

**Title: ‘Are all beliefs equal?’ Investigating the nature and determinants of parental  
attitudinal beliefs towards educational inclusion**

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## **Abstract**

### **Abstract**

This study explores the nature of parental attitudinal beliefs towards educational inclusion and the factors that determine these beliefs. Participants were drawn from the Growing Up in Scotland Survey (N=2200). Results indicate that majority of parents held positive generalised belief towards including children with additional support needs (ASN) in mainstream classrooms (90%), compared with belief about the benefits of inclusion for children with ASN (72%), or benefits for typically developing children (70%). Lower parental income and higher levels of satisfaction with child's current school were associated with positive generalised beliefs. Belief about the benefits of inclusion for children with ASN was also positively associated with lower parental income, while belief about benefits for typically developing children was determined by higher parental education and age. Our findings suggest that efforts to increase parental attitudes should target salient beliefs and take into account the determinants of each of these beliefs.

**Keywords:** parental beliefs and attitudes; additional support needs; inclusion; special educational needs; parental socioeconomic status

## Introduction

Inclusive education aims to remove barriers to learning for all students, and a growing number of children with special educational needs (SEN) around the world are now being educated in regular schools (Charter of Fundamental Rights 2000; United Nations 2006; Pijl, Frostad, and Flem 2008; UNESCO 2009; European Agency for Development in Special Needs Education 2010; Scottish Government 2014; Lui et al. 2015). Within the Scottish educational context, an eclectic form of provision, with parallel developments in inclusive education, special classes or units in mainstream schools, and special schools is favoured. However, the term *special educational needs* is no longer in use. Instead, the Education (Additional Support for Learning) (Scotland) Act 2004 (Scottish Government 2004) introduced a broader concept of Additional Support Needs (ASN) which focuses on a functional approach to helping children who require extra support to overcome any barriers to learning. ASN captures any child or young person who is, or is likely to be, unable without the provision of additional support to benefit from school education provided for them. ‘Additional support’ therefore encompasses educational provision, which is additional to, or otherwise different from, that made generally available for pupils of the same age in schools (other than special schools). As noted by Riddell et al. (2006), this broader definition of ASN has implications for making comparisons between countries as well as discussing policy differences.

A key aim of inclusive education is to make it easier for parents to request and access support within a mainstream educational system. However, not all parents are in favour of inclusive education. Some parents prefer and advocate for inclusive placement, while others favour segregated provision (Palmer et al. 2001; Allan 2010). These preferences are rooted in

parental beliefs and attitudes about the impact of inclusive provision on their children's education, and can have significant consequences for the success of inclusive educational policies in schools. Despite the importance of parental beliefs for the success of inclusive education, our understanding of these beliefs and the factors determining them is limited in several ways. On the whole, focus in previous studies has been on understanding global attitudes rather than the dynamics of underpinning beliefs behind these attitudes. While existing studies have documented varying parental beliefs towards inclusion (e.g., Palmer et al. 2001; Leyser and Kirk 2004; Kniveton 2004), very few of these studies have identified and explored these differences in depth. More importantly, as far as we are aware, none of these studies have examined the determinants of salient beliefs underpinning parental attitudes towards inclusion. Such knowledge can help us understand parental choices regarding inclusion, and offer guidance on how to engender positive attitudes among parents and the general public. For instance, considering that some beliefs are more influential than others in shaping parental behaviour, understanding the beliefs that parents find easy to endorse and those they struggle with can help policy makers and schools address key parental concerns regarding inclusion and to make inclusive education a success. The current study, therefore, aims to investigate the nature of beliefs underpinning parental attitudes towards educational inclusion and to explore the predictors of these beliefs. In doing so, we use the terms ASN when talking about the context of this study and SEN when referring to the general literature within the field.

### **Theory and Determinants of Attitudinal Beliefs towards Educational Inclusion**

Parental groups in many countries have been credited for contributing to policy changes towards inclusion (Pijl, Meijer, and Hegarty 1997; Riddell et al. 2010), and parents will continue to play a crucial role in its success. For instance, positive parental attitudes towards

inclusion can make it easier for schools to accommodate and implement inclusive policies (De Boer, Pijl, and Minnaert 2010) and schools find it difficult to foster inclusion if it is not supported by all parents (Rose 2001). As important stakeholders, parents can influence policy directions, how inclusion is implemented, and the amount of resources devoted to it. Additionally, since parental attitudes shape children's orientations, parents can have an indirect effect on the social experiences of students with SEN by influencing the nature of social relationships between typically developing children and those with SEN (Innes and Diamond 1999; Vignes et al. 2009; De Boer et al. 2012). This indirect influence of parents on social relationship between children is important considering that students with SEN often have limited friendships (Koster et al. 2010), experience a lack of peer acceptance, and bullying in mainstream settings (Pivik, McComas, and Laflame 2002; Frederickson and Furnham 2004).

The social psychological theory of planned behaviour (Ajzen 1991) and its predecessor, the theory of reasoned action (Ajzen and Fishbein 1980) provides a comprehensive lens for understanding attitudinal beliefs and its determinants. According to these theories, attitudes refer to "an individual's disposition to react with a certain degree of favorableness or unfavorableness to an object, behavior, person, institution, or event – or to any other discriminable aspect of the individual's world" (Ajzen 1993, 41). People have positive attitudes towards behaviours they believe have largely desirable consequences and form unfavourable attitudes towards behaviours they associate with mostly undesirable consequences (Ajzen 1991). In other words, attitudes reflect an individual's global positive or negative beliefs about a particular behaviour, issue or policy. In order to understand attitudes towards behaviour, we must identify the underpinning beliefs. It can, therefore, be argued

that parental attitudes towards inclusion are rooted in beliefs about the impact of inclusive provisions on their children's education.

While the overall attitudes of parents towards inclusion are generally positive (see De Boer et al. 2010 for a review), there is evidence that parents hold both favourable and unfavourable beliefs towards educational inclusion. Positive beliefs include parental perceptions that inclusive education will help typically developing children learn about and accept individual differences or diversity (Miller and Phillips 1992; Gallagher et al. 2000; Peck et al. 2004), and be more sensitive to the needs of others (Rafferty, Boettcher, and Griffin 2001; Rafferty and Griffin 2005). Parents of typically developing children often state that they prefer having their children in classes that include children with SEN because inclusion leads to an increase in personal development, and improved self-worth through helping others (Daniel and King 1997). With respect to children with SEN, parents believe that inclusive education will enable them to function effectively in the real world, and provide them with an opportunity to participate in various activities (Scheepstra, Nakken, and Pijl 1999; Palmer et al. 2001; Rafferty et al. 2001; Rafferty and Griffin 2005). They also believe that inclusive classrooms provide a more stimulating environment for learning, and promote positive role models and friendships for children with SEN (Scheepstra et al. 1999).

Negative parental attitudes towards inclusion are underpinned by the belief that typically developing children might imitate inappropriate behaviours, be injured by children with SEN, or be frightened by unusual behaviours (Reichert et al. 1989; Rafferty et al. 2001; Rafferty and Griffin 2005). Parents are also concerned that due to high demands of students with SEN, they will take up attention from teachers (Palmer et al. 2001; Dyson et al. 2004), lower academic standards (Huber, Rosenfeld, and Fiorello 2001) and thereby interfere or

compromise the education of other children (Daniel and King 1997). Further, parents of children with SEN are concerned that their children will face social isolation, rejection and bullying (Yude et al. 1998; Palmer et al. 2001; Leyser and Kirk 2004). According to Daniel and King (1997) parents are also concerned about the degree to which inclusive school systems address the needs of children with SEN. Some parents perceive staff in mainstream schools as lacking sufficient training and knowledge about SEN and see mainstream classrooms as potentially unwelcoming or harmful environments (Grove and Fisher 1999). Gilmore, Campbell and Cuskelly (2003) in their study found that, although parents recognise the educational, social and emotional benefits of inclusive education, they feel the needs of students with SEN would be better met in special education classes.

The theory of planned behaviour and its predecessor, the theory of reasoned action (Ajzen and Fishbein 1980), contends that people may hold several beliefs about any given object or behaviour, but attitudes are generally based on few salient beliefs. An analysis of existing beliefs towards inclusion in the literature suggests that they can be categorised into three broad salient attitudinal beliefs (Leyser and Kirk 2004). These are a) a generalised rights orientation towards inclusion of children with SEN in mainstream schools, b) belief about the benefits of inclusion for children with SEN, and c) belief about the benefits of inclusion for typically developing children. Available descriptive evidence so far suggests that parents are more likely to endorse beliefs about the general concept of inclusion than beliefs about its benefits to typically developing children or those with SEN (Leyser and Kirk 2004; De Boer and Munde 2014). Such nuances in parental belief systems are important in understanding key parental concerns and designing effective interventions aimed at addressing them. Additionally, it can be argued that attitudes towards educational inclusion are subject to socially desirable responses. It is, therefore, important to examine whether or not parents are

more positive towards some beliefs than others in an effort to get a more comprehensive understanding of the nature of parental attitudes. Current focus on global attitudinal measures misses this vital information on the dynamics of underpinning parental beliefs towards educational inclusion.

Within the framework of the theory of planned behaviour (Ajzen 1991), beliefs are acquired by associating an action with its qualities, characteristics and attributes, through life experiences resulting from direct observation or through information from outside sources. They can also be self-generated through inference processes. Several studies have investigated the determinants of parental attitudes towards inclusion with varying outcomes. For instance, Balboni and Padrabissi (2000) found that parents from high to average socio-economic (SES) backgrounds tend to be more favourable towards inclusion than parents from a low SES background. Studies investigating the influence of parental education have found that parents with high levels of education tend to hold more positive attitudes towards the inclusion of children with SEN compared to those with lower levels of education (Palmer et al. 1998; Stoiber, Getinger, and Goetz 1998; Tafa and Manolitsis 2003; Leyser and Kirk 2004). However, not all studies found a significant association between parental educational levels and attitudes towards inclusion (De Boer and Munde 2014; Kalyva et al. 2007). Additionally, while some studies have found significant associations between parental age and inclusion with younger parents demonstrating more positive attitudes (e.g. De Boer and Munde 2014), not all studies found an age effect (Balboni and Padrabissi 2000; Kalyva et al. 2007; De Boer et al. 2012). There is also an indication that personal experiences such as having a child with SEN leads to more positive attitudes (Stoiber et al. 1998; Balboni and Padrabissi 2000; De Boer et al. 2012; De Boer and Munde 2014), although others found no significant associations (Rafferty et al. 2001; Rafferty & Griffin 2005). In addition, knowing

someone with a disability in daily life is often believed to positively affect attitudes (Kalyva et al. 2007). Finally, parental perceptions about the capability of schools and teachers to effectively meet their children's needs (Palmer et al. 2001) as well as the nature of a child's disability (Leyser and Kirk 2004; Vignes et al. 2009; De Boer and Munde 2014) are important determinants of attitudes. These findings show that the link between parental characteristics and attitudes towards inclusion is not straightforward. One way for getting a better understanding of the determinants of attitudes is to explore the extent to which these characteristics influence the salient beliefs underpinning attitudes. This is because it is likely that the predictors might have differential influences on the various salient beliefs. As far as we are aware, no existing study has examined these differential dynamics.

## **Methodology**

### ***Research Aims and Questions***

The current study, therefore, explores the nature of parental attitudinal beliefs towards educational inclusion and the factors that determine these beliefs. Specifically, the study addresses two primary research questions:

- 1) what is the nature of parental beliefs towards educational inclusion?
- 2) what are the key determinants of parental beliefs:
  - a. about including children with ASN in mainstream schools?
  - b. about the benefits of inclusion for children with ASN?
  - c. about the benefits of inclusion for typically developing children?

### ***Data and Participants***

Data for the current study was drawn from the Growing Up in Scotland Survey (GUS). This survey explores a range of topics related to cohort children and their parents. Due to its

comprehensive coverage of a range of issues, GUS provides the most appropriate opportunity for exploring the issues of interest to the current study. Additionally, it is the only known national survey in Scotland that includes questions on parental attitudinal beliefs towards educational inclusion. GUS follows two separate cohorts, that is, a Birth and a Child Cohort. Data from Sweep 4 of the Child Cohort survey was used for the current study due to its suitability and coverage of the variables of interest. The Sweep 4 data were obtained between April 2008 and May 2009. The sample consisted of 2200 participants, representing a 90% response rate of all eligible participants. The sample for the survey was obtained using a multi-stage stratified random sampling technique to ensure a nationally representative sample. Data were obtained through face-to-face interviews with parents (97% were mothers). At the time of data collection, the cohort children were aged between 5-6 years. In Scotland, almost all children within this age bracket begin first year of compulsory primary schooling; with the majority in publicly funded schools. The procedure for school allocation is primarily based on location with children attending a school close to their place of residence. A detailed description of the sampling procedure and method of data collection is published in the official user guide (Bradshaw et al. 2010).

### ***Dependent Variables***

Three dependent variables were used in this study. These were a generalised belief about including children with ASN in mainstream education; belief about the benefit of inclusion for children with ASN; and belief about the benefits of inclusion for typically developing children (Table 1). *Generalised belief* was measured by asking participants to respond to the question “It is important that parents of children with additional support needs<sup>1</sup> are able to

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<sup>1</sup> The term additional support needs (ASN) is used in Scotland rather than ASN. It is broadly conceptualised to encompass students with disabilities as well as those who require extra support for their learning (Scottish, Government, 2004)

send their child to a mainstream school if they wish to do so". Responses were on a 5-point Likert scale: Strongly agree [1], Agree [2], Neither agree nor disagree [3], Disagree [4], Strongly disagree [5]. *Belief about the benefits to children with ASN* was measured by asking participants to respond to the statement "Allowing pupils with additional support needs to attend mainstream schools improves the educational experience of those pupils". Responses were on a 5-point Likert scale: Strongly agree [1], Agree [2], Neither agree nor disagree [3], Disagree [4], Strongly disagree [5]. Responses from the above beliefs were subsequently recoded into three polytomous categories so that disagree and strongly disagree responses represent negative belief (1), neither agree nor disagree responses represent neutral belief (2) and strongly agree and agree responses represent positive beliefs (3). *Belief about benefits to typically developing children* was measured by asking parents to select the phrase that comes closest to their feelings about school education: "Allowing pupils with additional support needs to attend mainstream school has a *negative* impact on other pupils at the school" (1); "Allowing pupils with additional support needs to attend mainstream school has a *positive* impact on other pupils at the school" (2); "Allowing pupils with additional support needs to attend mainstream school has *no* impact on other pupils at the school" (3). Responses to this question were recoded so that option 1 represents negative belief (1), option 3 represents neutral belief (2) and option 2 represents positive belief (3). In other words, all responses were recoded to ensure that they were on a similar scale.

### ***Independent Variables***

Various predictor variables (Table 1) were selected based on the theory of planned behaviours hypothesis about belief formation and a review of the literature on the determinants of parental attitudes towards educational inclusion discussed in the section above.

*Socioeconomic status* (SES) was measured using a multidimensional conceptualisation which encompasses job status, income and education (Braveman et al. 2005). *Household income* was measured on a scale of 1-17 based on actual household income. These scales represent specific annual income bands (from 1 – less than £3,999 to 17 – £56,000 or more). The original measure of *Parental Education* was in six categories (degree, vocational, higher grade, standard grade, other, no qualification). These categories were recoded into five groups (degree, vocational, higher, standard grade/other, no qualification) so that higher scores represent higher levels of education. The ‘other’ category was also added to the standard grade group as this had only 6 responses. *Parental Job Status* (referred to as SES in the GUS data set) was a derived variable based on employment relations (Office for National Statistics 2005). This classifies individuals into six categories using the characteristics of their job such as career prospects, autonomy, mode of payments, and period of notice. Higher scores indicate higher status.

*Parental age* was a derived variable based on age of respondents at the time of interview. Within the data, age was categorised into three groups, that is, 20-29, 30-39, and 40 and above.

*Parental satisfaction with the child’s school* was measured by asking participants ‘how satisfied they were with their child’s current school’. Responses were originally measured on a 6-point scale (Very Satisfied [1] to Too early to say [6]). The last category ‘Too early to say’ was deleted and the other responses reverse coded so that higher scores indicate greater satisfaction with the child’s school (Very Dissatisfied [1], Fairly Dissatisfied [2], Neither Satisfied or Dissatisfied [3], Fairly Satisfied [4], Very Satisfied [5]).

*Parental disability* was measured by using responses to two proxy questions: a) whether respondents were in receipt of disability allowance, a non-means-tested cash contribution from the government towards extra cost of needs arising from an impairment or health condition (1-Yes; 0-No), and b) whether respondents were in receipt of incapacity benefits, an allowance provided by the government for people who cannot work because of illness or disability (1-Yes; 0-No). Responses from the two questions were combined and recoded so that a *Yes* response to any of the two questions would be indicative of presence of disability and a *No* response to both questions would indicate the respondent did not have a disability<sup>2</sup>.

*Child with additional support needs* was measured by asking participants whether the cohort child was identified by the school as having additional support needs (special educational needs in other countries). Additional support needs (ASN) in Scotland is a broad categorisation that captures children who require additional support to achieve learning goals. These range from disabilities to not having English as a mother tongue. Responses were dummy coded (1-Yes, 0-No).

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## **Analysis**

Two forms of inferential statistical analyses were used to explore the research questions. In the first analysis, a Friedman test combined with post hoc analyses were undertaken to investigate the nature of parental attitudinal beliefs towards educational inclusion. The focus

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<sup>2</sup> At the time of data collection, these two means of support were usually received by individuals with some form of disability. The approach for providing support has since changed. It is also likely that this measure might underestimate the true number of respondents with disability because there might be individuals with some form of disability, who are not in receipts of any of these benefits.

here was to test whether or not parents are more positive towards some salient beliefs over others. The second analysis involved the use of ordinal logistic regression to establish whether or not a systematic relationship exists between the predictors and the probability of parents having positive, neutral or negative attitude towards inclusion. This analytic technique is parsimonious and was chosen because the outcome variables, i.e. parental beliefs were categorical and ordinal. Specifically, we evaluated the impact of predictors on each of the three attitudinal belief domains. Due to the nature of the sampling procedure used for the GUS survey, all analyses were carried out using cross-sectional weights to account for unequal probabilities of selection and non-response bias (Bradshaw et al. 2010).

## Findings

Result from descriptive statistics (Figure 1) shows that overall, majority of parents held positive attitudinal beliefs towards educational inclusion. A Friedman test employed to test whether parental responses to the three salient beliefs differ was statistically significant  $X^2(2, 2200) = 172.31, p < .001$ .

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INSERT FIGURE 1 HERE  
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Post hoc analyses using Wilcoxon Signed Rank test with a Bonferroni adjusted alpha (.02) showed that parents were more positive in their belief about the inclusion of children with ASN in mainstream schools than belief about the benefits of inclusion to children with ASN ( $p < .001$ ) or belief about the benefits of inclusion for typically developing children ( $p < .001$ ). Additionally, parents were more positive in their belief about the benefit of inclusion for children with ASN than on benefit for typically developing children ( $p < .001$ ). In other words,

parents hold more positive generalised beliefs about inclusion in comparison to specific beliefs about its benefits.

### **Predictors of Parental Attitudinal Beliefs**

Three separate logistic regression analyses were undertaken to investigate the determinants of salient parental attitudinal beliefs towards inclusion. Parental socioeconomic status (income, job status and education), age, satisfaction with child's current school, parental disability, and whether or not the cohort child had an ASN were specified to predict the three salient beliefs. Results of the first analysis predicting generalised belief about including children with ASN in mainstream schools were statistically significant  $X^2(7, 2200)=29.09, p<.001$ .

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Amongst the variables investigated, only income and parental satisfaction with their child's current school had a significant effect on parental belief about provision of inclusive educational opportunities for all children. The odds of parents having a positive belief that children with ASN should have the opportunity to attend mainstream schools decreases by 0.96 times (4%) for each level of increase in parental income. In other words, higher income was associated with lower positive beliefs about including children with ASN in mainstream classrooms. On the other hand, for every increase in parental satisfaction with their children's current school, parents were 1.28 times (28%) more likely to hold a positive generalised belief towards including children with ASN in mainstream schools. None of the other variables were significantly associated with the generalised inclusive belief.

Results from the second model predicting parental belief about the benefits of inclusion for children with ASN were also significant  $X^2(7, 2200)=17.22, p<.001$ .

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INSERT TABLE 3 HERE  
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Parental income was significantly associated with the belief about the benefits of inclusion for children identified as having ASN. For every unit increase in household income, parents were .97 times (about 3%) less likely to hold a positive belief in the benefit of inclusion for students with ASN. In other words, parents from less affluent backgrounds were more likely than those from high-income backgrounds to hold a positive belief about the benefits of inclusion for children with ASN. Two other variables reach marginal statistical significance ( $p<.10$ ). Older parents and parents who were satisfied with their children's current school were 1.16 times (16%) more likely to hold a positive belief in the benefits of inclusion for children with ASN. None of the other variables reached statistical significance.

The final model predicting parental belief about the benefits of inclusion for typically developing children was significant  $X^2(7, 2200)=23.25, p<.001$ .

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Significant predictors of belief about the benefit of inclusion for typically developing children were parental education and age. For every increase in the level of educational qualification, parents were 1.15 times (15%) more likely to hold a positive belief that inclusion benefits the

education of typically developing children. Additionally, for each unit increase in age, parents were 1.19 times (19.72%) more likely to hold a positive belief that inclusion benefits the education of typically developing children. None of the other predictors reached statistical significance.

## **Discussion**

In this current study, we explored the nature of salient beliefs underpinning parental attitudes towards educational inclusion and predictors of these beliefs. In line with previous studies on global parental attitudes (De Boer et al. 2010), parents in our study held positive salient beliefs towards inclusion. In order to gain a more nuanced understanding of these beliefs, we statistically tested whether or not parents were more positive towards some salient beliefs than others. Consistent with previous descriptive findings (Leyser and Kirk 2004), parents were more positive in their generalised beliefs about including children with ASN in mainstream schools, followed by belief about the benefits of inclusion for the education of children with ASN, and belief about benefits for typically developing children respectively. In other words, salient beliefs underpinning parental attitudes towards inclusion are not equal.

What the above findings demonstrate is that discussions about inclusion need to go beyond arguments about social justice and towards articulating the educational benefits for all children. While a social justice perspective is important, it can be argued that in the face of difficulties, parental support for inclusion might not be sustained if its benefits to the education of all children are not an influential consideration in parental attitudes. Policy makers, education authorities and schools must, therefore, make prominent in public discourses and showcase evidence on the specific benefits of inclusion for the education of all children. Knowledge about the benefits of inclusion to the education of all children may serve

as a catalyst for parents to become strong advocates for policy and financial supports to be given to schools to enable them to provide effective inclusive educational experiences for all children. Additionally, knowledge about the benefits of inclusion for the education of typically developing children might eliminate the risk of these parents withdrawing their support in the face of difficulties because of perceptions that inclusion is something they are permitting for the benefits of 'other children'. Furthermore, even though there has been a lot of focus on the benefits of inclusion for children with ASN, it appears the anxieties about inclusion expressed by parents (Rafferty and Griffin 2005; Palmer et al. 2001; Rafferty et al. 2001; Leyser and Kirk 2004) persist. Thus, much work is needed on delivering an inclusive education and practice that parents can have confidence in. To achieve this goal, structural and financial barriers will need to be removed. Most importantly, the education of teachers must go beyond the predominant focus on their attitudes and include experiences that will provide them with the skills and knowledge needed for effective inclusive practice (e.g. Agarwal et al. 2010; Sosu, Mtika, and Colucci-Gray, 2010).

Results on factors influencing parental beliefs towards inclusion suggest this issue is not entirely straightforward. Our findings on the predictors of the salient beliefs show complex and differential effects. With respect to determinants of generalised beliefs towards inclusion, we found that parental satisfaction with the cohort child's school influenced their belief towards including children with ASN in mainstream schools. Considering that the majority of parents were satisfied with their child's school (97%), it is no surprise that this belief is overwhelmingly positive. Previous research has shown that parents express concern about inclusive education when they perceive schools as lacking the infrastructure, knowledge and skills (Daniel and King 1997; Huber et al. 2001). Thus, building parental confidence in the efficacy of schools is crucial for ensuring parental support for inclusion.

Higher levels of parental income were associated with lower positive generalised belief in the inclusion of children with ASN in mainstream schools. Parental income was equally a significant predictor of belief about the benefits of inclusion for children with ASN with more affluent parents being less likely to hold positive belief in the benefits of inclusion for the education of children with ASN. This finding is in contrast to previous studies (Balboni and Padrabissi 2000), which have shown a positive association between parental SES and attitudes towards inclusion. It is, however, worth pointing out that the measure of SES in the aforementioned study was based on a combined score of parental education and job status rather than actual household income. Thus, as far as we are aware this is the first study to explore the effects of income on parental attitudinal beliefs towards inclusion. A possible explanation for the negative relationship between parental income and these salient beliefs is that children identified as having ASN are more likely to come from low income households (Riddell et al. 2010). These parents are, therefore, more likely to feel the effects of exclusion policies and be the ones fighting for the inclusion of their children in mainstream schools. To overcome the current inequality in inclusive provision in schools, policy makers must complement the support for inclusion from these parents by incorporating a deprivation index into funding for ASN in order to enable schools and teachers to provide an effective inclusive educational experience for these children. Bearing in mind the effect of poverty on educational outcomes (Sosu and Ellis, 2014), support for inclusion should equally improve attainment for children from low-income households.

Beliefs about the benefits of inclusion for the education of typically developing children were significantly determined by parental education and age. Consistent with previous studies on attitudes (Tafa and Manolitsis 2003; Leyser and Kirk 2004), more educated parents were

more likely to believe that inclusion benefits the education of typically developing children. Considering that this is the belief most parents find difficult to endorse, it can be argued that parental education leverages the additional level of understanding necessary for recognising that inclusion is not only about social justice or mainly for the benefit of children with ASN, but it can also benefit the education of all children. Our findings also show significant association between parental age and attitudes towards inclusion. However, unlike in previous studies (De Boer and Munde 2014), older parents in comparison to their younger peers were more likely to hold a positive belief about the benefits of inclusion for typically developing children. A plausible explanation is that older respondents may have had the experience of other children going through an inclusive education system and are therefore more attuned to its benefits, compared to younger parents whose children are yet to go through the system and are more anxious based on the limited information they have about inclusion. The differences in findings might also be explained by the focus on global attitudes in De Boer and Munde's (2014) study and our focus on salient beliefs. Considering these differences, future investigation should focus on how age influences attitudes and beliefs towards inclusion among parents.

Contrary to previous studies (Balboni and Padrabissi 2000), experiences with disability or having a child with ASN were not significant predictors of any of the salient beliefs examined. However, caution is needed due to the potential for underestimation of the number of parents with these experiences in the current study. Parental disability was inferred from the number of parents claiming particular disability benefits. While the figure in our sample is similar to other available statistics (Phillips 2013), it is possible that some parents might have disabilities but not be in receipt of any of the benefits used to measure parental disability. Secondly, the measure of whether or not parents had a child with ASN was only in

relation to the cohort child in the GUS study, which might have underestimated the number of parents who have a child with ASN. Additionally, this measure is very broad encompassing a host of needs. A more detailed analysis that looks at the type of ASN the child has would have been preferable as we know the severity and nature of a child's disability influences parental attitudes (Leyser and Kirk 2004; De Boer and Munde 2014). This was, however, not possible due to extremely small sample sizes of each ASN category in our data. It is important to note that our data on parental beliefs were obtained when the cohort children were 5-6 years of age and had just started formal schooling. It is therefore possible that findings may differ when considering beliefs of parents with older children or those whose children are about to engage in high-stakes examinations. While our findings on the nature of parental beliefs are generally consistent with studies exploring the attitudes of parents with relatively older children (e.g. Leyser and Kirk 2004; Lui et al. 2015), future studies should explore potential differences between parental groups. Finally, causal attributions cannot be imputed from our findings. It is likely that we have missed other potential predictors of these salient beliefs as the number of predictors used in the current study was limited to what was available in the data set. Future qualitative studies should, therefore, be undertaken to gain further insights into the determinants of salient beliefs underpinning parental attitudes towards inclusion.

### **Educational and Policy Implications**

In addition to the points discussed above, our findings suggest that efforts to increase parental attitudes should target salient beliefs and take into account the determinants of each of these beliefs. For instance, we now know that parents find it more difficult to endorse the belief that inclusion benefits the education of all children; hence more effort is needed to identify and address specific parental concerns. To achieve this goal, school and education authorities

should make explicit reference to the benefits of inclusion for typically developing children. Evidence suggests that inclusion enables typically developing children to develop complex sociocognitive skills such as acceptance of individual differences, sensitivity to the needs of others (Gallagher et al. 2000; Peck et al. 2004; Rafferty and Griffin 2005), ethics of fairness and equity (Diamond and Hong 2010), adaptive communicative skills (Guralnick and Paul-Brown 1977), broader range of friendship (Henninger and Gupta 2014), and a sense of self-worth (Daniel and King 1997). Schools and education authorities may for instance provide concrete examples to parents of when their children have developed these positive attributes as a result of inclusion as part of children's school reports. Such information may increase parental knowledge about the benefits of inclusion. Additionally, we need to draw on findings from previous studies to inform the development of educational campaigns on inclusion to assuage parental fears about the risk of inclusion for typically developing children (see e.g. Rafferty and Griffin 2005). For instance, we can draw on Kalambouka et al.'s (2005) review which shows that including pupils with ASN in mainstream schools had no adverse effects on pupils without ASN, with 81% of the findings reporting positive or neutral effects on children's learning. Such evidence can strengthen the case for inclusion and influence parental attitudes. It is also evident that schools in more affluent areas will have to do more to convince parents of the value of inclusion. Considering that this group of parents is generally vocal and active in decisions about how the education of their children is organised, it is important to provide them with the information and confidence that inclusion will not be detrimental to their children's education in order to secure their support.

Finally, if our aim is to deal with parental concerns about the benefits of inclusion for typically developing children, then we need to place more emphasis on informing parents and engage younger parents and those with lower levels of education. Such efforts are likely to

bear fruits, as it is well established that knowledge plays an important role in shaping attitudes (Ajzen 1991; Lui et al. 2015). Lastly, while parental attitudes are crucial for the success of inclusion, it is also important to tackle the structural and educational barriers that account for difficulties in implementing inclusive education (Vislie 2003; Pivik et al. 2002; Sosu et al. 2010).

To conclude, the current study extends our understanding of the salient beliefs underpinning parental attitudes towards inclusion in several ways. As far as we are aware, it is the only study to have empirically tested whether or not parents differed in their endorsement of salient beliefs towards inclusion. It is also one of the few studies to have explored beliefs towards inclusion among a nationally represented sample of parents. In the current study, we evaluated the impact of predictors on individual attitudinal beliefs rather than on a global attitudinal measure. This is because we recognise that it is possible for the predictors to have an impact on one set of beliefs but not on others. Our findings confirmed this hypothesised differential effect as in the distinctive effects of parental socioeconomic variables of income and education on the salient beliefs investigated. This nuanced understanding is only possible by exploring predictors of salient beliefs rather than global attitudes. It suggests that more detailed analysis of individual beliefs should accompany analysis of global attitudes, as this can provide important insights for changing underpinning beliefs and behaviours. Targeting salient beliefs that determine parental attitudes and subsequent behaviours is only possible when we understand the dynamics of underpinning beliefs.

## **References:**

Agarwal, R., S. Epstein, R. Oppenheim, C. Oyler, and D. Sonu. 2010. "From ideal to practice and back again: Beginning teachers teaching for social justice." *Journal of Teacher Education* 61: 237-247.

Ajzen, I. 1991. "The theory of planned behavior." *Organizational Behavior and Human Decision Processes* 50: 179–211.

Ajzen, I., and M. Fishbein. 1980. "Understanding attitudes and predicting social behaviour." Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I. 1993. "Attitude theory and the attitude-behavior relation" In *New Directions in Attitude Measurement*, edited by D. Krebs, and P. Schmidt. Berlin: Walter de Gruyter.

Allan, J. 2010. "Questions of inclusion in Scotland and Europe." *European Journal of Special Needs Education* 25: 199-208.

Author (XXXX)

Balboni, G., and L. Pedrabissi. 2000. "Attitudes of Italian support teachers and parents toward school inclusion of students with mental retardation: The role of experience." *Education and Training in Mental Retardation and Developmental Disabilities* 35: 148—159.

Bradshaw, P., L. Marryat, J. Corbett, M. Ferrandon, and S. Tipping. 2010. *Growing Up in Scotland. Sweep 4: 2008–2009 user guide*. UK Data Archive Study (Number 5760).

Braveman, P. A., C. Cubbin, S. Egerter, S. Chideya, K. S. Marchi, M. Metzler, and S. Posner. 2005. "Socioeconomic status in health research: One size does not fit all." *Journal of the American Medical Association* 294: 2879–2888.

Charter of the Fundamental Rights of the European Union. 2000. *Official Journal of the European Communities* 364: 1-22.

Daniel, L. G., and D. A. King. 1997. "Impact of inclusion education on academic achievement, student behavior and self-esteem, and parental attitudes." *Journal of Educational Research* 91: 67-80.

De Boer, A. A., S. J. Pijl, and A. Minnaert. 2010. "Attitudes of parents towards inclusive education: A review of the literature." *European Journal of Special Needs Education* 25: 165-181.

De Boer, A. A., S. J. Pijl, W. Post, and A. Minnaert. 2012. "Which variables relate to the attitudes of teachers, parents and peers towards students with additional support needs in regular education?" *Educational Studies* 38: 433-448.

De Boer, A. A. and V. S. Munde. 2014. "Parental attitudes toward the inclusion of children with profound intellectual and multiple disabilities in general primary education in the Netherlands." *Journal of Special Education* 1–9.

Diamond, K. E., and S.-Y Hong. (2010). "Young children's decisions to include peers with physical disabilities in play." *Journal of Early Intervention*, 32: 163–177.

Dyson, A., P. Farrell, F. Polat, G. Huteson, and F. Gallannaugh. 2004. *Inclusion and Pupil Achievement*. London: DfES.

European Agency for Development in Special Needs Education. 2010. *Teacher Education for Inclusion. International Literature Review*. Odense: European Agency for Development in Special Needs Education.

Frederickson, N. L., and A. F. Furnham. 2004. "Peer-assessed behavioural characteristics and sociometric rejection: Differences between pupils who have moderate learning difficulties and their mainstream peers." *British Journal of Educational Psychology* 74: 391–410.

Gallagher, P. A., J. H. Floyd, A. M. Stafford, T. A. Taber, S. A. Brozovic, and P.A. Alberto. 2000. "Inclusion of students with moderate or severe disabilities in educational and community settings: perspectives from parents and siblings." *Education and Training in Mental Retardation and Developmental Disabilities* 35: 135-47.

Gilmore, L., J. Campbell, and M. Cuskelly. 2003. "Developmental expectations, personality stereotypes, and attitudes towards inclusive education: Community and teacher views of Down syndrome." *International Journal of Disability, Development and Education* 50: 65–76.

Grove, K. A., and D. Fisher. 1999. "Entrepreneurs of meaning: Parents and the process of inclusive education." *Remedial and Special Education* 20: 208–215, 256.

Guralnick, M. J., and D. Paul-Brown. (1977). "The nature of verbal interactions among handicapped and nonhandicapped preschool children." *Child Development* 48: 254–260.

Henninger IV, W. R. and S. S. Gupta (2014). "How do children benefit from inclusion?" In *First steps to preschool inclusion: how to jumpstart your program wide plan*, edited by S. S. Gupta, W. R. Henninger IV, and M. E. Vinh. Baltimore (MD): Brookes Publishing.

Huber, K. D., J. G. Rosenfeld, and C. A. Fiorello. 2001. "The differential impact of inclusion and inclusive practices on high, average, and low achieving general education students." *Psychology in the Schools* 38: 497–504.

Innes, F. K., and K. E. Diamond. 1999. "Typically developing children's interactions with peers with disabilities: Relationships between mothers' comments and children's ideas about disabilities." *Topics in Early Childhood Special Education* 19: 103–111.

Kalambouka, A., P. Farrell, A. Dyson, and I. Kaplan. 2005. *The impact of population inclusivity on student outcomes*. London: DfES/Institute of Education.

Kalyva, E., M. Georgiadi, and V. Tsakiris. 2007. "Attitudes of Greek parents of primary school children without additional support needs to inclusion." *European Journal of Special Needs Education* 22: 295-305.

Kniveton, B. H. 2004. "A study of perceptions that significant others hold of the inclusion of children with difficulties in mainstream classes." *Educational Studies* 30: 331-343.

Koster, M., S. J. Pijl, H. Nakken, and E. Van Houten. 2010. "Social participation of students with special needs in regular primary education in the Netherlands." *International Journal of Disability, Development and Education* 57: 59-75.

Leyser, Y., and R. Kirk. 2004. "Evaluating inclusion: An examination of parent views and factors influencing their perspectives." *International Journal of Disability Development and Education* 51: 271–85.

Lui, M., K. F. Sin, L. Yang, C. Forlin, and F-C. Ho. 2015. "Knowledge and perceived social norm predict parents' attitudes towards inclusive education." *International Journal of Inclusive Education*.

Miller, L. J., and S. Phillips. 1992. "Parental attitudes toward integration." *Topics in Early Childhood Special Education* 12: 230–46.

Office for National Statistics. 2005. *National statistics socio-economic classification user manual*. Hampshire: Palgrave Macmillan.

Palmer, D. S., S. A. Borthwick-Duffy, K. Widaman, and S. J. Best. 1998. Influences on parent perceptions of inclusive practices for their children with mental retardation. *American Journal on Mental Retardation* 103: 272-287.

Palmer, D. S., K. Fuller, T. Arora, and M. Nelson. 2001. "Taking sides: Parent views on inclusion for their children with severe disabilities." *Exceptional Children* 67: 467–484.

Peck, C. A., D. Staub, C. Gallucci, and I. Schwartz. 2004. "Parent perception of the impacts of inclusion on their nondisabled child." *Research and Practice for Persons with Severe Disabilities* 29: 135–43.

Phillips, D. 2013. "Government spending on benefits and state pensions in Scotland: current patterns and future issues." *Institute for Fiscal Studies Briefing Note*, BN139.

Pijl, S. J., P. Frostad, and A. Flem. 2008. "The social position of students with special needs in regular schools." *Scandinavian Journal of Educational Research* 52: 387-405.

Pijl, S. J., C. J. W. Meijer, and S. Hegarty (eds.) 1997. *Inclusive education: a global agenda*. London: Routledge.

Pivik, J., J. McComas, and M. Laflame. 2002. "Barriers and facilitators to inclusive education." *Exceptional Children* 69: 97-107.

Rafferty, Y., and K. W. Griffin. (2005). "Benefits and risks of reverse inclusion for preschoolers with and without disabilities: Perspectives of parents and providers." *Journal of Early Intervention* 27: 173–192.

Rafferty, Y., C. Boettcher, and K.W. Griffin. 2001. "Benefits and risks of reverse inclusion for preschoolers with and without disabilities: parents' perspectives." *Journal of Early Intervention* 24: 266–86.

Reichert, D. C., E. C. Lynch, B. C. Anderson, L. A. Svebodny, J. M. DiCola, and M. G. Mercury. 1989. "Parental perspectives on integrated preschool opportunities for children with handicaps and children without handicaps." *Journal of Early Intervention* 13: 6–13.

Riddel, S., K. Tisdall, J. Kane, and J. Mulderrig. 2006. "Literature review of educational

provision for pupils with additional support needs.” Edinburgh: Scottish Executive.

Riddell, S., J. Stead, E. Weedon, and K. Wright. 2010. “Additional support needs reforms and social justice in Scotland.” *International Studies in Sociology of Education* 20: 179-199.

Rose, R. 2001. “Primary school teacher perceptions of the conditions required to include pupils with additional support needs.” *Educational Review* 53: 147-157.

Scottish Government. 2004. *Education (Additional Support for Learning) (Scotland) Act 2004*. Edinburgh: Scottish Government.

Scottish Government. 2014. “Summary Statistics for Schools in Scotland.” *Statistical Bulletin Education Series*, No.5.

Scheepstra, A. J. M., H. Nakken, and S. J. Pijl. 1999. “Contacts with classmates: The social position of pupils with Down’s syndrome in Dutch mainstream education.” *European Journal of Special Needs Education* 14: 212–20.

Sosu, E. M., P. Mtika, and L. Colucci-Gray. 2010. “Does initial teacher education make a difference? The impact of teacher preparation on student teachers’ attitudes towards educational inclusion”. *Journal of Education for Teaching* 36: 389-405.

Sosu, E. and S. Ellis. 2014. *Closing the attainment gap in Scottish education*. York, UK: Joseph Rowntree Foundation.

Stoiber, K. C., M. Gettinger, and D. Goetz. 1998. “Exploring factors influencing parents' and early childhood practitioners' beliefs about inclusion.” *Early Childhood Research Quarterly* 13: 107-124.

Tafa, E., and G. Manolitsis. 2003. “Attitudes of Greek parents of typically developing kindergarten children towards inclusive education.” *European Journal of Special Needs Education* 18: 155–71.

UNESCO. 2009. *Policy Guidelines on Inclusion in Education*. Paris: UNESCO.

United Nations. 2006. *Convention on the Rights of Persons with Disabilities and Optional Protocol*. New York: United Nations.

Vignes, C., E. Godeau, M. Sentenac, N. Coley, F. Navarro, H. Grandjean, and C. Arnaud. 2009. “Determinants of students' attitudes towards peers with disabilities.” *Developmental Medicine & Child Neurology* 51: 473-479.

Vislie, L. 2003. “From integration to inclusion: Focusing global trends and changes in Western European societies.” *European Journal of Special Needs Education* 18: 17-35.

Yude, C., R. Goodman, and H. McConachie. 1998. “Peer problems of children with hemiplegia in mainstream primary schools.” *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 39: 533–541.

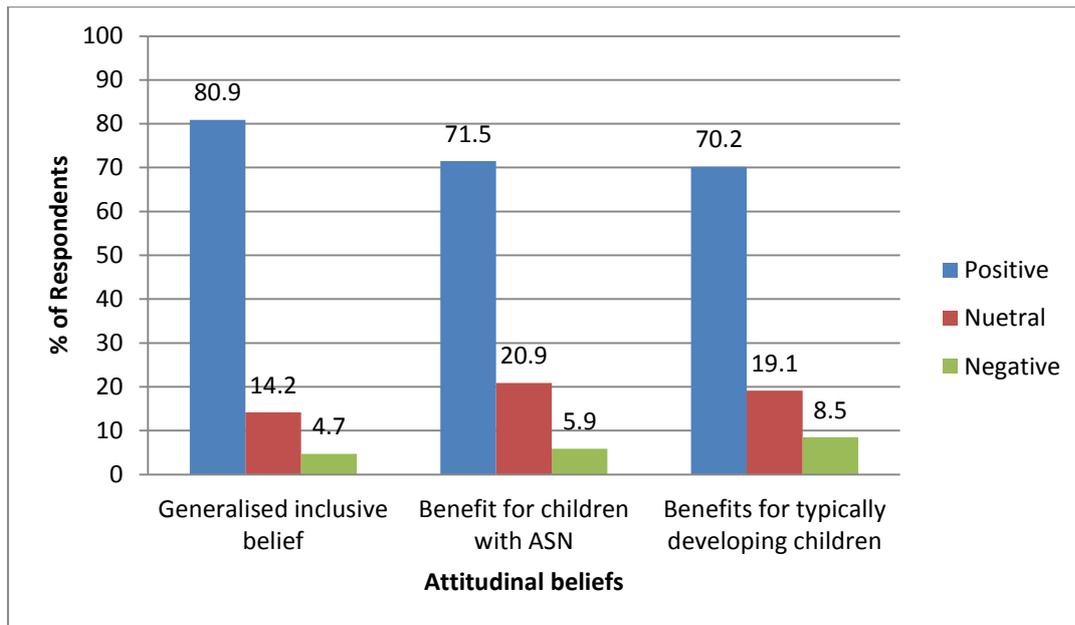


Figure 1: Graphical representation of parental attitudinal beliefs towards inclusion

Table 1: Descriptive statistics of dependent and predictor variables

<b>Variable</b>	<b>N</b>	<b>%</b>
<b><i>Dependent Variables (Beliefs)</i></b>		
Generalised Inclusive Belief		
Positive	1767	80.9
Neutral	317	14.2
Negative	110	4.7
Benefit of inclusion for children with ASN		
Positive	1568	71.5
Neutral	465	20.9
Negative	129	5.9
Benefit of inclusion for typically developing children		
Positive	1440	70.2
Neutral	394	19.1
Negative	179	8.5
<b><i>Predictor Variables</i></b>		
Income <sup>3</sup> (1[<£3,999] – 17 [>56,000])	2049 (6 – 365)	–
Education		
No qualification	168	9.1
High school and below	319	15.7
Standard grade/other,	155	6.9
Vocational	874	39.6
Degree and above	703	28.4

The values in bracket represent the minimum sample and maximum samples which corresponds to (1[<£3,999] – 17 [>56,000]) respectively

## Job Status

Never worked	63	4.0
Semi-routine and routine	626	31.8
Lower supervisory and technical	131	6.4
Small employers and own account workers	132	5.7
Intermediate	406	17.6
Managerial and professional	841	34.4

## Parental Age

20-29	362	21.1
30-39	1206	53.7
40 and above	632	25.1

## Satisfaction with child's school

Very Dissatisfied	5	0.2
Fairly Dissatisfied	15	0.8
Neither Satisfied or Dissatisfied	24	1.1
Fairly Satisfied	509	23.8
Very Satisfied	1632	73.3

## Parental Disability

Yes	170	8.1
No	2028	91.8

## Child with ASN

Yes	170	8.3
No	2188	91.0

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NB: The *N* represents the total sample of respondents and sample sizes do not always add up to 2200 due to missing data. The *N* values are based on unweighted samples while % are based on a weighted sample.

Table 2: Ordered logistic regression coefficients for predictors of generalised parental beliefs about including children with ASN in mainstream schools

<b>Predictors</b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>Wald</i></b>	<b><i>Odds Ratio</i></b>	<b><i>% likelihood</i></b>
Parental Socioeconomic Status					
Education	-.05	.06	.80	0.95	-4.88
Income	-.04	.02	4.98*	0.96	-3.92
Job status	-.03	.04	.67	0.97	-2.96
Parental age	-.08	.09	.78	0.92	-7.69
Satisfaction with school	.25	.10	6.84**	1.28	28.40
Child with ASN					
No	.09	.21	.17	1.09	9.42
Yes	-	-	-	-	-
Parental Disability					
No	-.24	.24	1.02	0.79	-21.34
Yes	-	-	-	-	-

NB: \*\*  $p < .01.$ , \*  $p < .05.$ , +  $p < .10$

Table 3: Ordered logistic regression coefficients for predictors of parental beliefs about the benefits of inclusion for children with ASN

<b>Predictors</b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>Wald</i></b>	<b><i>Odds Ratio</i></b>	<b><i>% likelihood</i></b>
Parental Socioeconomic Status					
Education	-.06	.05	1.70	0.94	-5.82
Income	-.03	.01	3.91*	0.97	-2.96
Job status	-.02	.04	.18	0.98	-1.98
Parental age	.15	.08	3.47 <sup>+</sup>	1.16	16.18
Satisfaction with school	.15	.09	2.76 <sup>+</sup>	1.16	16.18
Child with ASN					
No	-.24	.20	1.46	0.79	-21.34
Yes	-	-	-	-	-
Parental Disability					
No	.13	.19	.48	0.89	-12.9
Yes	-	-	-	-	-

NB: \*\*  $p < .01.$ , \*  $p < .05.$ , <sup>+</sup> $p < .10$

Table 4: Ordered logistic regression coefficients for SES and control variables as predictors of parental beliefs about the benefits of inclusion for typically developing children

<b>Predictors</b>	<b><i>B</i></b>	<b><i>SE</i></b>	<b><i>Wald</i></b>	<b><i>Odds Ratio</i></b>	<b><i>% likelihood</i></b>
<b>Parental Socioeconomic Status</b>					
Education	.14	.05	9.25**	1.15	15.02
Income	-.02	.01	1.54	0.98	-1.98
Job status	.01	.04	.13	1.01	1.01
Parental age	.18	.08	5.24*	1.20	19.72
Satisfaction with school	.11	.09	1.50	1.12	11.63
<b>Child with ASN</b>					
No	.17	.18	.83	1.19	18.53
Yes	-	-	-	-	-
<b>Parental Disability</b>					
No	-.30	.20	2.27	0.74	-25.91
Yes	-	-	-	-	-

NB: \*\*  $p < .01.$ , \*  $p < .05.$ , +  $p < .10$