friendships challenging. This could be tied also to the use of social media, with its benefits as a controlled friendship space being emphasised. This is not an example of imposing neuro-typical norms onto pupils with ASD, but rather a broadening of their own understanding of what friendship might mean and how they can attain it, if they so desire.

Psychoeducation will offer pupils with ASD alternative perspectives on their friendship experiences and preferences, creating opportunities for them to attempt different friendship practices. This will involve educating pupils about what they might anticipate in their own friendships also, creating a frame of behaviour for pupils with ASD which highlights norms within that population, rather than have

them based around those of their typically-developing peers. This would be centred around homophilic friendships with a structured context for friendship to take place based on shared interests.

Unexpectedly, the socio-cognitive mapping exercise was a useful tool for one pupil as it gave an explicit demonstration and evidence that he was included in friendship groups and seen as a friend by peers, and this could be delivered in a carefully-constructed manner for pupils who require it.

Further support for friendships could be provided by sharing the results of this research with schools and families, so that they can plan for friendship opportunities or create programmes to support friendships if necessary. As the population of young people with ASD is a heterogeneous one (Dillon & Underwood, 2012), any intervention programme would have to be bespoke and tailored to the pupil it targets. The EP will be integral here, as they may lean on their knowledge of friendships in ASD pupils, and utilise their skills in accessing the pupil's own perspectives to create a programme which was individually-tailored to provide developmentally-appropriate relationship support.

As this study has laid clear the anxieties that parents of pupils with ASD have, work can be done to salve these. Combining this with the knowledge of what parents suggest as being supportive for their children's friendships creates a functional, directive ecosystem of support for the pupil at its centre. Schools should be recommended to offer direct teaching of social skills, to safeguard time with an adult to mediate friendship and offer reflections and alternative perspectives on friendship experiences, and should be encouraging initiations of social interactions.

EPs need to ensure that school staff and parents expect ASD friendships to be different, and that this information is disseminated to Primary staff, making them aware of likely later friendship outcomes. This way, adults around the young people

with ASD are not imposed norms on them which they do not feel comfortable with, and thus creating cycles of anxiety from setting unrealistic goals which will lead to failures.

Ultimately, it will be important for EPs to convey to schools, parents, and pupils themselves that it can be expected that friendships are different for pupils with ASD, and that this is OK, so long as the pupils are happy with what they have and are supported. Whilst professionals aim to help young people with ASD, they do have to accept and recognise and value that friendships within that group will be alterations of what they perceive as typical (acknowledged by Carrington et al, 2003), but they are perfectly appropriate and acceptable from the pupil's perspective,

Additionally, given the emphasis on transitions, outcomes, and preparing for adulthood in the most recent legislation and the key role these play in the guiding of Education, Health and Care Plans (DfE, 2011), this research can provide a foundation for examination into later life outcomes and relationships for individuals with ASD. Later research can extend the findings of this work into adulthood and provide a broader representation of what support individuals with ASD may require.

The place of the work of EPs with pupils with ASD cannot be overstated, and was acknowledged by one of the parent participants when discussing the improvements in friendships that they had seen in their child over the course of the prior year, who made it clear that:

"Without the help of the school and without the help of the Educational Psychologist, I don't think we'd be in the place we are in now."

5.7 Conclusion

The current study adopted a mixed-methods approach to examine the friendships of Secondary pupils with ASD, in comparison with their typically-developing peers.

Parental perspectives were also sought, and socio-cognitive mapping exercises used to verify self-reports of friendship experiences.

The findings indicate that pupils with ASD do not rate the quality of their best friendship any differently than do typically-developing pupils, nor are they any more or less self-determined and motivated to form and maintain friendships. The socio-cognitive mapping exercise did reveal a difference between and within the two groups though, as some children were perceived as having an essential role in a significant class grouping, whilst others had only one or two friends and were not acknowledged as being a high status member of those groups. None of the pupils with ASD were isolated.

The use of interviews with typically-developing pupils and pupils with ASD, as well as the parents of both groups of participants, meant that comparisons of qualitative responses was possible in this research, which made it unique. The distinct differences revealed in this research indicated that pupils with ASD do have friendships, but they are different from the friendships of their typically-developing peers, and should be accepted as different as such. The friendships differ at a qualitative level from peers, such as usually being experienced in small groups with more intensive 'best friend' relationships. They are more likely to seek out friends who will be able to protect and support them in social situations, and pupils with ASD are more motivated to form homophilic friendships and appreciate being better understood by their friends now that they are older and more self-aware. Pupils with ASD also utilised social media differently than typically-developing peers, using it as a safe, controlled space in which they can interact and share functional friendship experiences with friends.

This does not mean however that all pupils with ASD will experience friendships comfortably or happily. Parents noted that they benefit from being supported in their

friendships by someone who understands their needs as pupil with ASD, particularly relating to friendship development in pupils with ASD. The pupils benefit also from others mediating their friendships, and offering psychoeducation around friendship experiences, when necessary,

The role of the EP is identified as being the person who will raise awareness of these differential friendship experiences, can help bring together schools and families around working with a pupil with ASD, and can redress the expectations around friendships in a way which is supportive and useful to the pupils, not simply by forcing them to behave as typically-developing pupils do. In doing so, the EP will be able to work individually and systemically to maximise the well-being and ensure the full inclusion of pupils with ASD in mainstream schools.

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APPENDICES



Leading education
and social research
Institute of Education
University of London

Appendix 1: Pupil information sheet

Hi, my name is Graeme and I am running a project to find out about the friendships of autistic pupils. I know that friendships can be really important and want to be sure that everyone is getting the help they need to have friends.

20 Bedford Way
London WC1H 0AL
Tel +44 (0)20 7612 6000
Fax +44 (0)20 7612 6126
Email info@ioe.ac.uk
www.ioe.ac.uk

To do my research, I am talking with pupils who have autism and those who don't, so that I can learn more about what young people like you think about friendships. I'm interested in what you have to say, and there are no right or wrong answers. What you tell me might help your school help you and other young people

I have spoken to your parents/carers and they have hopefully told you a bit about the study and said it was OK you to join in. Now I would like to find out if you would be interested too.

What will happen if I take part?

As part of this research, I will be meeting with you on 2 occasions.

In the first session, I will give you a short questionnaire about your best friend, and then ask some questions about your feelings around friendships in general. This will take about the length of one lesson.

In the second session, I will give you another short questionnaire, this time about what motivates you to be friends with people. We will then do a brief cognitive assessment, to give me an idea of your verbal and non-verbal learning abilities. This will also take about the length of one lesson. These jobs are not hard and are not tests, and I won't be telling anybody what you said or how you did.

Do I have to take part?

Participation is voluntary, so it is up to you! If you do decide to take part, I will arrange a time at school for you to meet me. We will talk about the project again and I will ask you to write your name on a piece of paper, which says that:

1) You understand what the project is about

2) You agree to join in with the project

Even if you sign the paper, you can still stop at any time if you change your mind, or if you just don't want to answer certain questions.

What will happen to the results of the project?

When we're done, I will write a report about what you and all the pupils I meet with talk about. Your name won't be used in it, so no-one will know it was you. All the information and results are kept on a computer and in a locked filing cabinet at the Institute of Education.

I hope you will want to take part in my project, so I can help schools learn how to help other pupils with their friendships.



Appendix 2: Parent information letter and consent form for pupils with ASD

FRIENDS LIKE YOU: Friendships of Autistic Secondary School Pupils

Dear Parent or Carer,

My name is Graeme McLeary and I am a Trainee Educational Psychologist working with children and young people in Richmond. I am currently carrying out a research project for the Institute of Education to find out more about the friendships of pupils with autism who attend mainstream Secondary Schools. It is hoped that the information collected in this research will help schools to better support young people with autism to have positive futures.

This study will examine Secondary School pupils, with a particular focus on finding out what kind of things motivate autistic children to form friendships, what their understanding of friendship is, and how involved in social groups within school these children are.

What will happen if my child takes part?

As part of this research, I will be meeting with your child on 2 occasions, and their whole class on one occasion.

In the first session, I will give your child a short questionnaire about their relationship with their best friend, and then ask some questions about their feelings around friendships in general. This will take about the length of one lesson.

In the second session, I will give your child another short questionnaire, this time about what motivates them to be friends with people. We will then do a brief cognitive assessment, to give an idea of their verbal and non-verbal learning abilities.

After this, I will meet with your child's whole class, and ask them to complete a friendship survey. The children will be asked to identify the social groups that exist in their class, by noting on a list which of the pupils in their class are

their friends in the group. This will help me work out the extent to which pupils are considered by their peers to be included in social groups and networks.

Along with meeting with pupils, I will be randomly-selecting five parents of pupils taking part in this study to interview them and discuss their thoughts on their child's friendships, what motivates them, and what they see as their role in those friendships.

What will happen to the results of the project?

Following completion of the study, I will share with the school a report regarding the findings of the study. Individual results will not be disclosed. The information we collect is kept strictly confidential. Children are identified by a code number only and all information and results are kept on a computer and in a locked filing cabinet at the Institute.

Do I have to take part?

Participation is voluntary, so it is up to you and your child if you would like them to take part. At the end of this information sheet there is a form for you to sign if you decide that you wish to take part. Anyone who signs a form is still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your child's education in any way.

What should I do next?

If you would like your child to take part in this study, please fill in the enclosed form and return it to your child's form teacher so that I can collect it. Please get in touch if you have any questions. You can contact me on 07732045429 or gmcleary@ioe.ac.uk. I would be more than happy to talk with you.

Yours Sincerely,

Graeme McLeary
(Research Student/Trainee Educational Psychologist)

This study has been reviewed and approved by the Department of Psychology and Human Development's Research Ethics Committee, Institute of Education. Thank you for your interest in our research.

Parent/guardian copy - Please keep this copy for your records

	 Yes	 No
I have read the information sheet and I understand what will happen if I decide for my child to take part.		
I understand that my child can choose whether or not to take part. I know that I or they can decide not to take part at any time and that this is okay.		
I understand that Richmond will receive a copy of Graeme's research, but that nobody will be able to identify my child because they will be anonymous or given a different name.		
My child has a current diagnosis of autism.		
I would be willing, if selected, to meet with the researcher to discuss my child's friendships. This discussion would last around half an hour.		

Name of child: _____
(Forename) (Surname)

(Male) (Female)

Date of Birth: _____

School: _____

Contact email: _____

Contact phone: _____

Address: _____

Name of parent/guardian (please print): _____

Signature: _____ **Today's date:** _____

Researcher copy - Please return this copy to researcher

	 Yes	 No
I have read the information sheet and I understand what will happen if I decide for my child to take part.		
I understand that my child can choose whether or not to take part. I know that I or they can decide not to take part at any time and that this is okay.		
I understand that Richmond will receive a copy of Graeme's research, but that nobody will be able to identify my child because they will be anonymous or given a different name.		
My child has a current diagnosis of autism.		
I would be willing, if selected, to meet with the researcher to discuss my child's friendships. This discussion would last around half an hour.		

Name of child: _____
(Forename) (Surname)

(Male) (Female)

Date of Birth: _____

School: _____

Contact email: _____

Contact phone: _____

Address: _____

Name of parent/guardian (please print): _____

Signature: _____ Today's date: _____

Appendix 3: Parent information letter for typically-developing pupils

FRIENDS LIKE YOU: Friendships of Autistic Secondary School Pupils

Dear Parent or Carer,

My name is Graeme McLeary and I am a Trainee Educational Psychologist working with children and young people in Richmond. I am currently carrying out a research project for the Institute of Education to find out more about the friendships of pupils with autism who attend mainstream Secondary Schools. It is hoped that the information collected in this research will help schools to better support young people with autism to have positive futures. Your child's class has been chosen to take part in this research.

This study will examine Secondary School pupils, with a particular focus on finding out what kind of things motivate autistic children to form friendships, what their understanding of friendship is, and how involved in social groups within school these children are.

I hope that you and your child would like to help with this project. Typically developing children – just like your child – are important in studies such as this one as they help us to gain a picture of how children without autism perform in the same tasks. After reading this information sheet, please explain the project to your child (if possible) and discuss whether she/he wants to take part.

What will happen if my child takes part?

As part of this research, I will be meeting with your child on 2 occasions.

In the first session, I will give your child a short questionnaire about their relationship with their best friend, and then ask some questions about their feelings around friendships in general. This will take about the length of one lesson.

In the second session, I will give your child another short questionnaire, this time about what motivates them to be friends with people. We will then do a

brief cognitive assessment, to give an idea of their verbal and non-verbal learning abilities.

What will happen to the results of the project?

Following completion of the study, I will share with the school a report regarding the findings of the study. Individual results will not be disclosed. The information we collect is kept strictly confidential. Children are identified by a code number only and all information and results are kept on a computer and in a locked filing cabinet at the Institute.

Do I have to take part?

Participation is voluntary, so it is up to you and your child if you would like them to take part. At the end of this information sheet there is a form for you to sign if you decide that you wish to take part. Anyone who signs a form is still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your child's education in any way.

What should I do next?

If you would like your child to take part in this study, please fill in the enclosed form and return it to your child's form teacher so that I can collect it. Please get in touch if you have any questions. You can contact me on 07732045429 or gmcleary@ioe.ac.uk. I would be more than happy to talk with you.

Yours Sincerely,

Graeme McLeary
(Research Student/Trainee Educational Psychologist)

This study has been reviewed and approved by the Department of Psychology and Human Development's Research Ethics Committee, Institute of Education. Thank you for your interest in our research.

Appendix 4: Descriptive data of the schools used in this research

	School 1	School 2
Number of pupils on school roll	1070	617
Age range of pupils	11-16	11-16
Gender ratio	Considerably more boys than girls in school.	Proportion of girls below national average
Pupil ethnic background	Proportion of pupils from minority ethnic groups above national average	Proportion of pupils from minority ethnic groups above national average
Pupil premium eligibility	Proportion of pupils eligible for pupil premium is average	Proportion of pupils eligible for pupil premium is average
Proportion of pupils with statements of SEN	Below average	Average
Achievement of pupils	Outstanding	Good
Quality of teaching	Outstanding	Good
Behaviour and safety of pupils	Outstanding	Good
Leadership and management	Outstanding	Good

All information in this Appendix comes from the schools' most recent OFSTED reports (2013)

Appendix 5: Information and consent form for socio-cognitive mapping task

FRIENDS LIKE YOU: Friendships of Autistic Secondary School Pupils

Dear Parent or Carer,

My name is Graeme McLeary and I am a Trainee Educational Psychologist working with children and young people in Richmond. I am currently carrying out a research project for the Institute of Education to find out more about the friendships of pupils with autism who attend mainstream Secondary Schools. It is hoped that the information collected in this research will help schools to better support young people with autism to have positive futures. Your child's class has been chosen to take part in this research.

This study will examine Secondary School pupils, with a particular focus on finding out what kind of things motivate autistic children to form friendships, what their understanding of friendship is, and how involved in social groups within school these children are.

I hope that you and your child would like to help with this project. Typically developing children – just like your child – are important in studies such as this one as they help us to gain a picture of how children without autism perform in the same tasks. After reading this information sheet, please explain the project to your child (if possible) and discuss whether she/he wants to take part.

What will happen if my child takes part?

As part of this research, I will be conducting a 'social networking exercise' in your child's class.

Your child will be given a survey about their friendships that will take around 10 minutes to complete.

For this exercise, the children will be asked to identify the social groups that exist in their class, by noting which of the pupils in their class are groups of

friends. This will help me work out the extent to which pupils are considered by their peers to be included in social groups and networks but removes the need to ask pupils specifically about their views of any particular child.

What will happen to the results of the project?

Following completion of the study, I will share with the school a report regarding the findings of the study. Individual results will not be disclosed. The information we collect is kept strictly confidential. Children are identified by a code number only and all information and results are kept on a computer and in a locked filing cabinet at the Institute.

Do my child have to take part?

It is hoped that all children in the class will take part in this study, however for whatever reason you do not wish for your child to take part, please inform your child's form teacher by 25/3/15. If a reply is not received, it will be assumed that you are happy for your child to be involved in the research. At the beginning of the exercise, all children will have it explained to them that they are able to withdraw at any time. If your child chooses to withdraw or you do not wish them to take part, it will not affect their education in anyway.

What should I do next?

You do not need to do anything. However please get in touch if you have any questions. You can contact me on 07732045429 or gmcleary@ioe.ac.uk. I would be more than happy to talk with you.

Yours Sincerely,

Graeme McLeary
(Research Student/Trainee Educational Psychologist)

This study has been reviewed and approved by the Department of Psychology and Human Development's Research Ethics Committee, Institute of Education. Thank you for your interest in our research.

Appendix 6: Socio-cognitive mapping exercise form

YOUR NAME: _____
CLASS: _____

FORM

Write down groups of friends from this class. These can be 2 or more people.
People can be in more than one group.

Think about who hangs around together a lot in class, at breaks, or at lunchtimes.

You can include yourself if you are in a group.

What is a good friend? (Please write underneath)

Appendix 7: Pupil interview schedule

Interview Schedule (Pupils)

I would now like to ask you some questions about your friends. Remember, if you don't want to answer any of these questions, just let me know and we will move on to the next question. If you need a break or want to stop, tell me and we will stop straight away. This conversation will be recorded and later transcribed, and the recording disposed of when transcription is complete. All results of the study will be anonymised and no names will not be stored in any records or used in the reporting of the findings. The interview should take between 10-20 minutes.

Do you have some friends at school?

Can you tell me about them?

- What are their names?
- Do you have a best friend?
- How long have you been friends?
- How did you meet your friend?
- How do you know this person/ these people are your friend(s)?

Do you have friends outside of school?

- How did you meet them?
- How long have you been friends?

What do you like doing together?

- e.g. at school, at breaktime/ lunchtime
- At weekends/outside of school?

How often do you see your friends?

- Where do you usually see your friends?
- Do they come to your house?
- Have you been to their house?

Do you use social networking sites(SNS) - such as Facebook, Twitter, Instagram, Snapchat - or play online video games to interact with your friends?

- In what ways?
- How often?
- Are your SNS friends the same as the friends you see at school, home, etc?
- Are they helpful to you, in terms of friendships?

Have your friendships changed since Primary School?

- In what way?
- What is different?
- Do you have the same friends?

Are you happy with your friends?

- Why/ why not?
- What do you like about your friend(s)?

Do you think you have enough friends?

- How do you know?
- Would you like your friendships to be different in any way?

What does being a friend mean to you?

Why are people friends?

- What motivates people to become friends?
- Why do people have friends?

What do you like about having a friend/friends?

- Is it important to have friends?
- Why have friends?

Would you like to tell me anything else about your friends?

Appendix 8: Example transcribed pupil interview

I would now like to ask you some questions about your friends. Remember, if you don't want to answer any of these questions, just let me know and we will move on to the next question.

If you need a break or want to stop, tell me and we will stop straight away. This conversation will be recorded and later transcribed, and the recording disposed of when transcription is complete. All results of the study will be anonymised and no names will not be stored in any records or used in the reporting of the findings. The interview should take between 10-20 minutes.

Researcher: Do you have some friends at school?
Pupil: Yes.
Researcher: Yes. Can you tell me about them?
Pupil: My first one would be [NAME]. He's quite nice, we both have exactly the same hobbies. We both like science, we're both very good at it. I have troubles with social situations, but he kind of does, but like not on the Autism spectrum, but because he's gay, and he finds it hard to, he's, I think that kind of, it makes it easy to talk through both our problems in public. You know, generally, just socially it's harder for both of us and I think we can find it easier to talk to each other. My other one would be [NAME]. He's quite nice. He's not one of my best friends. He's quite understanding. He often looks on the bright side of things. He's quite nice to talk to about things. The other one would be [NAME]. He's very like me cus we both like music. I can spend quite a lot of time in music with him. If he's there I'll ask him for help, I'll call him for help on the phone cus like if I miss something that's homework. Yeah. That's the main ones I have. A few other ones are nice to me, but that's my friends.

Researcher: How long have you been friends with those three?
Pupil: I haven't know any of them beyond this school, or before this school.

Researcher: So since you started in Secondary school. Year 7, the start of Year 7?
Pupil: Yeah.

Researcher: And did you meet them all in school?
Pupil: Yes.

Researcher: How do you know that these people are your friends?
Pupil: [NAME] stands up for me and he's, I can just tell because I've been talking for so long he's definitely my friend, he's stuck up for me and he's just really nice to me and I can tell because I would know if he was being rude to me behind my back and I know that's not how he is. [NAME], there's something with him that generally he's very interesting. He's never rude. He finds it very hard to be rude. Literally he cannot be rude to people. It's just something about his personality. So I'd be able to know if he was mean or not.

Researcher: What about [NAME]?
Pupil: [NAME] I would, I don't know, I mean, he's just really nice and he doesn't, he might not stick up for me if it was physical, I think he's just really nice and he feels that he can be my

friend.

Researcher: Do you have any friends outside of school?

Pupil: Yes.

Researcher: How did you meet them?

Pupil: My previous school and through scuba diving in Malta, archery courses, things like that.

Researcher: So these are sort of past-times that you have?

Pupil: Yeah, and in my own school as well.

Researcher: How long have you been friends with those people that you know outside of school?

Pupil: Well, the longest friend I think I've had would probably be [NAME]. I don't see him as much anymore because he's had more children he's had to move house, because his flat's too small, but he used to live really close and he's been since, was before like Nursery.

Researcher: Before Nursery?

Pupil: Pre-school, yeah, I've known him since then. What was the question again?

Researcher: It was how long have you been friends?

Pupil: [NAME] I've been friends since the beginning of my Primary school. And then there will be [NAME] who I've been friends with since Nursery.

Researcher: What do you like to do together, your friends? Let's think about school friends for example, what do you do at breaktime, lunchtime?

Pupil: We usually spend it here [LEARNING SUPPORT BASE] or playing around outside or in the library with the librarian. To be honest we usually end up going to Music block because we like to play Music. [NAME] is usually in the, generally in the library as well.

Researcher: So there's three different boys, basically. Do you hang out together, or is it only ever individually?

Pupil: I don't, well like, two of them are in my class, but like, if they were put together they probably would. Well, they know them, they just don't hang out, sort of thing. They're neutral.

Researcher: What about at weekends or outside of school?

Pupil: Yeah. Occasionally I'll go to [NAME]'s house and we usually walk around and like play with his friends from the school who I know. [NAME], [NAME], and a few other people who I'm also friends with. We go to the cinema sometimes, I go to the Science Museum with him. Things like that.

Researcher: What about those friends that you have that are not friends from school?

Pupil: Outside? I often invite them, I usually invite them to my birthday parties. I don't see them as often now due to the fact that many of them had to move or they've get up too early for me. I see [NAME] quite often because he lives just down the road from me.

Researcher: Well that was actually going to be my next question. How often do you see your friends? I'm guessing your school friends you see most days if not every day.

Pupil: Yeah. My outside school friends I see them quite occasionally.

Researcher: How occasionally is quite occasionally, can you be specific?

Pupil: Maybe once or twice a week.

Researcher: Ok. And where do you usually see your friends?

Pupil: On the way to school, in the cricket park which is in [NEARBY AREA].

Researcher: What about the school friends? I'm guessing you see them in school.

Pupil: Yeah. Again, general places like that.

Researcher: Lessons?

Pupil: Yeah.

Researcher: Do they come to your house?

Pupil: [NAME] came to my house, the other two don't.

Researcher: And you said that you've been to his house, didn't you?

Pupil: Yeah.

Researcher: Earlier on, when we were talking you mentioned social media you use to interact with your friends...

Pupil: No. I have their phone number and I like talk to them via that, but I don't see the point of social media really. I like YouTube, I use social media in that way, but I don't like, I don't find it very useful like what's the point of talking to someone online like, talking to someone you've never met them before in your entire life. It's a lot less safe and also I just don't see the point of it.

Researcher: Would you talk to people that you knew in real life on those things though?

Pupil: If I was into them.

Researcher: But I mean, do you do that?

Pupil: No.

Researcher: Ok. So you don't have any friends on social networking sites or anything like that?

Pupil: Well, I've subscribed to [NAME], he's a YouTuber.

Researcher: Ok. So social networking sites aren't really useful to you in terms of friendships then?

Pupil: That depends. Not really.

Researcher: Have your friendships changed since Primary school?

Pupil: Yeah.

Researcher: In what way?

Pupil: Well at the start two other people came to my school from my old school. I'm friends with, I'm neutral with them, but I can tell by the way they've changed, you know. You've probably seen them occasionally.

Researcher: I wouldn't know them.

Pupil: He used to be really really quiet, like you'd never hear him talk in my old school, but like he's changed. He's more loud now. I say loud: more open. [NAME] is more grown up I think, more mature. Same thing with [NAME], someone else I knew. [NAME]'s become a lot more concentrated I think, a lot less daydreamy I think. I think my relationships haven't changed that much. The only reason I haven't seen [NAME] in two years is because he's moved and we haven't been able to talk.

Researcher: Ok. So they've changed a bit but your friendships haven't really changed, is that it?

Pupil: No, my friendships haven't really changed, really.

Researcher: Ok. So you still consider them friends though? I was going to ask you if you have the same friends, I suppose.

Pupil: They are kind of newer. I dunno. I'm kind of neutral with most people. There are a few people who're not very nice to me. Or

[NAME] because of his way of life, I guess. But he often, I think, I don't think they've changed that much. What was the question again?

Researcher: I asked you do you have the same friends, basically.

Pupil: Yeah.

Researcher: Would you say you were happy with your friends?

Pupil: Yes.

Researcher: Why?

Pupil: I find them, they're very, I can talk to them if I'm sad or I have something to talk about. They're very understanding. They, you know, I see them in the library a lot, they go outside and have fun a lot as well, and they're, I can rely on them, I guess.

Researcher: What do you like about them, your friends?

Pupil: I think [NAME], because he's very similar to me, and all of the time we know how each other feels. And also we're very, we actually often work at, you know the open evenings? We often do sections at the open evenings and kind of work together. And I think generally we just get on really well.

Researcher: Do you think you have enough friends?

Pupil: I don't think you can ever, I think you only need one or two. You don't need loads and loads, because that makes it not very special.

Researcher: Right. Well how do you know that you have enough, currently?

Pupil: Well I feel satisfied about it and I don't feel like I don't see people enough.

Researcher: Would you like your friendships to be different in any way?

Pupil: Not really.

Researcher: No? You're quite happy with them then?

Pupil: Yeah.

Researcher: What does being a friend mean to you?

Pupil: It means someone you can rely on when you're having problems I think. Someone like, someone who's entertaining but also considerate, I guess.

Researcher: Those sounds like nice qualities. Here's an interesting question; why are people friends?

Pupil: This is physiology, or, I don't know what the term is.

Researcher: Psychology?

Pupil: Psychology. I think when people sort of...like when you call someone a friend, or?

Researcher: Well, I'm asking why are people friends? So what motivates people to become friends?

Pupil: There's, I suppose, many emotions, I suppose. I suppose it's some, if you...why people are friends, I suppose, is to have someone they can rely on. Give them company, I suppose. Kind of like a much further out version of a family, in that sense. Just not as close.

Researcher: So you see friends as something of an extended family?

Pupil: Yeah.

Researcher: Alright.

Pupil: They have to be really close friends, you know.

Researcher: What do you like about having a friend or friends?

Pupil: I guess, I keep saying the same things. I think it's nice because I don't feel necessarily alone. And I know that the main thing I'm worried about I can ask them, talk to them

Researcher: about it. And you know I have someone else who I can talk to.
Pupil: Ok. So it's important to have friends then?
Massively, yeah. Because if you don't have friends, I suppose, you have very low self-esteem, you probably find it harder to...if you don't have friends you don't have experience in social situations the I suppose it'll be harder to get a job which involves interacting with other people. It can effect your life.

Researcher: So you think it's not just important, it's essential really that you have friends in order to be healthy, almost?

Pupil: Yeah. Like, mentally and in heart, healthy.

Researcher: Ok, that's really useful. Would you like to tell me anything else about your friends that we haven't touched on already?

Pupil: I guess, you know [NAME] and [NAME]? They aren't my main friends, you know. I think there are many people in school - how do I put this - I have quite a few enemies, and I don't try to have enemies, you know, I don't mean for it to happen, and I think the only reason these people are my friends is because they understood me. Because most of the reason I have enemies is because other people misunderstood what I was saying which goes back to social situations. They interpret it and that spread and rumours and stuff. I don't consider it necessarily ruined my time here, because the first year it kind of did, but they got over it. Most people are neutral to me, but there are quite a few people who aren't, so I suppose it's nice to have a few people who you see on a day to day basis which are friendly and understand you.

Researcher: Do you think you're going to be friends with these people for a long time?

Pupil: Yeah. Hopefully [NAME] for the rest of the Secondary and also we're both got applications for college, to do GCSEs and A-Levels a year earlier. We both want to go to the same college and study sciences, general sciences. So I think maybe beyond college as well.

Researcher: That's all I wanted to ask, then. Thanks for your time.

Appendix 9: Parent interview schedule

Interview Schedule (Parents)

As you know, I am carrying out some research about the friendships of children with Autism in mainstream schools and part of this research is to interview parents about their children's friendships. I would like to ask you some questions about your child's friendships. The recording will be securely disposed of once the interview has been transcribed. All results of the study will be anonymised and no names will not be stored in any records or used in the reporting of the findings. If I ask you any questions you are not happy to answer, just let me know and we can move on, if there is anything you don't understand please feel free to ask me for clarification. Also, please feel free to ask me questions at any time. The interview should take between 20-30 minutes, you are free to stop the interview at any time.

Do you think your child has a friend who would also consider your child as a friend?

Can you tell me about these friendships?

- Who are their friends?
- How many friends would you say they had?
- Where do they know their friends from?
- What age are these friends?

Do you know if these friendships are reciprocated? How do you know?

What kinds of activities does your child do with his/her friends?

When does your child see their friend?

How often does your child see their friend?

Does your child have siblings?

Are their friendships different to their siblings friendships? In what way?

Would you like your child's friendships to be different in any way?

How do you think your child feels about their friends?

- Are they happy with the number of friends they have?
- Are they happy with the things they do with their friends?
- Does your child talk to you about their friendships?

What do you think your child gets out of their friendships?

Do you do anything to influence or encourage your child's friendships?

Has this changed as your child has grown older?

How have your child's friendships changed as they've grown older?

- Has that changed from Primary-Secondary?

Do you think anyone else influences your child's friendships? (School staff?)

Would you like anyone to do more to support your child's friendships?

What kind of help do you think they need?

Is there anything else you would like to tell me about your child's friendships?

Appendix 10: Example transcribed parent interview

As you know, I am carrying out some research about the friendships of children with Autism in mainstream schools and part of this research is to interview parents about their children's friendships. I would like to ask you some questions about your child's friendships. The recording will be securely disposed of once the interview has been transcribed. All results of the study will be anonymised and no names will not be stored in any records or used in the reporting of the findings. If I ask you any questions you are not happy to answer, just let me know and we can move on, if there is anything you don't understand please feel free to ask me for clarification. Also, please feel free to ask me questions at any time. The interview should take between 20-30 minutes, you are free to stop the interview at any time.

Maybe it would help if you could tell me a little bit about their friendship then. Maybe who they are, his friends?

Researcher: Do you think that [CHILD'S NAME] has a friend who would also consider him as a friend?

Parent: It's difficult. Not like you would think a friend was.

Researcher: In what way?

Parent: He can switch very quickly. I think it makes it hard for him to be someone's friend. Because he can be great one minute and then switch and completely not talk to you the next. I think it makes it a little hard for people to be friends with him.

Researcher: Would you say though that he has got - at school or home or whatever - that would call [PUPIL'S NAME] a friend?

Parent: Yeah. Yeah.

Researcher: Maybe it would help if you could tell me a little bit about their friendship then. Maybe who they are, his friends?

Parent: I know he has a friend [NAME] he's been to Primary school with. That's maybe why he's still friends with him. But I wouldn't say it was a deep friendship. It can switch, [PUPIL'S NAME] quite hard to to understand. He has [NAME] who he likes who he seems to like, who is a bit more naughty. [PUPIL'S NAME]'s drawn to that. He doesn't really speak about that many people, so it would be a bit harder for me to know other ones. There's just names he gives sometimes.

Researcher: So if I was to ask you to put a number on it, could you do that? Like how many friends you thought [PUPIL'S NAME] had?

Parent: Maybe 3 or 4.

Researcher: And where does he know them all from?

Parent: School friends.

Researcher: Same age as him as well?

Parent: Yeah.

Researcher: So, the question was asked is if they considered him a friend. Do you know that these friendships are reciprocated?

Parent: Maybe a couple, yeah.

Researcher: How do you know?

Parent: Because he'll talk about them more than once. One he goes to school with, travels to school with. One does knock for him. And the other one is through I'm friends with their mum.

Researcher: So there are a few and there is a sign. What kinds of activities

Parent: does [PUPIL'S NAME] tend to do with his friends?
 Researcher: Football, sometimes. And computer games.
 Parent: And would that be online gaming?
 Researcher: Yeah. Well, yeah, they play on the Playstation or Xbox.
 Parent: What I mean though is do they go to each other's houses and play games, or are they playing via the internet?
 Researcher: He doesn't really go to other people's houses. Sometimes they come here.
 Parent: So I guess these are friends he sees on a daily basis, if they're school friends?
 Researcher: Yeah
 Parent: Would that be outside of school? Because you mentioned that sometimes they would come around to yours' or whatever.
 Researcher: Yeah, occasionally he'll have one who comes round and he'll go and play football sometimes.
 Parent: Ok. How often is sometimes? Once a week? More than that?
 Researcher: It tends to come in little batches, like he did it twice last week, but he hasn't done it for 3 or 4 months before that.
 Parent: Right, so it can be quite a long time, sometimes, without seeing friends.
 Researcher: And they would have to approach him, he wouldn't approach them.
 Parent: Right, ok. Does [PUPIL'S NAME] have any siblings?
 Researcher: Yes he does.
 Parent: Would you say that his friendships are different to his siblings' friendships?
 Researcher: Well, I've got another one like him. So if I talked about the other ones yes it is different.
 Parent: In what sort of way?
 Researcher: Well [PUPIL'S NAME] can take it or leave it. Not really bothered. He finds it hard because he doesn't like people in his space, he doesn't like people in his room. Where my other children may have their friends in, they don't mind if they sit on the bed or touch something, where [PUPIL'S NAME] doesn't like it.
 Parent: So that means it can be more difficult for him to have people come round?
 Researcher: Yeah.
 Parent: Would you like [PUPIL'S NAME] friendships to be different in any way?
 Researcher: Yeah, I wish that he'd understand people a little bit and not just think everybody's after something or trying to get in his space. That's his problem. But it's hard for him, because he's like that with every relationship: with his siblings, with me, with anyone.
 Parent: So you think it would be better if he understood things a little differently, friendships a little differently.
 Researcher: Definitely.
 Parent: How do you think [PUPIL'S NAME] feels about his friends?
 Researcher: He could take it or leave it. He's not that bothered. We've talked about it before. He isn't really bothered.
 Parent: So if I said to him '[PUPIL'S NAME], are you happy with the number of friends that you have?' what do you think he would say?
 Researcher: Probably 'no'. I think he'd like it to be different, but he's quite difficult.
 Parent: Would you say he was happy with the things he did with his

friends as well?

Parent: I think he'd like to do more, but I think that his social side stops him. And I do a little bit, because he can be quite easily led and I curb him, like where he goes and things like that. Because he can be led into things quite easily.

Researcher: So would you be concerned about his friendships a little bit? Maybe some of the people he's choosing to be friends with aren't good influences on him? Is that fair to say?

Parent: Yeah.

Researcher: You mentioned that [PUPIL'S NAME] and you have spoke about friendships before. What did you talk about when you spoke about friendships?

Parent: I was trying to encourage him to have friends, but he says he doesn't like people. They annoy him, they irritate him. He can deal with people, I think, in short little bursts, but longer than that, no. They start to irritate him. He couldn't have somebody come and see to him every day. Especially at home.

Researcher: That would be too much for him?

Parent: Yeah.

Researcher: How so?

Parent: He gets irritated. He gets bored. He's hid from people before. Telling me like 'When someone knocks, I'm not here.'

Researcher: This is probably a good time to ask this questions then: what do you think [PUPIL'S NAME] gets out of friendships?

Parent: I don't know, I actually don't know. He doesn't seem to want much from people. I mean one friend who he had because he goes to school with them because he doesn't like to go on his own, so it's convenient and I think friends for [PUPIL'S NAME] sometimes are just about convenience for what he wants to do. As soon as he doesn't, 'why do they ring me?'. 'Mum why are they ringing me all the time?' You know, somebody rings him twice he thinks they're harassing him. 'Why do they keep ringing my phone, all the time?' I think if Jack could go without friends he'd quite happily do so.

Researcher: So it sounds like they're quite functional friendships then? So his friendships are there because he gets something out of it, effectively.

Parent: Yeah, because during the holidays or weekends he doesn't speak to anyone.

Researcher: Right. So the friendships are related almost wholly to school then?

Parent: Yeah, he doesn't have any friends outside of school. Unless my friend brings her son, he won't see anybody. And he's quite happy that way as well.

Researcher: Do you do anything to influence or encourage Jack's friendships?

Parent: Yeah, I've encouraged him with people before, but it doesn't work. I've had people come round, I've encouraged him to go out. Even bring someone to the park, 'Do you want to ask [NAME]?' No. 'What would I want to do that for?'

Researcher: And has that always been the case? Or has that changed as he's grown older?

Parent: Nah, he's always been like that.

Researcher: How have his friendships changed as he's grown older? Like maybe from Primary to Secondary. Have you seen change in his friendships?

Parent: I think his friendships have always been at a distance. I think as kids get a bit more, you know some children get a bit more naughty, he can find that a bit interesting and he'd be more drawn to that. But not really. He's never really been interested in people. Maybe what they're doing, but not actually them.

Researcher: So it's been much the same from when he was young to now?

Parent: Yeah.

Researcher: You haven't seen much difference. You've mentioned this a couple of times now, about him being drawn to naughty children. Do you have any thought on why this might be? Have you considered that at all.

Parent: I'm not really sure. I suppose it's the forbidden stuff, isn't it? The stuff that they're not allowed to do maybe. He sees somebody who does quite a few things, and he's interested by it. He will ask me sometimes not to let him out because of what they're doing. But he finds it hard to say no.

Researcher: So if they were all doing something, even if he thought it was wrong, he'd go along with it?

Parent: Oh he knows it's wrong. But he will feel the pressure to carry on.

Researcher: So do you think anyone else influences his friendships? For example maybe school staff.

Parent: No.

Researcher: Would you like anyone to do more to support his friendships?

Parent: Yeah.

Researcher: And what kind of help might that be?

Parent: I actually don't know. It's a really difficult question. I just don't know. I don't know a lot about what [PUPIL'S NAME] has. He was only recently diagnosed, so I don't know. I don't know where to help him anymore. I can encourage him to be friends with someone, but that doesn't mean he's going to. It's like they're all fake friendships, they're not real.

Researcher: And how would you know if they were real? What would be the difference?

Parent: Because he'd respect them.

Researcher: And you don't feel he respects them now?

Parent: No, because he can be quite cold and harsh about anyone really quickly.

Researcher: And that would be different if it was a real friendship, is that right?

Parent: Yeah. Yeah. He did have one, actually, in Primary school. One boy for nearly all the way through Primary school, he left in the last year. They were quite close. He was a little, quiet boy, quite similar to him.

Researcher: But they went their separate ways?

Parent: Yeah, the boy left 2 years before they finished Primary school.

Researcher: I was wondering, you mentioned it was a relatively recent diagnosis. Do you remember when that happened?

Parent: It was last year. It's been a year.

Researcher: Ok. Do you think your perspective of things have changed at all since you got the diagnosis?

Parent: I can understand him a bit more. Because I always found him, he was very, very like good boy, we had quite a good relationship until he was about 8, and then he changed. He can be sometimes, I don't feel half the time that he loves me. So if he's like that with me, I don't know what he's going to be like. It does scare me a bit, for future.

Researcher: In what kind of way?
Parent: Relationships. You know, friends. Later on future relationships like when you meet a partner, things like that. It's a bit scary for me to think of him like that.

Researcher: So going back to that earlier question, do you think he would need some help or some support in some kind of way, if that was possible?

Parent: Yeah. I just can't think of what.

Researcher: Right. Is there anything else you'd like to tell me about [PUPIL'S NAME]'s friendships that we haven't touched on so far?

Parent: No. I can't think offhand.

Researcher: Well that's really the last of the questions that I had that I wanted to ask you, so thank you for taking part.

Appendix 11: Completed ethical approval form

BPS Ethical Approval Form

DEdPsy (Y2) STUDENT RESEARCH ETHICS APPROVAL FORM

Psychology & Human Development

This form should be completed with reference to the BPS Code of Ethics and Conduct – available online from www.bps.org.uk

On which course are you registered? DEdPsy

Title of project: Friends Like You: Investigating the Nature of Friendship in Autistic Adolescents in Mainstream Secondary Schools

Name of researcher(s): Graeme McLeary

Name of supervisor/s (for student research): Liz Pellicano & Vivian Hill

Date: 12/10/14 Intended start date of data collection (month and year only): October 2014

- 1. Summary of planned research** (please provide the following details: project title, purpose of project, its academic rationale and research questions, a brief description of methods and measurements; participants: recruitment methods, number, age, gender, exclusion/inclusion criteria; estimated start date and duration of project). It's expected that this will take approx. 200–300 words, though you may write more if you feel it is necessary. Please also give further details here if this project been considered by another (external) Research Ethics Committee.

As increasing numbers of pupils with Autistic Spectrum Disorders (ASD) are being educated in mainstream educational provisions, and the friendships and peer interactions of pupils in this group are of great importance to them, the aim of this research is to investigate the friendships of young people with ASD, relative to typically-developing young people of similar age and cognitive ability. This study will consider pupils with ASD attending mainstream Secondary Schools, adopting a mixed-methodology, multi-informant approach.

In an attempt to examine these possible factors which will affect their friendships, the study will compare the scores of adolescents with ASD and their typically-developing, cognitively-matched peers on measures of friendship quality and friendship motivations, as well as the responses they give in semi-structured interviews around their friendships.

Also, to consider what other figures in the lives of the young people perceive as being the nature of friendships for these adolescents with ASD and how they may be supported with their friendships; parents and school staff will be interviewed.

Further to this, and in order to form a picture of the inclusion of adolescents with ASD within friendship groups in the classroom, the study will examine the friendship nominations of adolescents with ASD and their peers within the class, and whether there is reciprocation. These reports will be coalesced and analysed to create a social cognitive map, to identify the social groups in the classroom.

This leads to the following Research Questions:

- How do adolescents with ASD rate the quality of their friendships compared to their typically-developing peers?
- What do adolescents with ASD understand by the term 'friendship', and what motivates them to form and maintain friendships?
- How do parents and teachers perceive the friendships of adolescents with ASD, and what specific role do parents and teachers play in supporting the friendships of these adolescents?
- To what extent are adolescents with ASD perceived by classmates as being within friendships groups in the classroom and are friendship nominations made by children with ASD reciprocated by class peers?

Participants will be selected by contacting mainstream Secondary Schools to give details of attending pupils with an independent diagnosis of ASD. Parents will then be contacted to provide consent for their young people and themselves to be involved in the study. The school will also indicate cognitively-matched peers, for whom consent to participate will then be sought. Cognitive-matching will be confirmed by conducting non-verbal measures of the Wechsler Abbreviated Scale of Intelligence (WASI). The participating pupils (both those with ASD and typically-developing peers), their parents, and the school Special Educational Needs Co-ordinator will be interviewed. Transcriptions of the interview data will be thematically analysed to locate key themes.

The interviews and assessments for this study will be conducted between October and December 2014.

- 2. Specific ethical issues** (Please outline the main ethical issues which may arise in the course of this research, and how they will be addressed. It's expected that this will require approx. 200–300 words, though you may write more if you feel it is necessary. You will find information in the notes about answering this question).

This research will aim to investigate the nature of friendships for pupils with ASD who are educated in mainstream Secondary Schools. It is hoped that the research will be able to provide information on what motivates pupils with ASD to form and maintain friendships, and ways in which these friendships are supported by parents and school staff.

Interviews and assessments with pupils and parents/teachers will be conducted within schools.

As work will be conducted with both young people and adults, I will provide the school with an up-to-date Criminal Records Bureau check. Participants (pupils and their parents) will be provided with information sheets which detail the purpose and aims of the research, and written consent will be obtained from parents, pupils and school staff involved. Parental and young person consent will be

required for each of the participants. If parents consent to being involved in the study but their children do not, then neither participant will be included. [Copies of the information sheets and consent letters are included with this form.]

Through the recruitment process, young people participants will thus be taking part with informed consent of themselves, and their parents, and will be aware that they are able to withdraw should they so wish. They will be reminded of this before interviewing begins, and given opportunity should they become uncomfortable or distressed during the interviewing process. As the interviewer will be a Trainee Educational Psychologist (TEP) with experience of working with individuals with ASD particular consideration will be given to the participants' emotional reaction to questioning and their continued consent to continue will be gained verbally throughout the interviewing and test administration process. If participants choose to withdraw, they will subsequently be offered the opportunity to speak with the TEP outside of the context of the study, or they can be referred to the school's counsellor.

Interview data will be recorded digitally for later transcription and will be anonymised for the purposes of reporting. No identifying information regarding school or local authority will be included to ensure full anonymity of participants. The data will be securely saved and available only to the researcher and his supervisors. Upon completion of the project, the data will be deleted.

After completion of the project, I will share the outcomes of my research with those involved, if they wish.

3. Further details

Please answer the following questions.

		YES	NO	N/A
1	Will you describe the exactly what is involved in the research to participants in advance, so that they are informed about what to expect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Will you tell participants that their participation is voluntary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Will you obtain written consent for participation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	If the research is observational, will you ask participants for their consent to being observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Will you tell participants that they may withdraw from the research at any time and for any reason?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?	x	<input type="checkbox"/>	<input type="checkbox"/>
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If you have ticked **No** to any of Q1-8, please ensure further details are given in section 2 above.

		YES	NO	N/A
9	Will your project involve deliberately misleading participants in any way?	<input type="checkbox"/>	x	<input type="checkbox"/>
10	Is there any realistic risk of any participants experiencing either physical or psychological distress or discomfort? If Yes , give details on a separate sheet and state what you will tell them to do if they should experience any problems (e.g. who they can contact for help).	x	<input type="checkbox"/>	<input type="checkbox"/>
11	Will your project involve human participants as a secondary source of data (e.g. using existing data sets)	<input type="checkbox"/>	x	<input type="checkbox"/>

If you have ticked **Yes** to any of 9 - 11, please provide a full explanation in section 2 above.

		YES	NO	N/A
12	Does your project involve working with any of the following special groups?			
	• Animals	<input type="checkbox"/>	x	<input type="checkbox"/>
	• School age children (under 16 years of age)	x	<input type="checkbox"/>	<input type="checkbox"/>
	• Young people of 17-18 years of age	<input type="checkbox"/>	x	<input type="checkbox"/>
	• People with learning or communication difficulties	x	<input type="checkbox"/>	<input type="checkbox"/>
	• Patients	<input type="checkbox"/>	x	<input type="checkbox"/>
	• People in custody	<input type="checkbox"/>	x	<input type="checkbox"/>
	• People engaged in illegal activities (e.g. drug-taking)	<input type="checkbox"/>	x	<input type="checkbox"/>

If you have ticked Yes to 12, please refer to BPS guidelines, and provide full details in sections 1 and 2 above. **Note that you may also need to obtain satisfactory CRB clearance (or equivalent for overseas students).**

There is an obligation on the Student and their advisory panel to bring to the attention of the Faculty Research Ethics Committee any issues with ethical implications not clearly covered by the above checklist.

4. Attachments

Please attach the following items to this form:

- Approval letter from external Research Ethics Committee, if applicable
- Where available, information sheets, consent forms and other materials to be used to inform potential participants about the research.

5. Declaration

*This form (and any attachments) should be signed by the Trainee, Academic and EP Supervisors and then **submitted to Lorraine Fernandes in the Programme Office**. You will be informed when it has been approved. If there are concerns that this research may not meet BPS ethical guidelines then it will be considered by the Faculty Research Ethics Committee. **If your application is incomplete, it will be returned to you.***

For completion by students

I am familiar with the BPS Guidelines for ethical practices in psychological research (and have discussed them in relation to my specific project with members of my advisory panel). I confirm that to the best of my knowledge this is a full description of the ethical issues that may arise in the course of this project.

SignedPrint Name
.....Date.....

(Trainee Educational Psychologist)

For completion by supervisors/ advisory panel

We consider that this project meets the BPS ethics guidelines on conducting research and does not need to be referred to the Faculty Research Ethics Committee.

SignedPrint Name
.....Date.....

(Academic Research Supervisor)

SignedPrint Name
.....Date.....

(EP Supervisor)

FREC use

Date considered: _____ Reference: _____

Approved and filed Referred back to applicant Referred to RGEC



Signature of Chair of
FREC: _____