

# Volume I

## The Relationship between Pragmatic Language Competence and School Exclusion: An interactionist perspective

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A thesis submitted to the University of Birmingham in part fulfilment  
for the degree of Applied Educational and Child Psychology Doctorate

School of Education  
University of Birmingham  
June 2014

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## ABSTRACT

In the UK school exclusion is conceived as a disciplinary measure in response to breaches of a school's behaviour policy, it is also noted that unwanted behaviour can result from unmet need (DfE, 2012). The link between previously unidentified verbal language difficulties and unwanted behaviour has been well-evidenced; a smaller body of research has evidenced a link with pragmatic language abilities. Much research has been conducted in a clinical paradigm, with results interpreted within a deficit model. The aim of this thesis was to investigate if there was evidence of less well-developed pragmatic language competence in children at-risk of school exclusion, and if so, interpret the results through an interactionist perspective. Data was gathered using the Children's Communication Checklist: 2<sup>nd</sup> Edition (Bishop, 2003) on a sample of children at-risk of school exclusion (n=29). Results indicated that 77% of the sample had significantly less well-developed pragmatic language abilities than a matched sample. A probabilistic causal relationship is proposed, incorporating environmental factors as intervening variables that potentially determine risk of exclusion. Future directions involve research to test this proposed relationship. Findings suggest that professionals should consider the interaction between demands of the communicative environment and a child's communicative profile when considering interventions to address unwanted behaviour.

## DEDICATIONS

To Alex, for providing never-ending patience, unconditional love and complete selflessness at times when, in order to cope with these three hardest years of my life, I have needed to be at my most selfish.

To my Dad, for providing me with the necessary resources to get through these years and become an Educational Psychologist. Most obviously, top quality IT equipment, but more importantly, tenacity, self-reliance and a deeply embedded work-ethic.

To my big brother, Lee, for being my number one fan. It is easier to achieve when there is someone who is always impressed with your efforts.

And my lovely friends, who have waited patiently. We have some catching up to do.

I love you all immeasurably.

For Anne.

## ACKNOWLEDGEMENTS

A particular thank you to Dr Colette Soan for ensuring the environmental demands of the tutorial relationship were congruent with my academic and health-related vicissitudes. I could not have had a better 'goodness-of-fit'. I am sincerely appreciative of your knowledge and understanding.

Great thanks to Dr Jane Leadbetter, the rest of the tutor team, and Mrs Beverly Burke, for ensuring we all got there in the end. I chose to study at Birmingham due to my appraisal of the tutors I met at interview. After getting to know them better, I believe I chose wisely.

Further thanks to my host authority, and the schools and parents who assisted in my research. In particular, thank you to Dr Beth Turner for sharing her knowledge, being skilled at 'containing' and most importantly, for having a laugh.

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## LIST OF ABBREVIATIONS

AEP	Assistant Educational Psychologist
ASC	Autistic Spectrum Conditions
BESD	Behaviour, Emotional and Social Difficulties
BME	Black and Minority Ethnic
BOC	Broadmoor Observation of Communication
CCC	Children's Communication Checklist
CCC-2	Children's Communication Checklist: Second Edition
CSCOT	Communication Supporting Classrooms Observation Tool
EBD	Emotional and Behavioural Difficulties
EI	Early Intervention
FSM	Free School Meals
FTE	Fixed Term Exclusion
GCC	General Communication Composite
PE	Permanent Exclusion
PLCS	Pragmatic Language Composite Score
SALT	Speech and Language Therapy
SDQ	Strengths and Difficulties
SEN	Special Educational Needs
CoP	Code of Practice
SES	Socio-economic status
SIDC	Social Interaction Deviance Composite
SIP	Social Information Processing
SLCN	Speech, Language and Communication Needs
SULP	Social Use of Language Programme
YO	Young Offenders

## CHAPTER ONE: INTRODUCTION

### 1.1 Introduction to the thesis

This volume of work presents a further instalment in a journey of enquiry that began when I was employed as an Assistant Educational Psychologist (AEP) prior to doctoral studies. As an AEP I primarily worked with a population of children who were at risk of, or had been, permanently excluded (PE) from mainstream provision. My role involved undertaking assessment to ascertain if there was evidence of previously unidentified special educational needs (SEN) in this population of pupils. So began a shift in my understanding of school-based unwanted behaviour from an intrinsic conceptualisation where behaviour stemmed from uncontrollable emotions and adverse life experiences, to a broader understanding which encompassed unmet educational needs.

As an AEP, I routinely used the Children's Communication Checklist: Second edition (CCC-2; Bishop, 2003) to screen language and communication abilities. I continually found evidence of significant difficulties, particularly with pragmatic language abilities. In reviewing the literature I noted a significant body of research linking structural language abilities with unwanted behaviour (e.g. Gregory and Bryan, 2009; Clegg et al., 2009) but very little relating to pragmatic language. I could find only one study that used a non-clinical sample: Gilmour et al. (2004) using the first edition of the Children's Communication Checklist (CCC; Bishop, 1998) reported that 66% of their sample of children at-risk of or already excluded from school had clinically significant pragmatic language difficulties. To explore further, using a similar methodology, I undertook a research project with a sample of children at risk of

permanent exclusion from mainstream secondary schools in the geographical area in which I worked (n=27). The measures in the Checklist differed in the second edition (full description in the methodology chapter), therefore findings were not directly comparable with Gilmour et al.'s. However, 85% (n=23) had less well-developed pragmatic language abilities in comparison to structural language abilities (Owen, 2010). This data supported Gilmour et al.'s conclusion that a significant proportion of children labelled as having 'behavioural problems' have unidentified and underlying social communication needs.

My current programme of study introduced me to new frameworks, theories and understandings of additional and special educational needs which further challenged and developed my conceptualisation of unwanted behaviour in schools. These included interactionist perspectives on SEN (e.g. Frederickson and Cline, 2009), the bioecological model of human development (Bronfenbrenner and Morris, 2006), community psychology (Orford, 1992) and organisational psychology (Schein, 2004). I was certain that I had evidenced an important phenomenon in the study I had undertaken, but now realised the paradigm in which it was conceptualised was one of clinically identified intrinsic (to the child) difficulties. I had interpreted my findings with a deficit-model conceptualisation, which was no congruent with my knowledge base and values. I determined to replicate the study for my doctoral thesis to allow me to explore the same issue with greater methodological rigour, and through the lens of an interactional perspective.

## 1.2 Research aims

The aims of this thesis are two-fold. To identify whether there is a relationship between pragmatic language competence and unwanted behaviour in children without pre-existing clinical diagnoses or identified needs, other than the behaviour in focus. Secondly, to consider from an interactionist perspective the nature of this relationship, in order to identify propositions to test in further research and to consider appropriate interventions that may be beneficial in reducing school exclusion.

## 1.3 Key concepts, definitions and terminology

### 1.3.1 Conceptualisations of SEN

Broadly speaking, there are three positions that can be taken in relation to SEN (Frederickson and Cline, 2009). These can be conceived as a continuum with an intrinsic to the child view at one end, extrinsic to the child view at the other and an interactionist perspective between.

An intrinsic view holds that a child's SENs result from some deficiency 'within' them which presents a barrier to their development. The individual differences approach, which underpins psychometric study of intelligence (Thomas, 2002), would be considered an intrinsic view, as intelligence is conceived as innate, hereditary and fixed (Cline, 2008). A medical-model of disability also sits at this end of the continuum as it holds that a child's disability results from a deficiency in their functioning.

The extrinsic perspective is concerned with the environmental demands placed on a child. This view is held by advocates of instructional psychology (Miller, 2008) who argue that SENs result from environmental demands which disadvantage children by not being suited to their educative needs. Taken to its extreme, an extrinsic view purports that ‘...there are no children with learning difficulties, only adults with teaching difficulties’ (Frederickson and Cline, 2009, pg. 43). This view has parallels with the social-model of disability, which emerged in reaction to the medical-model, and considers disability to result from the way a society organises itself without regard to everyone’s needs, therefore producing an environment that disables some, rather than enables all (Oliver, 1983).

The interactionist perspective is a confluence of the two positions in that it considers the complex interplay between a child’s intrinsic abilities, and the environmental demands being placed on them. The bioecological model of human development (Bronfenbrenner and Morris, 2006) provides an interactional analysis of development in conceptualising proximal processes. These are described as reciprocal interactions that occur between a person and their environment and are viewed as ‘...the primary mechanism producing human development’ (pg. 795). Therefore SENs result from the interactions within a developmental situation, where the child is being acted on by their environment, whilst simultaneously shaping their environment through their own actions. This thesis adopts an interactionist stance.

### 1.3.2 School exclusion

In the UK, school exclusion is conceived as a disciplinary measure (DfE, 2012). Decisions and procedures relating to school exclusion are bound by a legal framework and broadly similar across the UK (DfE, 2012; DfES, 2012; DENI, 2012; Scottish Executive, 2003). Parsons (2005) notes that the measure is deemed 'normal' in the UK, and also in the USA and Australia, but in other countries the concept is 'decidedly abnormal' (pg. 188). In the introduction to the School Exclusions Inquiry report the Children's Commissioner comments that school exclusion is not a commonly used sanction in Europe (OCC, 2012).

In England statutory guidance (DfE, 2012) states that pupils can be excluded for a fixed-term period or permanently, and that permanent exclusion should be a last resort, only to be used in cases of:

'...a serious breach, or persistent breaches, of the school's behaviour policy: and where allowing the pupil to remain in school would seriously harm the education or welfare of the pupil or others in the school' (pg.6)

The children who are the focus of this thesis are those 'at-risk' of fixed-term or permanent school exclusion. The operationalization of the term 'at-risk' for the purposes of sample selection will be presented in the methodology chapter. More generally, for the consideration of this introduction and the subsequent literature review, 'at-risk' refers to those children who are behaving incongruently with school staffs' expectations, and whom those with the power to make exclusion decisions consider to be at-risk.

### 1.3.3 Defining the population in focus

As school exclusion is a disciplinary measure any discussion of the topic refers, if only implicitly, to children positioned as being disruptive, or displaying challenging behaviour. This wide-ranging and heterogeneous group includes children with identified SEN, where the primary need is categorised in the SEN Code of Practice (CoP; DfES, 2001) as Behaviour, Emotional and Social Development (BESD). Also included may be those labelled from a clinical perspective as having, for example, Conduct Disorder, and those involved in the criminal justice system. The inherent overlap between these categories is well recognised (Visser, 2003).

Visser (2003) highlights how, 'Defining challenging behaviour, EBD [emotional and behavioural difficulties] or other [associated] terms... has always been an unsatisfactory enterprise...' (p. 10). A monograph produced by The British Psychological Society adopts the term 'anti-social behaviour in schools' (Maras et al. 2012), although uses this interchangeably with 'behaviour problems' and 'behaviour difficulties'. In the current government's draft SEN CoP (DfE & DoH, 2013) the word 'behaviour' has been omitted; the comparable category of need is described as 'Social, mental and emotional health'. It is clear that there is not yet consensus on an appropriate term.

Parsons (2005) points out that in different terminology '...the syntax explicitly or subtly locates the cause of the problem.' (pg. 187). An intrinsic conceptualisation is easily evoked with the historical terms Visser (2003) refers to, such as 'maladjusted' or 'disturbed'. Circular 9/94 (DfE, 1994) defines EBD by referring to an interplay between social, psychological and

possibly biological factors. This is the beginnings of an interactionist perspective, but still remains an explanation as to how the difficulties within the child's functioning have developed.

Kaufmann (2001) evokes an extrinsic position in the following quote, 'An emotional or behavioural disorder is whatever a culture's chosen authority figures designate as intolerable... Defining an emotional or behavioural disorder is unavoidably subjective...' (pg. 23). Prominent writers in the field concur that a biopsychosocial and ecosystemic perspective is most appropriate in understanding this area of need (e.g. Cooper and Jacobs, 2011, Maras, 2012; Cole et al., 2012) however a term encapsulating this interactionist perspective is yet to be proposed.

Determining an all-encompassing label for a heterogeneous group is likely to prove a futile exercise; attempts to incorporate subjectivity, situation-specific dynamics and heterogeneity result in nebulous and laboured terminology. There are issues of power and control in determining such a label and assigning it to children (Billington, 2000), therefore the endeavour could be conceived as oppressive practice. In an effort to navigate these tensions the term 'unwanted behaviour' will be used, (unless quoting specific works) to describe any behaviour that is unwanted by those with power in a particular social context and time.

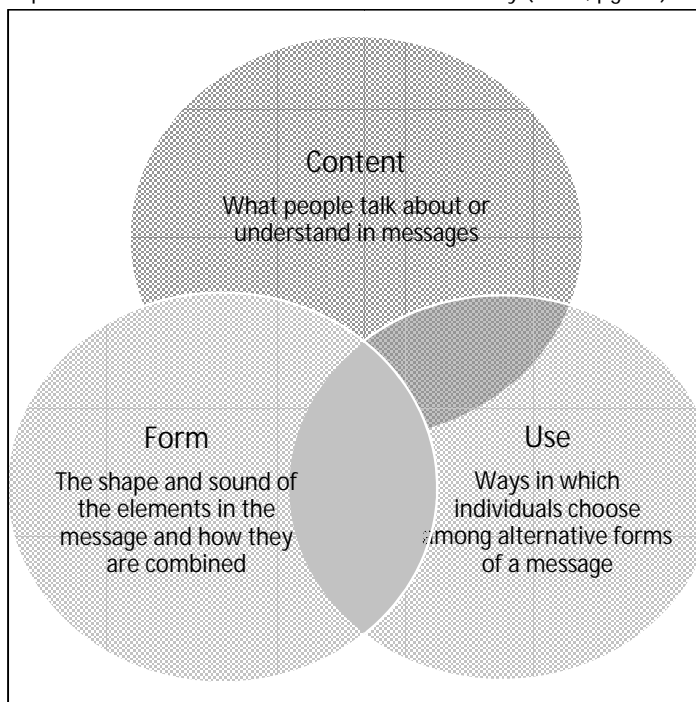
Finally, for purposes of brevity the term 'children' will be used, rather than 'children and young people', unless referring to or quoting specific works.



### 1.3.4 Pragmatic language

The study of pragmatics occurs in two domains, linguistic and clinical, with limited application of the findings from one discipline to the other. The linguistics study of pragmatics tends to refer only to the behavioural use of spoken language whereas the clinical view considers wider communicative behaviours and knowledge (Perkins, 2007). The clinical view is founded on Bloom and Lahey's (1978) three-dimensional view of language (Figure 1). As this theory supports a broader view of pragmatic abilities, and it also underpins the method used to collect data (CCC-2) it will inform the conceptual bases of this thesis.

Figure 1. The intersection of content, form and use in language.  
Reproduced and amended from Bloom and Lahey (1978, pg. 22)



Bloom and Lahey define language as '...knowledge of a code for representing ideas about the world through a conventional system of arbitrary signals for communication.' (1978, pg. 23).

They view language as consisting of three dimensions, content, form and use, the integration of which produces language competence. Their theory posits that the precursors to these dimensions develop separately in infancy and begin to integrate as the child begins to develop verbal language. They argue that the precursors to use differ to those of content and form as they are not learned from the environment and are not intended as representative. Precursors are identified as babies' innate sounds and movements, which only become communicative as others recognise and respond to certain patterns of behavioural display. Therefore use develops as a result of interactions between the infant and their social environment, or in bioecological theory terminology, proximal processes.

Writing at the same time, Donaldson (1978) argued that pragmatic abilities develop before verbal language understanding. She concluded that young children first determine meaning from observing social situations, developing verbal understanding by associating the words heard with their observations. Even when reasonable verbal skills are acquired, Donaldson posited that young children rely more on an appraisal of the whole situation than on 'sheer linguistic form' (pg. 63). An understanding of pragmatic language ability developing as a consequence of proximal processes between the infant and their social world, and of such abilities preceding and supporting the development of verbal abilities is central to this thesis.

Bloom and Lahey use the term 'pragmatic' in qualitatively different ways throughout their text: to differentiate from linguistic language (pg. 72); as an alternative label for language use (pg. 204); as one of two functions (the other being conventions) that form the dimension of language use (pg. 234). The more regular use of pragmatic to describe this dimension hails

from later clinical literature, where form is considered to be syntax and phonology, content to be semantic understanding (together conceived as structural language) and use to be pragmatic language (e.g. Bishop, 1998). Bishop defines pragmatic language as ‘...the selection of the appropriate message or interpretation in relation to the communicative context’ (2003, pg. 7). This definition, encompassing as it does an interactional view of the use of verbal and nonverbal language within a dynamic social context, coheres with the interactionist perspective of this thesis.

#### 1.3.5 Pragmatic language competence

Pragmatic language competence requires development of social knowledge about the context in which communication is taking place and knowledge about ones’ communicative partner(s) (Martin and McDonald, 2003). It requires the ability to use this knowledge to access contextual cues to facilitate the correct interpretation of a communicators’ meaning and to attain one’s own social goals (Coplan and Weeks, 2009). The Pragmatics Development Chart (Gard et al., 1993) describes a wide variety of skills that a typically developing child is expected to have at the age of entry to school. These include non-verbal communication, such as eye contact, gaze and responding to one’s name; ability to use gesture and vocalisations to gain and direct others’ attention; turn-taking in conversations; ability to vary communications in response to others’ reactions and to use linguistic forms to clarify and seek clarification.

A quote from a Pragmatic Language Assessment document (ECICMC, 2004) is particularly illuminative in considering how less well-developed skills may present in the school context:

'Children with pragmatic language difficulties have great trouble using language in ways that are appropriate for their age or for the setting. They may not understand that we take turns to talk. They may talk over another speaker, or respond with inappropriate silences. A child with pragmatic language delays may interrupt excessively, shift topics abruptly, or talk irrelevantly. They may assume that every listener has knowledge of the same people and events that they do. Conversely, they may give too much information that distracts the listener and obscures the point of the exchange. Children with pragmatic language delays may not be aware of the subtle cues people use to signal interest or discomfort. Their behavior (sic) may appear rude, distracted or self-involved.' (pg. 3).

The last sentence in particular highlights how less well-developed pragmatic language skills may translate to unwanted behaviour, which may be perceived as disruptive or challenging and requiring a disciplinary response.

#### 1.4 Outline of the thesis

The thesis will progress through four remaining chapters. Chapter Two contains a review of literature focussed on two main areas. First, factors associated with school exclusion and the types of unwanted behaviour most commonly provided as reasons for exclusion will be considered. Secondly the focus will shift to the relationship between language ability, school exclusion and unwanted behaviour. The review will conclude with a consideration of how less well-developed language abilities, specifically pragmatic language abilities, is congruent with alternative reasons provided for unwanted behaviour and a presentation of the research questions.

Chapter Three will describe the chosen methodology for the present study and make clear the epistemological stance. Chapter Four will present the findings, and finally Chapter Five contains a discussion of the findings in light of the literature reviewed, concluding with a consideration of the implications this knowledge may have for the practice of Educational Psychologists and other professionals.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

#### 2.1.1 Rationale and search strategy

The literature review pursued two main lines of enquiry, conducted through electronic databases using a Boolean search approach. Literature relating school exclusion and unwanted behaviour was searched in order to determine factors that been proposed as causally implicated. Search terms were combinations of: school exclusion/ disruptive behaviour/ anti-social behaviour/ aggressive behaviour/ challenging behaviour, with either: factors/ causes/ mechanisms.

The second line of enquiry related to the relationship between language, school exclusion and unwanted behaviour in order to consider the empirical relationship between the factors. The review is limited to literature investigating previously unidentified language difficulties in populations of children whose behaviour is unwanted. The following search terms were used with either 'language' or 'pragmatic': school exclusion/ disruptive behaviour/ aggressive behaviour/ challenging behaviour/ anti-social behaviour.

There were no limitations placed regarding country of origin, however the greatest proportion of relevant literature, other than that from the UK, originated from the USA, Canada and Australia, countries that Parsons (2005) identified as having parity with the UK's school exclusion approach.

### 2.1.2 Structure and content

The following review will be structured into three main sections. Initially the literature relating to school exclusion and unwanted behaviour is presented, beginning with a consideration of the characteristics of children who receive school exclusions, moving on to consider the reasons provided for school exclusion. This section will conclude with a presentation of an interactionist account of unwanted behaviour in children.

The second section presents literature evidencing the relationship between previously unidentified language difficulties, unwanted behaviour and school exclusion. As the largest body of literature concerns structural language difficulties this will be presented first, moving on to consider evidence of a relationship between pragmatic language competence, unwanted behaviour and school exclusion.

The chapter will conclude by drawing together the main points from the literature reviewed to consider how pragmatic competence may be related to other identified factors associated with school exclusion and to present a rationale for the present study.

## 2.2 Factors associated with school exclusion

### 2.2.1 The current context

Following a sharp increase in rates of officially recorded UK school exclusions throughout the 1990s there has been a general downward trend to the present (Rouse, 2011). It has been suggested that these figures may not represent increased inclusion (Hatton, 2013) but instead increased use of other exclusory methods, such as off-site alternative education,

between-school transfers and the use of unofficial exclusions or 'cooling-off' days (Charlton, 2004). Evidence of the continued use of unofficial exclusion methods has been presented in a number of recent reviews of school exclusion (Evans, 2010; Eastman, 2011; OCC, 2012).

With that caution stated, current figures will be presented to provide a context; not least because although overall exclusion rates have decreased, patterns within the data relating to the overrepresentation of certain groups remains constant (Evans, 2010; Daniels and Cole, 2010; OCC, 2012). The latest national school exclusion data relates to the academic year 2011/12. Overall, permanent exclusion (PE) rates remained constant from the previous year at 0.07% (n= 5,170), however there was a 13.9% rise in PE of children from mainstream primary schools (0.02%; n= 690). The number of fixed-term exclusions (FTE) had decreased by 6.5%. This was attributed to a drop in secondary schools; rates of FTE in primary schools remained the same (DfE, 2013a). This appears to suggest that unwanted behaviour is on the rise in primary setting, but it may be that the figures reflect fewer unofficial exclusions or that PE is becoming a more commonly used disciplinary measure in this age group.

In the Authority in which this research was undertaken the picture was largely similar. The overall number of children excluded was slightly higher at 0.10% (n=150; decreasing from 0.11% [n=180] the previous year). Mainstream primary exclusions remained at 0.03% and patterns in terms of 'who' gets excluded and 'why', presented next, in general mirrored the national picture (DfE, 2013a).



### 2.2.2 Who gets excluded?

In the recent School Exclusion Inquiry report the Children's Commissioner (2012) highlights a disturbing statistic. In comparison to a White girl, without SEN, from a middle-class family a Black African-Caribbean boy, entitled to free school meals (FSM) with SEN is 168 times more likely to be excluded from a state-funded school. This statistic is derived from national data, and as noted earlier there have been enduring patterns of over-representation of certain minority groups. Children with SEN, of Black and Minority Ethnic (BME) origin, and those who are eligible for FSMs have consistently featured in exclusions data, as have male pupils in general (Daniels and Cole, 2010).

It has been argued that over-representation of children from minority ethnic backgrounds is more accurately depicted as a relationship between lower socio-economic status and exclusion. A study in the USA found that poverty level was more predictive of permanent exclusion than ethnicity (Theriot et al., 2010). The same argument was presented regarding the over-representation of certain ethnic groups in SEN data in the UK (Lindsay et al. 2006), except with Black Caribbean pupils who remained over-represented in the BESD category after controlling for socio-economic status. Skiba et al. (2000) also reported findings of racial disparities persisting in school disciplinary measures in the USA when poverty levels were controlled for. Cultural discontinuity between home and school environments promoting miscommunication and culturally irrelevant curricula have been posited as reasons for this bias (Skiba et al. 2000; Osler and Hill, 1999). Law and Sivyer (2003) report on a sample of UK primary-aged children (n= 31) recruited on the basis of being at-risk of school exclusion, who were subsequently found to have language and communication difficulties. 73% of the

children were from the 'black community' (sic). Not only does this support patterns observed in exclusions data, but also suggests the possibility that there is a relationship between communicative ability, ethnicity and school exclusion.

In a further analysis of the DfE's official data for the School Exclusions Inquiry (OCC, 2012) SEN status was found to be the most significant predictor of exclusion. All other characteristics controlled for, a child on a school's SEN register is 12.5 times more likely to receive a PE and 5.4 times more likely to receive a FTE from school. The DfE SEN analysis (2013b) shows that children whose primary need is categorised as BESD are most likely to receive a FTE (21.5% compared with 4.05% of the general population) or a PE (0.75% compared with 0.07%). Jull (2008) comments on this relationship, noting that [BESD] '... is perhaps the only category of SEN that exposes a child to increased risk of exclusion as a function of the very SEN identified as requiring special provision in the first instance.' (pg. 13). Reasons provided for exclusions will be considered more fully in the next section, but it is relevant to note that children with autism spectrum conditions (ASC) and speech, language and communication needs (SLCN) are overrepresented in certain categories. Taken together it suggests that where social and communicative needs are identified, exclusion risks are increased.

Boys are three times more likely to be excluded than girls (DfE, 2013a). Jackson (2002) has argued that 'laddishness' as a self-worth protection strategy may contribute to unwanted behaviour from boys, as they attempt to conform to stereotypes of masculinity in an education system where to succeed is perceived as feminine. Leoni (2005) reported high

rates of experiences of loss in children who were excluded, arguing that boys were more likely to use anger to mask vulnerable emotions. Both accounts implicate culturally constructed bias, as did the explanations for the over-representation of Black-Caribbean students. Boys are also over-represented in SEN data; they are up to three times more likely to have a statement of SEN and more likely to be categorised as having ASC or BESD (DfE, 2012b). Language difficulties are more commonly identified in boys (Robinson, 1987; Tommerdahl, 2009). Higher levels of identification does not necessarily reflect increased prevalence of difficulties, however such figures do suggest interactions between perceptions of social and communicative abilities, gender and risk of school exclusion.

Children who are eligible for FSM , one measure of socio-economic status (SES), are four times more likely to be PE and three times more likely to be FTE (DfE, 2013b). Children with a primary BESD category account for between 39 – 43 % of all children with SEN eligible for FSM; children with SLCN and ASC are also overrepresented (30% and 23 – 26% respectively; DfE, 2013c). As varied measures of social disadvantage and SES are employed in studies direct comparisons are not often possible, but generally evidence suggests a strong link between social-disadvantage and school exclusion. Macrae et al. (2003) summarise the findings of a number of studies undertaken in the late 1990's commenting that 'overwhelmingly, excluded children come from families who are under stress, who are less likely to have employment and who are experiencing multiple disadvantage' (pg. 92). Charlton et al. (2004) note evidence that disadvantaged home backgrounds were positively associated with exclusion rates. The link between social disadvantage and language development is also well evidenced (e.g. Clegg and Ginsbourg, 2006; Law et al., 2008). Again

interactions between characteristics in the data appear evident, in this case social-disadvantage, language abilities and risk of school exclusion.

This section began by noting that certain groups were over-represented in exclusions data, patterns which have remained stable over time. The studies reviewed, which have explored the issue, have focussed on isolating which characteristic is the most significant predictor. There are some issues with this pursuit, if the aim is ultimately to reduce exclusions. Isolating one variable as most significant does not render others insignificant and nor does it consider the interactions between them. Isolating specific factors to narrow the focus may be of benefit to methodological rigour but this may be at cost of identifying (if in existence) common causal mechanisms. The following section considers literature which has presented causal factors in school exclusions.

### 2.2.3 Reasons for exclusions

For purposes of data collection categories have been constructed for schools to report reasons for school exclusions. They include: persistent disruptive behaviour; physical assault against a pupil or adult; verbal / racist abuse or threatening behaviour against a pupil or adult; bullying; sexual misconduct; drug and alcohol incidents; damage and theft (DfE, 2013a).

Persistent disruptive behaviour is the most common reason provided, across all settings (PE= 32.9%; FTE= 24.1%: DfE, 2013a), however it is illuminative, as Eastman (2011) does, to group four categories. Those pertaining to verbal abuse or physical assault against a pupil or an

adult, arguably all represent aggressive methods of pursuing one's social goals. Removing the distinction between who the act was against results in rates of physical assault being comparable with persistent disruptive behaviour (PE= 27.3%; FTE= 24.7%). Adding the verbal abuse categories suggests that aggressive interpersonal behaviours account for 41% of all PE and 48% of FTEs (DfE, 2013a).

Vulliamy and Webb (2000) note that whilst these official categories are commonly used in exclusions research, they are subject to methodological concerns due to their socially constructed nature. They refer to the issue of unofficial exclusions, and in particular the subjective judgements and decision-making involved in determining exclusions and assigning a category; also, although the categories purportedly represent a 'reason' they do not illustrate why a situation occurred.

Evans (2010) refers to the 'real-life reasons' behind official statistics in a presentation of findings from research interviews with young people at risk of exclusion (n= 20). She cites pupils describing uncontrolled anger, aggressive interpersonal problem-solving styles and stresses in coping with the large-scale social environment of school as reasons behind 'physical assault' statistics. In relation to 'verbal abuse', reasons related to poor pupil-teacher relationships, being disrespected in front of peers and responses to teachers 'losing it' (pg. 25). In discussing persistent disruptive behaviour, Evans argues that reasons relate to environmental conditions perpetuating unwanted behaviour, and ineffective intervention at early stages to prevent behaviours becoming persistent.

Eastman (2011) argues that the underlying causes of exclusion have their roots in the family environment. She presents compelling statistics in relation to numbers of children who experience (for example) family breakdown, have absent fathers or a parent who misuses substances, witness domestic violence or have been assaulted by an adult, concluding that children in such environments ‘...can become profoundly damaged, which often leads to challenging behaviour in school and beyond’ (pg. 14). Intuitively such a view makes sense, and is evident in other reports focussed on school exclusion. The previous government referred to the ‘challenging personal circumstances’ of many excluded children (DCSF, 2008a, pg. 5); Evans makes reference to ‘chaotic home lives’ (2010, pg. 4). Empirical data is not provided to support these assertions, however, and other than comments by Eastman, regarding the importance of early caregiving relationships in promoting optimal brain and subsequent social, emotional and behavioural development, causal mechanisms are not proposed.

Given the above hypothesis, it could be assumed that equal proportions of children from chaotic family homes would attend schools in similar communities, and therefore there would be similarity in exclusion rates between such schools. Exclusions data, however, demonstrates that some schools exclude at markedly different rates to others who share the same demographic characteristics (Macrae et al., 2003; Hatton, 2013; Gibbs and Powell, 2012). This had led some authors to focus on school organisational factors as causal mechanisms.

Macrae et al. (2003) highlight a distinction between two discourses of social exclusion; 'weak' and 'strong'. They argue that weak interpretations locate the cause (of exclusion) within the individual and look to support the individual to change, whereas strong interpretations look to consider how organisational structures and policies could change to better promote inclusion. The authors go on to describe the educative policy context at the time of writing, conceiving it as a force which promoted exclusion. This view, shared by others (e.g. Vulliamy and Webb, 2003; Charlton et al., 2004), considered the target-driven drive to improve academic attainment as creating a context of reduced opportunities for quality pastoral support, and one where excluding certain children would be beneficial for school figures. Therefore it may be that schools under more pressure to meet certain targets would be more likely to exclude.

Other literature concerned with differing rates of exclusion between schools refers to a different type of force; school ethos and culture. The concept of organisational culture originates from Schein's (2004) corporate business experiences, but has also been applied to schools. Stoll and Fink (1989) refer to school culture as being the deep-set beliefs and assumptions that are shared by staff, which are perceived as a powerful force. Gibbs and Powell (2012) presented findings from a survey of the individual and collective efficacy beliefs of teachers, in relation to classroom behaviour management (n=197). Findings were analysed against exclusion rates and other demographic information of the respondents' settings. They reported that collective beliefs, particularly in relation to the ability of the organisation to address external factors affecting children's behaviour, were a more powerful predictor of lower exclusion rates than individual efficacy beliefs of managing

misbehaviour. In a smaller scale study, Hatton (2013) presented findings that schools with higher exclusion rates had less shared understanding of behaviour policies, responsibility for all children's behaviour and a more punitive rather than reward-based approach to behaviour management. Both studies suggest that a shared ethos and belief in the capacity to effectively manage school behaviour promote lower exclusion rates.

Thus far, reasons presented for exclusion have consisted of official data categories, which in only providing a bureaucratic descriptor, are not illuminative in terms of proposing causal mechanisms. Chaotic family backgrounds and adverse life experiences are implicated, but specifics are not presented to explain how these experiences may result in unwanted behaviour. Literature considering organisational factors does present causal mechanisms, but by adopting a systemic focus, does not explain why some children in settings that manage behaviour less effectively are and are not excluded. An interactionist perspective to the issue of unwanted behaviour requires consideration of individual factors in interaction with environmental differences. As causal mechanisms at an individual level are not explored in school exclusion literature this review will continue by considering literature proposing explanations for the types of behaviour most commonly associated with school exclusion: disruptive and aggressive behaviour.

A larger proportion of research considering causal mechanisms for unwanted behaviour emanates from a clinical paradigm (Maliphand et al. 2003). Anti-social or aggressive behaviours are labelled externalising (Stringer and Clegg, 2009), or disruptive behaviour, disorders (Peticlerc and Tremblay, 2009) and include diagnoses of Conduct Disorder (CD),



Attention Deficit Hyperactivity Disorder (ADHD) and Oppositional Defiance Disorder (ODD). Overlaps between children positioned as having BEDS and these diagnoses are well documented (e.g. Visser, 2003; Cooper and Jacobs, 2011).

A particular mechanism that has been proposed as being implicated in such disorders concerns differences in socio-cognitive processing style. For example, ability to correctly infer emotion from facial expressions (Uekermann et al., 2010) and consider different responses in social situations (Seguin, 2004) has been linked to frontal-lobe dysfunction in children with ADHD diagnoses. A fight-response bias with an increased likelihood of choosing a hostile interpretation in an ambiguous situation has been proposed in children with CD diagnoses (Viding and Frith, 2006), who also refer to genetic predispositions. Kazdin (2010) discusses distortions and deficits in socio-cognitive process as underpinning behavioural problems, particularly aggression in children with ODD and CD diagnoses. The general view shared between these theories is that children who behave aggressively or disruptively variously misinterpret the intentions of others, misread social situations, do not adequately consider the effect of their response in terms of impact on others or long term consequences.

A concern with these clinical accounts is that in foregrounding the neurobiological and cognitive functioning of the child, theorising does not encompass other risk factors that may have been present in a child's developmental history or are present in the child's environment. It was noted in the introduction that a biopsychosocial model of unwanted behaviour is currently advocated (e.g. Maras, 2012). In presenting such a model Dodge and

Pettit (2003) provide a comprehensive review of research which has evidenced relations between biological predispositions, early life experiences, sociocultural context, pre-school and school experiences and unwanted behaviour. Arguing for the principle of multifinality (i.e. specific risk factors interacting and resulting in varied outcomes) they accept the evidence reviewed as examples of multiple distal risk factors, stating that the relationship between distal factors and proximal processes is typified by myriad pathways. Referring to Steinberg and Avenevoli (2000) they highlight a distinction between risk factors associated with the initial development of unwanted behaviour, and risk factors associated with the maintenance of such behaviour.

Such an account provides an overarching theoretical conceptualisation within which the evidence presented in the school exclusion literature can validly co-exist. Research findings which relate individual, developmental or organisational factors to school exclusion, in this model can be conceptualised as valid parts of the whole. Dodge and Pettit (2003) argue that rather than pursuing a line of enquiry to ascertain which factors are more predictive of unwanted behaviour than others the important task of research is to consider how these factors interact to cause the initial development and subsequent maintenance of unwanted behaviour.

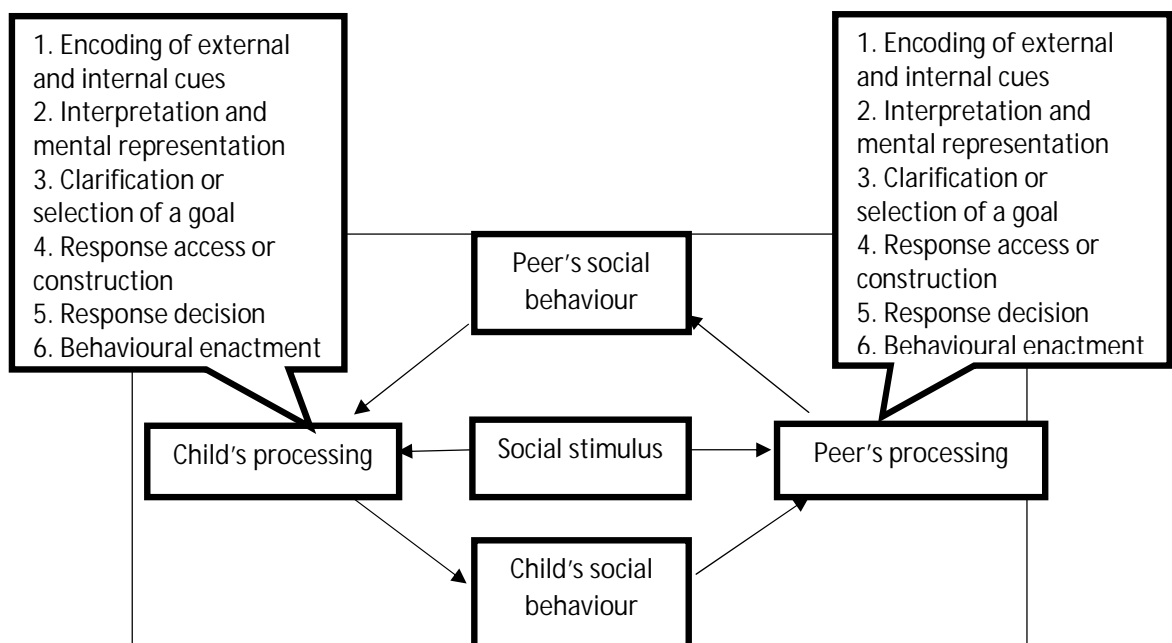
Social information processing theory (SIP; Dodge et al., 1986), is proposed as a mechanism that perpetuates and maintains unwanted behaviour. The theory encompasses findings from social and cognitive psychology (Dodge and Pettit, 2003) such as those presented above, but in proposing a model of social exchange provides an interactionist account. SIP is situated in

the biopsychosocial model as it is proposed that ‘...dispositions, context and life experiences lead children to develop idiosyncratic social knowledge about their world.’ (pg. 361). These stored memories provide the link between past experience and current behavioural choices (Dodge and Pettit, 2003), as they foster particular patterns of social information processing.

The original SIP model (Dodge et al., 1986) has been reformulated (Crick and Dodge, 1994) to incorporate more recent conceptual and empirical developments. The current model consists of six steps of information processing, and now proposes that they occur in parallel, rather than sequentially. The model explains social behaviour occurring as a function of the cognitive processing of environmental cues. Processing occurs recursively within social interactions, and simultaneously between actors; each are interpreting and acting upon environmental cues, including the others’ behaviour. Dodge and colleagues (Dodge et al., 1986; Quiggle et al., 1992; Lansford et al., 2010; Pettit et al., 2010) have presented empirical findings in support of the model in varied and well-designed, often large-scale, studies. Original studies involved video vignettes and naturalistic observation with two samples of children in the school environment and compared the use of proposed steps and errors made between children judged to have problematic behaviour and those who did not (n= 43; n= 79: Dodge et al., 1986). Evidence of errors in processing, in particular a hostile attribution bias has been demonstrated in aggressive and depressed children, using a similar methodology (n= 220: Quiggle et al., 1992). A longitudinal study of primary-aged children provided evidence that SIP processing style, as assessed through responses to hypothetical vignettes, was predictive of later patterns of behaviour in terms of aggression (Salzer Burks et al., 1999). Evidence pertaining to the interactive nature of social-cognitions, in terms of

how the aggressor and rejecter perceived the others' behaviour, was presented in studies that linked peer rejection to unwanted behaviour (Dodge et al., 2003; Lansford et al., 2010) and the interplay in dyadic relationships fostering aggressive behaviour between boys (Hubbard et al., 2001). The persistence of SIP processing patterns and subsequent externalising behaviours, was evidenced in a 12-year prospective study (Lansford et al., 2006); a later study evidenced the dynamic nature of SIP styles, which showed change in consequence to changing peer and social contexts (Lansford et al., 2010). The model of social exchange, with the more recent taxonomy of SIP steps is depicted in Figure 2.

Figure 2. Model of social exchange, adapted from Dodge et al. (1986, pg. 2)



By understanding unwanted behaviour in the classroom through application of this model, accounts that propose biological predispositions (e.g. Viding and Frith, 2006) and adverse early life experiences (e.g. Evans, 2010; DCSF 2008a) are not only incorporated, but

developed. SIP theory suggests that such factors shape an individual's information processing style. The characteristics of children who are more likely to be excluded can be understood as biological risk factors (e.g. being male), or as a function of sociocultural risk factors (e.g. a particular ethnic group being more likely to live in a socially disadvantaged community). Environmental factors provide the conditions to foster relationships between these distal factors and behavioural choices by supporting the development and maintenance of wanted, or unwanted behaviour (e.g. a shared school ethos that certain types of behaviour are beyond a school's capacity to address).

A major strength in the theory is its incorporation of multi-disciplinary evidence and the collaboration of a number of researchers, producing a large body of research, only a selection of which is presented above. However it must be noted that the group of researchers appear to emanate from the same research community, research has been limited to samples of American children. Also, despite the focus on social exchange, there has been little emphasis so far on the interaction between adults' and children's socio-cognitive processing and how this may maintain unwanted behaviour in the school environment.

As may be expected for a model of information processing, greater emphasis is placed on the internal cognitive processes that determine behaviour choices, with less consideration of the sixth step; 'behavioural enactment'. Dodge et al. (1986) argue that errors can occur at any step, and such errors are incremental. In order to enact a chosen response skilfully it

could be assumed that adequate language skills are prerequisite. The following section will consider the body of literature linking language development to unwanted behaviour.

## 2.3 Language development and school exclusion

### 2.3.1 Language development and unwanted behaviour

Stringer and Clegg (2006) note that the relationship between language difficulties and unwanted behaviour was documented as early as the mid-20<sup>th</sup> century. Initially the development of emotional and behavioural problems subsequent to identified SLCN was in focus, but more latterly the opposite trajectory has been considered (Clegg et al. 2009). The evidence base linking previously unidentified language difficulties with unwanted behaviour is substantial and well accepted. In the UK this was reflected in the Bercow review of SLCN (DCSF, 2008b) where it was stated that unidentified SLCN were associated with ‘...multiple risks [...] of behavioural problems, of emotional and psychological difficulties, [...] challenges to mental health and, in some cases, of a descent into criminality.’ (pg. 7).

The majority of research in this area relates to structural language abilities (Ketelaars et al. 2010; Leonard et al. 2011) and has been undertaken with special populations, within a clinical paradigm. Structural language abilities are predominantly verbal skills which compose the domains of form and content in Bloom and Lahey’s (1978) taxonomy, and are often formally assessed by measures of expressive or receptive language ability. The following section will briefly refer to populations where a relationship between unwanted behaviour and unidentified language difficulties has been evidenced, moving onto a consideration of studies focussed on school exclusion.

### 2.3.2 Structural language abilities

The relationship between psychiatric externalising disorders and language difficulties is well-documented. Cohen and colleagues have reported prevalence rates of 34% and 40% of previously unidentified language difficulties in children attending or referred to children's psychiatric services (Cohen et al., 1993; Cohen et al., 1998, respectively) and have stated that the most frequent diagnosis is ADHD (Cohen et al., 2000). In an American publication, Beitchman and Brownlie (2014) cite ADHD, ODD and CD as the most common psychiatric diagnoses co-occurring with language difficulties. In the UK, Clegg and Hartshorne (2004) have argued that children with hyperactivity disorders require speech and language input, illustrating their position with case studies. Walsh et al. (2014) investigated the structural language skills of a UK sample of children with ADHD diagnoses (n= 40). 75% had previously unidentified language difficulties; 70% of those had both receptive and expressive language difficulties.

The evidence base in the young offender (YO) population is also substantial. In the UK, Bryan (2004) reported that up to 47% of a UK sample of imprisoned YOs had significant structural language difficulties. A further study with YOs on community orders identified a 65% rate (Gregory and Bryan, 2009). In a UK YO service, Games et al. (2012) identified that 90% of a small sample (n=11) had significant structural language difficulties, also noting that 90% of staff in the service underestimated the prevalence of such difficulties among their cohort. Sanger et al. (2001) report that 20% of their female sample drawn from an American correctional facility had significant language difficulties; Snow and Powell (2004) reported

average language functioning in a sample of YOs serving community orders in Australia as being two years below age expectations.

Links have also been made to children in care. Cross (2001) reported mild to severe communication difficulties in a small scale study (n=6) of children in foster care; all of the children had statements of SEN targeting BESD without reference to SLCN. Snow (2009) highlights the high rate of YOs who have been in the care system, arguing that children's experiences of neglect and abuse may be casually implicated in the development of language difficulties, and subsequently in unwanted behaviour. Social disadvantage generally has been linked to delayed language development (e.g. Hart and Risley, 1995; Locke et al., 2002; Law et al., 2008).

In the previous section the overlap between children assigned a BESD category of SEN, those with psychiatric externalising disorder diagnoses and those in the criminal justice system was noted (Visser, 2003). Unwanted behaviour and school exclusion was also linked with social and familial disadvantage (e.g. Eastman, 2011; DCSF, 2008a). The selected literature above illustrates that high rates of structural language difficulties have been evidenced in all of these populations. As well as being more likely to be excluded, boys are more likely to be categorised as having BESD (DfE, 2013b), more likely to receive an externalising disorder diagnosis (Beitchman and Brownlie, 2014) and disproportionately represented in the criminal justice system (MoJ and YJB, 2014). As noted earlier a higher prevalence of SLCN is recorded in boys (Robinson, 1987; Tommerdahl, 2009). The evidence presented so far continues to demonstrate interactions between characteristics in exclusions data and less



well developed language abilities. This section will proceed with a consideration of much smaller body of research in the school context.

Law and Sivyer (2003) evaluated the efficacy of speech and language therapy in addressing unwanted behaviour in a small sample of children (n=20) who were at-risk or already excluded from primary school. All of the children recruited for the study were found to have significant (and previously unidentified) oral language and social communication difficulties using criterion-referenced assessments; the overrepresentation of children from the 'black community' (sic) in the sample (72%) was referred to earlier. The authors concluded that the therapy supported behaviour development and self-esteem, suggesting a causal link, but noted that the use of standardised pre- and post-measures would provide more robust data.

A second speech and language therapy evaluation study assessed 11 pupils attending a Pupil Referral Unit (Heneker, 2005). 91% were found to have a communication difficulty, with 55-65% of those reported as having receptive language difficulties and 64% -73% expressive language difficulties. 64% were found to have 'difficulties which significantly impact on learning and socialisation in areas of social communication and understanding ambiguity' (pg. 88). Although the structural language skills were measured with standardised tools, criterion-based measures were used with social communication skills. The criterion-based measures used in these studies were useful in determining aspects to be addressed through the speech and language intervention, but are less useful for purposes of illustrating levels of need within this population in comparison with the general population.

Ripley and Yuill (2005) investigated patterns of structural language abilities and behaviour in a sample of 19 boys, predominantly of secondary age, who had been excluded from school and a control sample of boys who were not excluded. Standardised tests were used to assess aspects of structural language and non-verbal cognitive ability; a teacher report Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) provided a behaviour profile. They reported a greater prevalence of receptive, expressive or mixed difficulties in the excluded boys in comparison to non-excluded and noted that differences in results were not attributable to general cognitive ability. Significant differences were reported in levels of expressive language difficulties, which were related to emotional symptoms (as assessed by SDQ). The authors concluded that verbal ability, specifically expressive language, is implicated in behaviour that leads to school exclusion.

Clegg et al. (2009) conducted a similar study on a sample of 15 secondary-aged pupils at risk of school exclusion. Six of the sample had identified additional needs (mild learning difficulties; mild hearing impairment; 3 x ADHD diagnoses; stammer). Standardised measures of receptive and expressive language and a teacher-report SDQ were completed for each participant. 10 pupils were found to have language difficulties; five of these were judged as 'severe' (2 standard deviations [SD] below the population mean). Two of the children with ADHD, and the only girl in the study were in the group of five pupils who did not evidence language difficulties. Severe behavioural difficulties, as measured by the SDQ, were reported in all but one pupil. Six pupils had receptive-expressive difficulties; four pupils had only expressive difficulties. Significant relationships between type of difficulties and behavioural symptoms were not found.

The two studies above used different subtests from different standardised assessments which may explain inconsistencies in results regarding the aspect of language most affected, and whether there are specific relationships between types of behaviour and profiles of language abilities. Although undertaken with a different population, Gregory and Bryan's (2009) study is comparable due to the link between school exclusion and offending behaviour (DCSF, 2008a). The study used measures from the same assessment as Clegg et al.'s (2009) study, but in this case receptive language was highlighted as the most significant difficulty. It may be that as the three studies have small samples the inconsistency results from sampling bias.

Another explanation can be offered. A number of the studies presented above have made reference to difficulties with social communication, but as tools used were not standardised less weight appears to be placed on these findings. Heneker (2005) used a tool from the Social Use of Language Programme (Rinaldi, 1995) and suggested that future projects 'assess social skills more objectively' (pg. 90). Gregory and Bryan (2009) noted that more than half of their sample had social skills difficulties, as determined by completion of the Broadmoor Observation of Communication (BOC; Bryan, 1998), but commented that the standardised structural language measures they used 'give a more robust and measurable indication of the level of language difficulty' (pg. 25). Both of these tools measure skills in the domain of use, for example, intonation, non-verbal skills, turn-taking skills (SULP chart; Rinaldi, 1995) and gesture, facial expression, initiation and topic maintenance (BOC). We will now turn to the literature investigating the relationship between use, or pragmatic language.

### 2.3.3 Pragmatic language abilities

The connection between pragmatic language competence and unwanted behaviour has been made previously (e.g. McDonough, 1989; Giddan, 1991), but a focus on the relationship between this aspect of language competency and unwanted behaviour seems to have been prompted by the development of a standardised tool by which to measure it; the Children's Communication Checklist (CCC: Bishop, 1998). A review of the small but growing body of literature in this area demonstrates that almost exclusively the first or second edition (CCC-2: Bishop, 2003) has been used, with Law et al. (2014) referring to it becoming the 'industry standard' (pg. 36) measure for pragmatic language abilities. These studies will now be presented.

Gilmour et al. (2004) used the CCC in a UK two-phase study. The first phase involved a sample of children referred to clinical services for conduct disorder (n= 55). The second phase used a sample of at-risk or already excluded primary-aged children (n= 54). 69% of each sample were reported to have clinically significant pragmatic language impairments (> 2SD) which the authors noted were, in many cases, 'similar in nature and degree to those of children with Autism' (pg. 967). The authors also report that there was no significant correlation between IQ (where measured) and pragmatic language abilities, concluding that the pragmatic language difficulties evidenced were not a function of general intelligence. In a follow-up study Donno et al. (2010) attempted to replicate the findings using the CCC and standardised autism diagnostic interviews. Using a higher threshold (3SD below the population mean, rather than 2SD as in the first study) they reported that 42% of their sample of primary-school children (n= 22) judged by their school to be persistently disruptive had clinically significant pragmatic language difficulties and that 35% met clinical criteria for

an autism-spectrum disorder. In both studies findings are interpreted as evidence of unidentified social-communication disorders, the symptoms of which are being misperceived as poor behaviour.

The CCC was also employed in a large scale study undertaken in Holland (Ketelaars et al., 2010). Data was gathered on four-year old children recruited from 53 primary schools (n=1,364) using teacher-reported CCCs and SDQs in order to consider the relationship between pragmatic language competence and behavioural development. The design was prognostic, aiming to predict factors which increased risk, therefore exclusion criteria were not applied in sample selection. 15 children had clinical diagnoses (i.e. ADHD, ASC, language disorder, general developmental delay). The authors also note that 'many' (pg. 207) children were considered to have problems relating to language or social / emotional development. In general, boys were found to have less well developed communication skills, as evidenced by CCC scores, and a higher incidence of behaviour problems, as evidenced by SDQ scores. Within the whole sample SDQ measures of hyperactivity, peer problems, pro-social behaviour and the total score were found to correlate moderately-highly with poorer scores in CCC subscales; those measuring pragmatic aspects yielded higher correlations. A regression analysis determined pragmatic competence to be the most important predictor of behaviour difficulties, and found that structural language difficulties were not predictive. Mackie and Law (2010) used the CCC-2 in a study aiming to replicate Gilmour et al.'s results, incorporating additional measures to further investigate the relationship. A sample of 7-11 year olds (n=17) were recruited from referrals made to an educational psychology service due to school-reported behavioural concerns. Parental report suggested that six children

had previously identified communication problems and a further seven reported concerns about their child's communicative abilities. Parent and teacher reported SDQs determined a behaviour profile; CCC-2s were teacher reported. Standardised measures of receptive and expressive language, non-verbal cognitive ability and literacy were used. No significant difference was found between the two groups' non-verbal ability. 94% of the referred sample were judged to be at high-risk of an emotional and behavioural disorder diagnosis according to SDQ scores, although the greater proportion were classed as behavioural (it is not made clear which subscales are conflated to create this category, or if it represents the conduct disorder scale). This conflicts with Ketelaars et al.'s findings of a stronger relationship with hyperactivity. Children in the referred group scored significantly lower in the receptive and expressive language assessment, with six children's scores indicating significant receptive-expressive language difficulties.

As a number of the CCC-2's failed the inbuilt consistency check the sample size for this measure was reduced to 11. Children in this reduced referred group had significantly lower scores in the General Communication Composite (GCC: total score denoting general ability across all domains) in the five scales selected as measures of pragmatic ability. Seven children (64%) had patterns of scale scores deemed to be of clinical significance (defined as > 2 scales at or below the 5<sup>th</sup> percentile or > 3 scales at or below the 10<sup>th</sup> percentile). Six of these children (55%) had composite ratio scores suggesting that their pragmatic skills were disproportionately affected in comparison to their structural language ability. Whilst noting caution due to the depleted sample size for the pragmatic measures and methodological differences, the authors conclude that their findings, of a two-third prevalence rate,

replicate Gilmour et al.'s findings. They also comment that it is not possible to determine if such findings are indicative of unidentified pervasive developmental disorders or if they are due to impoverished environmental conditions prejudicing development.

The same authors (Mackie and Law, 2014) presented more findings linking pragmatic competence with unwanted behaviour in a sample of 7-11 year old boys (n=35) in Scotland who had significant externalising behaviours (as defined by SDQ measures). Teacher-reported CCC-2 and standardised measures of structural language were used as assessments. The boys scored significantly lower than a control group in all measures and demonstrated evidence of disproportionate pragmatic language difficulties in comparison to structural language abilities as measured by CCC-2.

Further studies have been concerned with the interaction between pragmatic language competence and specific types of behaviour, where it has been proposed as a mediating variable. Bignell and Cain (2007) reported an association between poor attention, elevated levels of hyperactivity and underdeveloped pragmatic language ability in a population of non-diagnosed hyperactive 7-11 year olds (as measured by teacher-reported clinical ADHD checklist). Leonard et al. (2011) considered the relationship between hyperactivity and pragmatic language competence in American school children (n=54). Standardised measures were used to ascertain functioning in relation to social skills, hyperactivity / inattention, structural language and cognitive ability, the CCC-2 was used to assess pragmatic language. The authors concluded that pragmatic language mediated the relationship between hyperactivity / inattention and social skills. Law et al. (2014) reported that pragmatic

language ability mediated between structural language difficulties and aspects of behaviour as measured by the SDQ (hyperactivity and peer-related problems). Pragmatic language competence was shown by Coplan and Weeks (2009) to have a buffering effect for shy children (as defined by parental responses to a psychometric social preference questionnaire). Those who were pragmatically competent were deemed to be better adjusted than those with less well-developed pragmatic language skills after their first year at primary school. Adjustment was defined by self-report measures of anxiety and loneliness and teacher-reported behaviour measures.

#### 2.4 The relationship between pragmatic language competence and unwanted behaviour

The evidence presented demonstrates an empirical relationship between levels of pragmatic language competence and unwanted behaviour, which is consistent. Such a relationship makes intuitive sense, given the descriptors of skills that are situated within the domain of language use, as described in the introduction. A child who selects an inappropriate message or interpretation in relation to the communicative context (to paraphrase Bishop, 2003, pg. 7) is less likely to manage successful social interactions. It was noted in the introduction that, according to Donaldson (1978), young children rely less on verbal communication and more on 'reading' the social situation to determine the appropriate response. Evidence suggests that the communicative context between home and school settings are very different; there are a new set of social rules to be internalised, many of which are implicit (Tizard and Hughes, 1983). On entering a novel situation, such as the school environment, the young child is required to 'read' the situation, taking cues from adults and peers to determine new behavioural expectations. It may be that the pragmatically competent child manages this;



adults in the classroom are unaware of how little emphasis children are placing on the 'sheer linguistic form' (Donaldson, 1978, pg. 63) of their verbal instruction. The child who is less skilled pragmatically is disadvantaged, and may appear to be wilfully disobeying instructions.

An account which implicates pragmatic language competence does not refute accounts of structural language difficulties in this population; rather it provides an explanation for the seemingly inconsistent findings between aspects of language most affected. It has been argued that pragmatic language skills develop first, and provide a foundation on which to acquire verbal skills (Donaldson, 1978). Evidence has been presented that children with pragmatic language difficulties tend to have problems with aspects of structural language as well (Botting and Conti-Ramsden, 1999; 2003). When the developmental trajectory of pragmatic language development is considered, an explanation for varied structural language profiles is available which also incorporates evidence suggesting adverse early life experiences are related to increased risk of school exclusion.

Bloom and Lahey (1978) argue that it is through the consistent attentions of adults that infants learn to use sounds and movements with intent, and subsequently symbolically. For example, extending an arm and an index finger could happen incidentally, but if a child consistently notes that an adult looks in a particular direction, and comments on an object in that direction when the child does this and if the adult uses the same gesture consistently and it occurs with the child noticing an object of interest in the environment then a shared meaning of 'pointing' will develop. In order to develop a rounded pragmatic repertoire a child will require lots of social experiences with an engaged adult who is able to consistently

support the child's accurate development of meaning. If these learning experiences are not adequate, perhaps due to stressors that impact on parents' ability to provide attuned and consistent responses, then not only does the child arrive at school with a reduced capacity to navigate demands in a novel social environment, but they have also had an uneven foundation on which to build verbal skills. Botting and Conti-Ramsden (1999) highlight specific types of semantic errors in children with primary pragmatic language difficulties, which they argue are not indicative of word-finding difficulties; they also note average scores for naming vocabulary. It is possible that the uneven foundation results in an uneven structural language profile that is a consequence of varied and inadequate learning experiences, which would be expected to vary from child to child.

Evidence regarding the impact of parenting and early environmental contexts on subsequent language development has been presented, although this is limited to measures of structural language abilities, and in many cases is situated in a context that is considering the impact of SES. Hart and Risley (1995) concluded that the amount of talking between parents and children (which tended to be less in families of lower SES status) is positively related to vocabulary development. Bradley and Corwyn (2002) report that negative life events and family risk factors (e.g. family dissolution, parental mental ill-health) interact with low SES, resulting in a greater negative impact on children's development, including their language development. Pickstone (2006) summarises proposed pathways between low SES and subsequent child development, including language development, highlighting maternal depression, trauma and abuse in familial contexts and parenting styles as being linked to

poorer outcomes. Similar themes are picked up in by Maggi et al. (2010) in their review of social determinants of early child development.

The first section of this literature review presented official exclusions data which highlighted that certain groups are more likely to be excluded from school, in particular boys, certain minority ethnic groups, and children with particular types of identified SEN. Prevalence rates of pragmatic difficulties in these populations are not present in the literature but a pragmatic account coheres with explanations for unwanted behaviour that highlight a disconnect between school behavioural expectations and cultural explanations, of (for example) working class boys (Jackson, 2002) or Black Caribbean pupils (Skiba et al., 2000). Pragmatic competence relies on understanding what certain cues mean, in that particular context, and being aware of the unwritten rules that determine appropriate responses. Such children may not have 'difficulties'; it may be that what is appropriate behaviour in their home and community settings is deemed inappropriate in the social context of school, by those in power.

Children with identified BESD, ASC and SLCN are overrepresented within certain categories of school exclusion. Pragmatic language difficulties are an expected feature of ASC (Bishop, 1998) and the category of SLCN is broad, encompassing children with specific language impairments, who would be expected to have relative strengths in this domain (Bishop, 2003) but can also include children with social communication difficulties. The evidence featured has described prevalence rates in children positioned as having BESD, but is also available in clinical literature for children with externalising disorders, with particular links

made to ADHD type profiles (e.g. Bignell and Cain, 2007; Leonard et al. 2011; Law et al. 2014).

An account implicating pragmatic language ability in school exclusion complements Dodge and colleagues' SIP theory (e.g. Dodge et al., 1986; Crick and Dodge, 1994). Pragmatic competence is imbued with socio-cognitive processing. Poor pragmatic ability could prevent appropriate encoding of environmental cues (step 1); a misinterpretation of such cues is by definition poor pragmatic ability (step 2); if the situation has been misread, the selection of the goal is not likely to be appropriate to the situation (step 3); a developmental account of pragmatic language would suggest impoverished learning experiences due to environmental conditions or biological predispositions providing fewer available possible responses, increasing the chances of choosing an ineffective method of attaining the selected goal (step 4 and 5). Finally, in enacting the chosen behaviour the child needs to ensure their tone, prosody, and non-verbal behaviour convey the message they had intended. Not only is it clear to see that an account of less well-developed pragmatic language ability is entirely coherent with the SIP theory, it is possible that they may be describing two sides of the same coin.

The literature evidencing the link between pragmatic competence and unwanted behaviour is not without limitations however. At the point of gathering data for this project few studies were published evidencing the relationship in the population under discussion. Gilmour et al. (2004) provided evidence which was replicated by Donno et al. (2010). Both used the earlier version of the CCC, which was devised to identify subgroups of language disorders in children with previously identified difficulties, and as the research was undertaken within a

clinical paradigm, findings were interpreted as unidentified disorders that potentially required diagnosis. Mackie and Law (2010) presented findings in a sample of children, some of whom had identified communication needs, or were at least suspected to have. Arguably these children were having difficulties in school as identified needs were not being met, not because their behavioural presentation was being misinterpreted. Also, as the authors note themselves, due to problems with inconsistent questionnaire responses the analysis of CCC-2s was limited to a sample of eleven children, which had implications for the validity of findings. The same authors have subsequently presented further evidence of this relationship but have differed as to which CCC-2 scales they have considered to be measures of pragmatic ability. Mackie and Law (2014) used the four scales that Bishop (2003) denotes are measures of pragmatic ability, whereas Law and Mackie (2010) and Law et al., (2014) add 'coherence', which Norbury et al. (2004) reclassified as a structural language scale due to empirical findings in the validation studies. This methodological issue prevents comparison of findings, and in the case of inclusion of coherence, questions are raised over the validity of interpreting the results as evidence of pragmatic, rather than more general language difficulties.

There is a coherent narrative between the theoretical explanations of the development and nature of pragmatic language and other reasons proposed as causally related to school exclusion and unwanted behaviour. From a theoretical perspective it is possible to understand how disadvantaged early experiences could result in less well-developed pragmatic language skills and how this may translate to unwanted behaviour if the communicative demands of the classroom were not congruent with the child's

developmental stage. However before such theorising can be applied to considering interventions to reduce school exclusion rates and address unwanted behaviour further empirical evidence of the relationship is required. Thus far the majority of studies have been undertaken with special populations (Coplan and Weeks, 2009), and there are methodological inconsistencies in those that have not. Both of these factors prevent generalisation of the results to the wider population, therefore the relationship between pragmatic language competence and unwanted behaviour requires further investigation.

## 2.5 The present study

The present study aims to replicate the findings of Gilmour et al., (2004) and Donno et al., (2010) using the most current version of the Children's Communication Checklist, the second edition. As this Checklist was developed to include further measures of language functions to enable its use as a general language screen to distinguish children with varying types of communicative difficulties from those without, it is judged a more methodologically sound tool for this research design than the CCC. The developments in the CCC-2 include more robust measures of structural language abilities, which given the larger body of research in this area, also support the design of research incorporating this method. Mackie and Law (2010) suggested that their preliminary findings were indicators for further investigation. This study aims to undertake that further investigation, but against a conceptual background that incorporates Bishop and Norbury's (2002) view that '...pragmatic impairment is a symptom that can have a range of causes' (pg. 928) as oppose to Gilmour et al.'s (2004) and Donno et al.'s (2010) clinical conceptualisation of undiagnosed clinical conditions.

### 2.5.1 Research Questions

The research questions are as follows:

- 1) Is there evidence of lower levels of pragmatic language ability in primary aged children at-risk of school exclusion in comparison to children not at-risk of exclusion from similar socio-economic and ethnic backgrounds?
- 2) If so, is there evidence that levels of pragmatic language ability are disproportionately lower to the children's structural language abilities?

## CHAPTER THREE: METHODOLOGY

### 3.1 Introduction

A longer term aim in conducting this piece of research is to consider how best to support schools to reduce school exclusion rates. Developing effective interventions requires the mechanisms at play in producing a phenomenon, the causal factors, to be identified. However it is prudent to ensure a relationship between variables exists, before committing time and resources to considering how they interact. This research design is exploratory, aiming to empirically evidence a relationship between pragmatic competence and risk of school exclusion. An interactionist perspective is adopted in discussing the results and to inform a proposed causal relationship, from which to design future explanatory studies. This chapter proceeds with a presentation of the chosen design and epistemology, then a description of the recruitment and characteristics of the samples. The rationale for the chosen method is explored and the procedure for the study described. The chapter concludes with a presentation of ethical considerations.

### 3.2 Design and epistemology

The present study is of a cross-sectional and independent design. Data gathering was conducted at a single time point for each participant, between May and December 2013. Data was gathered on two groups of children, a sample of primary-aged children at risk of school exclusion and a matched sample, in order to make comparisons of communicative ability. As the research questions related to the prevalence of less well-developed pragmatic language abilities a quantitative methodology was chosen.



Data was gathered using a standardised questionnaire, the Children's Communication Checklist, 2<sup>nd</sup> Edition (CCC-2: Bishop, 2003). Although a quantitative methodology has been chosen, a positivist epistemology was not judged to be appropriate due to the potential for multi-layered subjectivity. The use of third-person questionnaires introduces subjectivity by asking respondents to interpret and quantify another's behaviour. Given that subjectivity in judging the behaviour of the population under discussion has been raised as an issue (Kaufmann, 2002) and that the respondents in this design are school staff who are likely to have construed the child's behaviour in various ways prior to completing the Checklists, it is not considered that responses can represent an objective measure of reality as required by a positivist paradigm (Robson, 2011).

A critical realist position holds that mechanisms producing social phenomena are real, but as they are not directly observable, they can only be known through their effects. The task of research in this paradigm is to hypothesise as to what these mechanisms may be (Bryman, 2004). The research is designed to evidence a potential relationship between two variables, being at-risk of school exclusion and levels of pragmatic competence, not to test causality. However in adopting a critical realist perspective, if the hypothesised relationship between the variables is evident, this provides a basis on which to propose mechanisms which may be causally implicated by analytically considering the data in conjunction with the literature.

Within this study it can be objectively observed that the children within the sample are considered 'at-risk of exclusion'. The term is operationalised as any child who has been referred to the Early Intervention (EI) team at their local Pupil Referral Unit (PRU). The

teams' aim is to support schools to manage the behaviour of individual children to prevent school exclusion; referrals are taken only when there is 'evidence of serious disruption and consistent rule breaking'. Therefore by making a referral the child is observably 'at-risk' of school exclusion. The mechanism that results in the decision to refer this child, at this time, is less observable in that it implicates factors such as peoples' interpretations, judgements, and school norms. A critical realist perspective (Bhaskar, 1989) allows for a view where a social reality interacts with people's constructions of it. It was therefore felt that a critical realist epistemology was congruent with the aims of the study and the chosen method.

Potential concerns regarding the subjectivity of third-person responses forming the data set are only partially navigated through epistemological orientation. As noted, Kaufmann (2002) points to the subjectivity in judging the behaviour of the population in focus, and it is important to consider that in selecting respondents to the questionnaire who are experiencing concerns about that child that this may influence the responses given. Whilst it is not possible to remove this potential threat to data validity it is believed to be minimal, as the items on the questionnaire are such that they are tapping concrete descriptors of communicative behaviours and there is little room for judgements of a child's motivation or meaning in behaving in such a way.

### 3.3 Participants

As noted in the first chapter I had previously undertaken a study of similar design, albeit prior to doctoral studies and with less rigour. AS this study had focussed on a secondary-aged sample it was decided in the present study to focus on the primary-aged population. At

the most superficial level this allowed exploration of a different age group, thereby promoting greater generalisation of findings. Undertaking the study with a younger age group also allowed consideration of the developmental trajectory of pragmatic language competence. Evidencing the relationship in the secondary population does not provide any evidence to suggest that the children were experiencing difficulties prior to transfer to high school, and findings could have been linked to changes during puberty or myriad other events which would be expected to increase exponentially with the increasing age of the child.

### 3.3.1 Recruitment

The research design included two sample groups, the main sample of children who were at-risk of exclusion and a second control sample, not at-risk of exclusion, matched on bases of sex, term and year of birth and free school meal status. The main sample was recruited from referrals to the three PRU EI teams in the large Shire Local Authority in which the research was undertaken. To provide a matched sample population, the PRUs provided names of the three highest referring schools in their localities. These schools were invited to take part with an offer of training on the topic of this thesis in recompense.

Initial meetings with the PRU senior leaders indicated that a sample size of 60 - 80 pupils from each PRU could reasonably be achieved over the period of a school term. Following agreement to take part and arrangements for data gathering being made the PRUs experienced significant strategic changes which greatly increased staffing pressures; one PRU withdrew from the project. Expected sample recruitment was greatly reduced, the data

collection period required extension to two terms and the original plan to match the child from within their own school became unfeasible, resulting in the redesign to recruit the matched sample from high referring schools.

Agreement from one school in each locality was obtained, however one subsequently withdrew before data could be collected. To obtain agreement from another school and to set up all briefing and consent arrangements was not possible in the remaining time frame. The school was from the same locality as the PRU which withdrew; at this point only four Checklists had been completed in this locality for the main sample. Despite these data supporting the hypothesis (see Appendix 1), in order to adhere to the timescale of the project, a decision was taken to exclude this area of the county from the study. The procedure for gaining consent and gathering data is presented below, following a description of the characteristics of each sample group.

### 3.3.2 Characteristics of 'at-risk' sample

The 'at-risk' sample was recruited from consecutive referrals to the PRUs EI teams over a period of two terms (summer and autumn 2013). Inclusion criteria as determined by the method used (described below) required that children must speak in sentences and that English was their home language. As the study aimed to evidence previously unidentified need children were excluded from the sample if they had identified significant hearing, vision or speech and language difficulties, or if the child was receiving intervention from a psychology or speech and language service.

34 parents gave consent for a CCC-2 to be completed for their child and for data to be included in the study; data was gathered before the EI team began their intervention. All Checklists met the inbuilt consistency check, which is computed when scores are entered into the spreadsheet provided with the CCC-2 package, however on one the respondent had marked 3 items as 'not applicable'. As this prevents the computation of composite scores, this and the matching Checklist were removed. Consent had been obtained for one participant, and matched data already gathered when it transpired that the 'at-risk' pupil did not meet inclusion criteria. As one of four already-completed Checklists from the area removed from the study was for a participant with matching characteristics this was substituted. This resulted in a final sample size of 29, of whom 28 were recorded as being of 'White British' ethnic heritage, one of mixed heritage. Table 1 shows the characteristics of the sample by school year, sex and FSM status.

Table 1. Sex, year group and free school meal status of the at-risk sample.

Year Group	1	2	3	4	5	6
All (N=29)	5	4	4	7	6	3
Boys (N= 24)	3	4	4	4	6	3
Girls (N= 5)	2	0	0	3	0	0
FSM (N= 14)	3	3	2	2	2	2

### 3.3.3 Characteristics of the matched sample

The schools that agreed to provide a matched sample population were considered to be high referrers to the PRUs. In addition to the criteria outlined above, to be included in the matched sample children must not have identified SEN, or be considered to present

behavioural concerns. Children were selected from the schools' pupil tracker on the basis of term and year of birth, sex and free school meal status. Full matches were possible for the majority of the sample (n=22) and all were matched to the correct year group. One child could not be matched on two characteristics, FSM status and term of birth. The remaining six children were matched on all but one characteristic (FSM: n= 3; sex: n= 1; ethnicity: n=1; term of birth: n=1). All children in the matched sample were recorded to be of White British heritage.

Table 2. Sex, year group and free school meal status of the matched sample.

Year Group	1	2	3	4	5	6
All (N=29)	5	4	4	7	6	3
Boys (N= 24)	3	4	4	4	5	3
Girls (N= 5)	2	0	0	3	0	0
FSM (N= 14)	3	2	4	2	2	3

### 3.4 Method

Data was collected using the Children's Communication Checklist: Second Edition (CCC-2; Bishop, 2003) which is a standardised communication screening questionnaire. The first version of the Checklist was designed to sub-classify children with known communication difficulties; this was then developed to allow the tool to be used as a general language screen. The CCC-2 consists of 70 statements, to which respondents rate the behaviour described in the statement on a four point scale (0-3) depending on the frequency of the behaviour occurring. There are 10 scales (Table 2) each with seven items, measuring aspects of language form, content (scales A-D) and use (scales E-H). A further two scales (I and J) are

described as measuring behaviours that are particularly notable in children with ASCs (Bishop, 2003). Two composite scores are also provided, a General Communication Composite (GCC) which provides an overall score of communicative competence, and the Social Interaction Deviance Composite (SIDC), which provides a measure of disproportionate difficulties in pragmatic language in comparison to structural language abilities.

The earlier addition of the CCC (Bishop, 1998) included a Pragmatic Composite, equivalent of scales D-H in the CCC-2. This has not been included in the current version due to poor inter-rater reliability and validity when discriminating sub-types of communication disorders (Bishop, 2003). However as the equivalent composite proved useful in discriminating between clinical diagnoses and controls, and this study is focussed on children with previously unidentified difficulties, the equivalent composite scores will be utilised in the analysis. This method was used by Mackie and Law (2014) who used the name 'Pragmatic Language Composite Score' (PLCS); this term will be adopted in this thesis. The three composite scores will inform the analysis and interpretation of the data, which is described in greater detail in the following chapter.

Table 3. CCC-2 Scales

A	Speech	F	Stereotyped language
B	Syntax	G	Use of context
C	Semantics	H	Non-verbal communication
D	Coherence	I	Social relations
E	Inappropriate initiation	J	Interests

### 3.4.1 Validity of CCC-2

The CCC-2 was standardised on a large sample (n=542) of typically developing children in the UK, aged 4-16 years, selected to be representative of the UK population (Bishop, 2003). Two validation studies on separate populations of children have been undertaken (Norbury et al., 2004). The authors conclude that the CCC-2 has a clear strength in discriminating between children with communication difficulties and those developing typically, as there was very little overlap in GCCs. Pragmatic difficulties were evidenced in children with all communication diagnoses however, which led to the development of the SIDC. The authors suggest that the overlap between specific and pragmatic language impairments is a consequence of boundaries between communication disorders not being clearly demarcated, rather than evidence of poor validity in the CCC-2 (Norbury et al., 2004). This view is supported by evidence presented by other authors using a variety of methods to determine pragmatic and structural language abilities (e.g. Botting and Conti-Ramsden, 1999).

Farmer and Oliver (2005) concluded that the CCC-2 had utility as a tool to discriminate between sub-types of communication disorders. Although the sample was small (n=38) it represents a validity study undertaken by researchers other than those involved with the creator of the assessment. Although not undertaken as a validation study the results from Donno et al.'s (2010) study which used the CCC-2 and more direct clinician-led methods of assessing social communication abilities, finding parity in results, provides further evidence for the validity of the tool.



### 3.4.2 Alternative methods

Methods to determine children's functioning in certain areas of ability can be said to fall into one of three broad types: structured tests, designed to elicit certain behavioural responses for which there are expectations of performance levels for typically developing children; direct observation of a child by a trained practitioner who compares their behaviour against a theoretical developmental framework; third-person reports, perhaps via clinical interview or a ratings-style questionnaire.

Difficulties with standardised tests to measure pragmatic abilities are two-fold. Firstly they tend to provide scores on discrete abilities, such as providing an appropriate verbal response to a social problem depicted in a picture (TOLP-2; Phelps-Terasaki and Phelps-Gunn, 2007) or telling a story from a series of pictures or reporting a conversation (ADOS; Lord et al., 2000). Vickers (2003) argues that testing discrete abilities in this manner and denoting a score as representative of pragmatic ability is akin to claiming one ingredient is representative of a whole cake. Secondly, pragmatics by definition relates to the ability to use language to achieve social objectives. Test situations, being structured and didactic and removed from the child's normal social context lack ecological validity. As this study was particularly concerned with the interactions taking place in the school environment that were putting children at-risk of school exclusion a test method was not judged appropriate.

A systematic observation is conducted with explicitly formed parameters (Bryman, 2004) and as it could take place in the school setting would have the benefit of being ecologically sound. In the case of this design, a pragmatic language developmental framework, such as

the Pragmatic Development Chart (Gard et al., 1993) could be applied to delineate valid observational parameters. Of the limitations Bryman highlights with this method, a particular concern is that of 'reactive effects' (pg. 175), meaning that the presence of an observer in a situation may result in a conscious or unconscious influence on the behaviour of those being observed. Also, in order to get a representative measure of the nature and quality of a child's pragmatic competence lengthy or repeated observations would have been necessary. As the aim for the research was to determine levels of pragmatic competence across a population of children, the time required to undertake so many observations would not have fit to the project time limitations. It was therefore decided that systematic observation was not appropriate to the research design.

This leaves third person responses. Interview schedules were discounted as developing a reliable schedule and testing its validity was beyond the timescale of this project. Also, as the initial sample was envisaged to be up to 160 children the time pressures would have been onerous for one researcher, and also for those responding. This may have made it less likely that teaching staff would have been able to provide responses. A ratings checklist was chosen as most appropriate method to gather data to answer the research question as it provided a tool which could be administered with relative ease, and which would provide uniform responses, that were easily comparable. This allowed for a research design where members of the EI teams could support teaching staff to complete questionnaires as part of their normal assessment procedure, only adding 10-15 minutes to usual processes. The standardised nature of the CCC-2, and the good validation data, and its development to be

completed by teachers or parents, rather than clinicians determined it an appropriate choice for this design.

### 3.5 Procedure

The CCC-2 manual provides parameters regarding the suitability of respondents who are considered to know a child well enough to provide valid responses. The requirement is that a respondent must have known the child for at least three months and see them at least three times a week (Bishop, 2003). The researcher had no control over who was selected to provide Checklist responses, however it was made clear during briefings to the EI team, and during data collection sessions for the matched sample, that the best respondent is the member of staff who knows the child best. All respondents met the criteria stated in the CCC-2 manual as being required to produce valid data. Respondents were class teachers or teaching assistants who spent a high proportion of the school day with the child and the majority recorded that they had known the child for longer than the three month threshold.

#### 3.5.1 'At-risk' sample

EI workers attended a briefing to outline the purpose and design of the study, to provide training on the completion of the CCC-2, ensure arrangements for data collection, gaining informed consent and responses required should needs be identified (Table 3) were fully understood. As part of the initial response to receipt of a referral the EI manager meets with the parent. At this point parents were informed of the research project and invited to give permission for the CCC-2 to be completed for their child. It was made clear to parents that refusal would not prejudice the service they would receive from the EI Team, and their

decision would not be recorded in school records. Parents were told if they did give permission then the results of the CCC-2 would be incorporated into the initial assessment and inform the intervention plan for their child. They were also informed that they could withdraw their consent at any point during the period of intervention, and if the Checklist was already completed this would, if they wished, continue to inform intervention planning, but data would be removed from the study. Procedure sheets (Appendix 2), participant information sheets and consent forms (Appendix 3) were provided, with the understanding that the EI manager would talk through the information sheet with each parent. Parents were provided with the researcher's details should they wish to make contact directly and assured that this would be welcomed, but to do so may prejudice their anonymity. Direct consent was not sought from the children; as part of the referral procedure schools are required to ascertain the child's views of the situation and ensure they fully understand the referral being made and what this will involve. It was felt that as the research method did not involve direct interaction with the child, and as various assessments were being undertaken as part of the referral process that consent from the parent was sufficient.

To preserve anonymity each child was assigned a code, of which the EI manager kept a record, to ensure that feedback provided by the researcher regarding the child's communicative profile following scoring and interpretation of the CCC-2 could be correctly matched. The completed Checklist was sent to the researcher with a cover sheet including prompts and demographic details and the signed consent, either by email, through post, or collected by hand (Appendix 4). Agreement was made that feedback would be provided within two working weeks, to ensure that results could inform intervention planning. This

was achieved for all participants. Feedback was provided by email to the EI manager (example in Appendix 5), which was added to accumulatively. This provided a summary of the child's communicative profile and the advised response to any identified needs.

Table 4. Range of potential responses to identified need as outlined in briefings

Typically developing profile identified	No specific action advised relating to communication
Lower scores, but most within typical range	Staff in contact with child to fully understand nature of difficulties and how they can support in day to day interactions
Low level difficulties identified	As above and targeted intervention recommended to support development of communication skills
Identified profile indicated need for further investigation	Consideration given to referral to Educational Psychologist or Speech and Language Therapist

### 3.5.2 Matched sample

The British Psychological Society's Code of Human Research Ethics (2010) states that a legally responsible member of school staff may consent to research activity providing that the activity does not fall outside the usual range of institutional activities and that there are no significant risks to the student body. Therefore informed consent was sought from the Head Teachers of the schools agreeing to take part and they were provided with a copy of a participant information sheet (Appendix 6). Schools wrote to parents to inform them of the study and their right to 'opt-out' at any point. Schools were also encouraged to communicate via any other usual channels, e.g. text alert systems. No parents contacted schools to 'opt-out' of the study.

Once the characteristics of the main sample were known an appointment was made in the matched locality school to gather data. Initially a member of staff with access to pupil tracking data worked with the researcher to identify appropriate matches from within the student body. Codes were assigned to the pupils, who remained anonymous to the researcher; a senior member of staff retained the coding sheets to ensure feedback could be matched to the correct pupil. It was made clear prior to data collection that identification of any difficulties must be addressed (see Table 3), and that in the event of this occurring parents must be informed and consent obtained for further intervention. In both schools two visits were required to complete the CCC-2s; a combination of teachers and teaching assistants met with the researcher individually to complete each Checklist.

### 3.6 Ethical considerations

The research was designed with due consideration of ethical guidelines provided by the British Psychological Society (2010) and the University of Birmingham's ethical review procedure.

#### 3.6.1 Confidentiality and storage of data

As noted above, all data on point of collection was anonymous to the researcher, participants were only identified by a code, although the researcher also required access to their date of birth in order to correctly score the CCC-2s. Data was inputted directly onto a LA owned laptop which is protected with secure encryption. Information regarding that participant's term and year of birth, sex, FSM status and ethnicity, along with CCC-2 scores and participant code were collated onto a spreadsheet (Appendix 7). This collated

information was also stored on a personal laptop in the researcher's home. It was not possible to identify participants from this collated data.

### 3.6.2 Benefits for staff and participants

In return for assisting with the project all settings were offered free training in communication development and pragmatic language competence in the school environment. It was hoped that these sessions compensated for the time spent by staff in supporting the project, and that they provided systemic benefits by developing awareness of communication difficulties in school children. For the at-risk group the children received a communication assessment, albeit limited, that they would not otherwise have had. In light of the evidence presented in the literature review relating high rates of language difficulties with unwanted behaviour this was deemed beneficial.

Benefits may also be considered on a wider level. If evidence is found in support of the hypothesis that less well-developed pragmatic language abilities are related to unwanted behaviour in schools this could inform responses and interventions with the aim of reducing school exclusion.

### 3.6.3 Risks to staff and participants

The main risk is related to the identification of previously unsuspected difficulties, and the concern this may cause for a child, their family and professionals involved. With the main sample these risks were minimal as by agreeing to referral, families and professionals are expecting a variety of assessments. It is part of the EI workers role to support all concerned

in assimilating and addressing appropriately any findings. As the children selected for the matched sample will not have had difficulties previously suspected there is greater risk within this group. It may raise questions among children, parents and professionals as to how difficulties could have been missed. The risk relates mainly to the relationship between these parties being affected, and perceptions of a child being altered, which may impact on an adult's interactions with them. It was made clear to senior leaders before they agreed to participate that clear communication regarding the proposal to take part in the project was an essential part of minimising this risk.

Finally, a further risk relates to difficulties being identified and the appropriate support not being put into place. In order to minimise this risk the feedback arrangements following interpretation purposefully involved senior leaders within the school. Those same leaders were made aware before agreeing to the study of what the potential outcomes may be and their legal responsibility to ensure that any identified SEN were appropriately responded to. In terms of supporting parents with understanding the results of any assessment, this is a normal part of a school SEN co-ordinators role, but it was made clear that the researcher was available for further discussion as required.



## CHAPTER FOUR: RESULTS

### 4.1 Introduction

This chapter begins with a presentation of the decisions taken with regards to data preparation and analysis of the completed CCC-2s. The chapter will proceed in three sections; the first presents the 10 individual scale scores for the at-risk and matched sample groups, the second presents a comparison of the at-risk and matched sample group composite scores. The third considers individual's scores in the at-risk group to determine prevalence rates of particular communicative profiles. The chapter concludes with a summary of the results presented.

### 4.2 Data preparation

It was noted in the literature review that boys are more likely to be excluded, be diagnosed as having SLCN and are overrepresented in other risk categories relating to school exclusion. As boys made up the greater proportion of the sample ( $n=24$ ) it was felt that this trend was replicated in the data and therefore there was no rationale to conduct analysis by sex. The research aim is to consider if there is a relationship between pragmatic language competence and exclusion; if so, it may suggest that boys are more likely to have less well-developed skills in this area, but comparative analysis between the groups was judged to be superfluous given the proportional representation in the sample.

Two different sets of composite scores, computed from the individual CCC-2 scale scores were employed in order to answer the research questions. The first question asked if there is

evidence of lower levels of pragmatic language ability in the at-risk sample compared to the matched sample. As noted, the earlier addition of the CCC (Bishop, 1998) included a Pragmatic Composite, equivalent of scales D-H in the CCC-2. This had not been included in the current edition, but as it had validity in discriminating between clinical diagnoses and controls, and has been used in current research, named the 'Pragmatic Language Composite Score' (PLCS; Mackie and Law, 2014), it was judged to be an appropriate measure for addressing this question.

The second question considered whether, if present, lower levels of pragmatic language abilities were disproportionate to abilities in structural language. This is important, as a child may have low levels of pragmatic language ability, but as part of an overall profile of general communication difficulties. The ratio between the composite scores described in the previous chapter, the General Communication Composite (GCC) and the Social Interaction Deviance Composite (SIDC) is devised specifically to address this question and will be employed in this thesis.

A further point to clarify is the criteria applied to determine if scores are judged to denote typical or less well-developed abilities. Each CCC-2 scale has a mean score of 10 and SD of 3; Norbury et al. (2004) highlight that a skew in the CCC-2 data results in proportions of children being selected by scale score cut-offs being higher than if data were normally distributed. The use of percentiles is recommended in clinical cases for this reason (Bishop, 2003). As these scores are being used in order to determine levels of communicative competence in a research context, rather than to aid diagnostic procedures, the application

of a 1SD cut-off was felt appropriate to determine that a child had less well-developed pragmatic language in comparison to typically developing peers. Clinical significance of such scores is not the primary concern in terms of answering the research questions.

#### 4.3 Data analysis

The full data set is presented in Appendix 7. The data was analysed using the Statistical Package for Social Sciences (SPSS 21; IBM, 2012). Following input of the data, histograms were produced for each measure (Appendix 8) which demonstrated that data were not normally distributed and therefore a non-parametric statistical test was required. As this research is of independent design the Mann-Whitney test was judged to be most appropriate, and therefore the median is presented as the measure of central tendency (Dancey and Reidy, 2004). Comparisons of group scores, using the Mann-Whitney, were conducted on each scale and composite measure.

#### 4.4 Individual subscale scores

Table 3 from the previous chapter is replicated below to aid reading of this chapter.

Table 3. CCC-2 Scales

A	Speech	F	Stereotyped language
B	Syntax	G	Use of context
C	Semantics	H	Non-verbal communication
D	Coherence	I	Social relations
E	Inappropriate initiation	J	Interests

Table 5 displays the at-risk and matched sample group scores for the ten CCC-2 subscales; Figure 3 presents the results as a histogram, using median scores, for each scale for both sample groups.

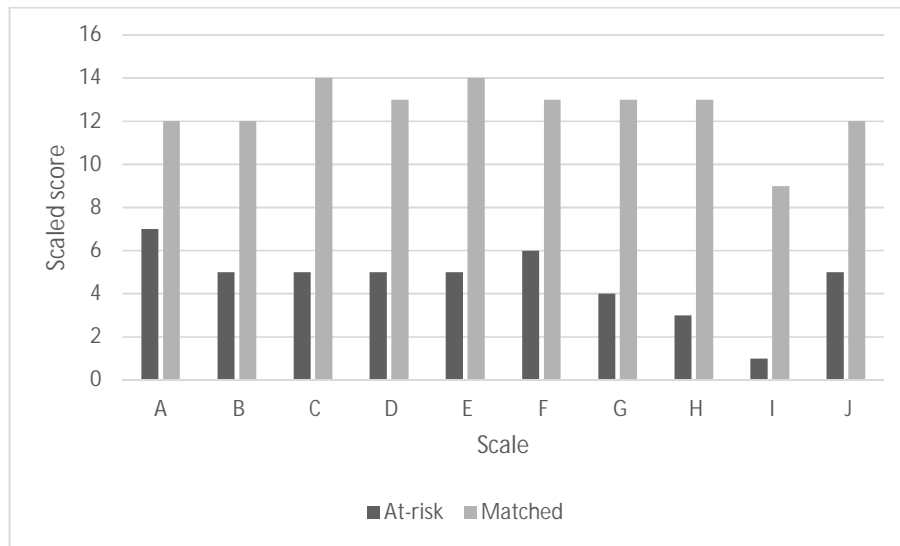
Table 5. Group scores for individual subscales for the at-risk and matched sample groups

Scale	A	B	C	D	E	F	G	H	I	J
At risk (N=29)										
Mean	7.03	5.21	5.72	5.17	5.62	7.03	4.38	3.14	1.72	5.76
Median	7	5	5	5	5	6	4	3	1	5
SD	3.47	3.80	2.14	2.79	1.80	3.31	2.82	1.2	1.93	2.37
Minimum	2	0	2	2	3	3	0	0	0	3
Maximum	13	13	11	13	11	13	13	8	5	11
Matched (N=29)										
Mean	11.90	11.52	12.93	11.14	13.10	12.45	12.14	11.62	9.93	12.86
Median	12	12	14	13	14	13	13	13	9	12
SD	1.52	1.43	2.79	2.60	3.17	1.94	3.30	2.60	2.53	3.28
Minimum	6	8	4	5	5	6	4	3	5	5
Maximum	14	13	16	14	17	14	17	14	13	18

The at-risk group scored significantly lower than the control group on all subscales (Speech,  $U = 112.0$ ,  $z = -4.942$ ,  $p < 0.001$ ; Syntax,  $U = 80.5$ ,  $z = -5.380$ ,  $p < 0.001$ ; Semantics,  $U = 36.5$ ,  $z = -6.020$ ,  $p < 0.001$ ; Coherence,  $U = 63.0$ ,  $z = -5.598$ ,  $p < 0.001$ ; Inappropriate Initiation,  $U = 32.5$ ,  $z = -6.068$ ,  $p < 0.001$ ; Stereotyped Language,  $U = 79.5$ ,  $z = -5.398$ ,  $p < 0.001$ ; Use of Context,  $U = 40.5$ ,  $z = -5.928$ ,  $p < 0.001$ ; Nonverbal communication,  $U = 15.5$ ,  $z = -6.383$ ,  $p < 0.001$ ; Social Relations,  $U = 5.0$ ,  $z = -6.522$ ,  $p < 0.001$ ; Interests,  $U = 41.0$ ,  $z = -5.929$ ,  $p < 0.001$ ).

The at-risk group demonstrated a relative strength in abilities to articulate speech (A) which at a median scale score (SS) of 7 is just within 1SD. Although not a high score, this is at the cut-off denoting typical development. Less marked difficulties were evident in ability to vary conversational content (Stereotyped: F) which scored within 1.5SD (SS: 6). The most marked difficulties (at or below 2SD) were evident in abilities to read cues in the social context (G, SS: 4), to use and understand non-verbal communication (H, SS: 3) and ability with social relations (I, SS: 1). The remaining scales which measured aspects of structural language use (B, C, D) and having varied social interests (J) were within 2SD (SS: 5).

Figure 3. Group median scores for individual subscales for the at-risk and matched sample groups



Group scores for the matched sample evidence typical development in all scales, scoring well within 1SD of the population mean in most scales (SS: 9-13). Scales denoting coherence in verbal communication (C) and ability to appropriately initiate communicative interactions (E) were strengths, scoring just above 1SD (SS: 14). Comparison of the scores for each CCC-2 scale demonstrates that as a group, the at-risk group had less well-developed abilities than the matched sample in each aspect of communicative competence.

Within the at-risk group the greatest variance of scores was observed in those scales measuring speech (A), syntax (B) and ability to vary conversational content (F). The least variance was observed in scales measuring ability to appropriately initiate communicative interactions (E), non-verbal communicative ability (H) and to have effective social relations (I). The pattern differed in the matched group where the greatest variance was observed in ability to appropriately initiate communicative interactions (E), ability to effectively utilise

contextual cues (H) and having varied social interests (J). The smallest variance was found in the same scales which contained the greatest for the at-risk group (A; B; F). This suggest that abilities within the at-risk group differed, in general, more on those scales measuring structural language and less so on those measuring pragmatic language whereas the converse pattern was observed in the matched sample. Details of individuals scale scores are presented in Appendix 7.

#### 4.5 Composite scores

##### 4.5.1 Group composite scores

Table 6 presents the group scores for each composite for the at-risk and the matched sample groups. The at-risk sample scored significantly lower than the matched sample within each composite: GCC ( $U = 11$ ,  $z = -6.371$ ,  $p < 0.001$ ; SIDC ( $U = 227.5$ ,  $z = -3.004$ ,  $p = 0.003$ ); PLCS ( $U = 19.0$ ,  $z = -6.249$ ,  $p < 0.001$ ).

Table 6. Group scores for composite measures for the at-risk and matched sample groups

Composite	GCC	SIDC	PLCS
At-risk			
Mean	43.31	-6.90	20.17
Median	41.00	-8.00	20.00
SD	15.05	9.64	7.77
Minimum	25	-31	9
Maximum	83	14	40
Matched			
Mean	96.79	0.03	49.31
Median	103.00	-1.00	52.00
SD	13.68	7.07	9.27
Minimum	50	-17	11
Maximum	114	11	62

Median scores for the PLCS indicate that the at-risk group are  $> 1.5SD$  from the population mean (20.00), whereas the matched sample is well within the typically developing range (52.00). The PLCS was selected as the marker by which to compare if there was evidence of less well-developed pragmatic language abilities in the at-risk group in comparison to the matched group. The scores demonstrate that this is the case.

The at-risk group median GCC score (41.00) is below the cut-off of 55 which determines communicative competence (Bishop, 2003) and is below  $1.5SD$  from the population mean. The matched sample achieved a score denoting typical development (103.00). Again this demonstrates that as a whole the at-risk group have less well-developed communicative abilities than the matched sample, and that their scores are below that judged to be necessary to achieve communicative competence.

To determine if pragmatic abilities are less well-developed than structural language abilities, or if the scores on the PLCS are part of a generally depressed communicative profile, the GCC: SIDC ratio is considered. Group medians demonstrate that the at-risk group have a ratio of 43.31: -6.90. This is indicative of disproportionate less well-developed pragmatic language in comparison to structural language. The matched sample's median ratio of 103.00: -1.00 denotes typical development. The data demonstrates that as a group, the children at-risk of school exclusion do have disproportionately less well-developed pragmatic language abilities in comparison to their structural language abilities.

#### 4.5.2 Individual composite scores

Within the at-risk sample individual composite scores were considered to determine prevalence rates for particular communicative profiles. Table 7 denotes the percentage and number of children in the sample whose scores suggest less well-developed abilities in the GCC and PLCS.

Table 7. Percentage and number of children scoring within 1SD, 2SD and below for GCC and PLCS composites in the at-risk sample.

	Within 1SD		>1SD within 2SD		Below 2SD	
	%	N	%	N	%	N
GCC	17	5	59	17	24	7
PLCS	21	6	45	13	34	10

83% of children in the at-risk sample had general communicative abilities (GCC) below the first SD; 24% had scores below the second SD. 77% of children in the sample had scores in pragmatic scales (PLCS) below the first SD; 34% had scores below the second SD. Considering the scores at an individual level demonstrates that the majority of the sample had less well-developed communicative abilities.

GCC: SIDC ratios indicating pragmatic language that was disproportionately less well-developed in comparison to structural language abilities were found in 72% (n=21) of the at-risk sample. Of these children three had GCCs within the average range, but extreme SIDC scores (83:- 15; 70:-31; 58:-16); it was highlighted in the previous chapter that extreme SIDC scores are of significance, even if the GCC is above the 55 cut-off. Of the eight children whose profiles did not indicate disproportionately less well-developed pragmatic abilities, six had profiles more consistent with specific language difficulties (GCC below 55, with a



positive score for SIDC; Bishop, 2003). A further two children scored ratios of 55: -1 and 60: -9, and therefore were just above the threshold at which interpreting a negative SIDC is deemed appropriate.

#### 4.6 The relationship between pragmatic competence and unwanted behaviour

The presentation of the results from statistical analysis demonstrates that as a group the at-risk sample have significantly less well-developed communication abilities, including pragmatic language abilities, than the matched sample. Comparison of the group GCC: SIDC ratios demonstrated that as a group, there was evidence of disproportionately less well-developed pragmatic language abilities, compared to structural language abilities in the at-risk sample. At an individual level the majority of the at-risk sample also demonstrated this communicative profile. The following chapter will consider these results in further detail.

## CHAPTER FIVE: DISCUSSION

### 5.1 Introduction

This final chapter begins with a summary of the results and a review of the aims of the present study. This is followed by a discussion considering possible interpretations of these results with reference to the literature discussed in Chapter Two. Remaining sections will consider possible alternative explanations for the results, in particular in terms of methodological issues and limitations of the present study. The chapter will conclude with a consideration of the implications the findings have for professional practice and future research.

### 5.2 Aims of the study

There were two broad aims of this thesis. The first was to identify whether there was evidence of a relationship between pragmatic language competence and unwanted behaviour in children without pre-existing clinical diagnoses or identified needs, other than the behaviour in focus. More specifically the study aimed to replicate the results reported by Gilmour et al. (2004) and Mackie and Law (2010), while addressing the potential methodological issues from those previous studies by utilising the second version of the Children's Communication Checklist (CCC-2; Bishop, 2003) with a larger sample.

The second aim was to adopt an interactionist perspective in interpreting the results, to consider, if such a relationship was evidenced, how it emerges, and to consider from a causal standpoint how it translates to increased risk of school exclusion. It was hoped that

exploring the phenomenon, if apparent, from this perspective would support theory building to inform future research and the development of effective interventions to reduce school exclusions.

### 5.3 Summary of results

The present study was designed to determine if there was evidence of less well developed pragmatic language ability in children at-risk of school exclusion, and if present, whether it was disproportionate to structural language development. Four scales on the CCC-2 measured pragmatic language abilities: Inappropriate initiation; Stereotyped language; Use of context; Non-verbal communication. The at-risk group scored below the average range across all scales, and group scores were significantly lower in comparison to the matched group, whose scores were in the average range. Lowest scores were observed in scales measuring Use of context and Non-verbal communication.

When the scales are computed as a composite, the at-risk group demonstrated a significantly lower Pragmatic Language Composite Score (PLCS) in comparison to the matched group. Individually, 77% of the children in the at-risk group had PLCS below the average range, with 34% of the group scoring below a 2SD cut-off.

This ratio between the General Communicative Composite (GCC) and the Social Interaction Deviance Composite (SIDC) provides a measure of pragmatic language competence in comparison to structural language abilities. The at-risk group had a median GCC: SIDC

which demonstrated disproportionate difficulties with the social use of language in comparison to their abilities with structural language. The matched sample had a median ratio depicting typical development; only one child (3%) had a GCC: SIDC ratio indicating disproportionate difficulties in the matched group. As noted in the methodology chapter procedures were in place to ensure that all children whose Checklist's indicated less well-developed communication skills, including the child in the matched sample received appropriate intervention, as outlined in Table 4.

The at-risk group's median score was below 1.5SD suggesting difficulties were marked. Individually, 72% (n= 21) of the children in the at-risk sample had such ratios. A further two children had negative SIDC scores, but their GCC scores were at, or just above, the cut-off by which a negative score is interpreted. The remaining six children in the at-risk sample had very low general communicative abilities, but with pragmatic abilities in line with their general ability.

The results demonstrate lower levels of pragmatic language ability in primary-aged children at-risk of exclusion, in comparison to children not at-risk of school exclusion from similar socio-economic backgrounds. Evidence also demonstrates that where lower levels of pragmatic abilities were evidenced, in most cases, they were disproportionate to the child's structural language abilities. Although a smaller proportion of children in the sample appeared to have greater difficulty with structural language abilities (n=6; 21%), none of the

children had typically developing language and communication skills as measured by the CCC-2.

#### 5.3.1 Pragmatic language competence and unwanted behaviour

Gilmour et al.'s (2004) study reported a 69% rate of clinically significant pragmatic language difficulties in two samples; children referred to services for Conduct Disorder and children who had been, or were at-risk of, school exclusion. The present study identified a comparable 72% rate of children with disproportionate skills in pragmatic abilities in comparison to structural language abilities. This figure, however, is taken from GCC: SIDC ratio scores which did not feature in the first version of the CCC (Bishop, 1998); the CCC's pragmatic composite informed Gilmour et al.'s results.

When using the PLCS comparisons are quite different. In the present study, using this composite, 77% of the at-risk sample had below average pragmatic language abilities. Gilmour et al. used a cut-off of 2SD to denote difficulties of clinical significance; applying this criterion in the present study results in a figure of 34%. Due to the differences between the two versions of the Checklist, not least the reclassification of the coherence scale to a measure of structural rather than pragmatic language ability in the CCC-2 (Norbury et al. 2004) it is not possible to draw any meaningful conclusion regarding these differences.

More direct comparisons are possible with the two studies reported by Mackie and Law (2010; 2014). In the 2010 study they reported GCC: SIDC ratios indicating disproportionate

pragmatic language difficulties in 55% of their sample. This provides a lower rate than the present study, however that may be explained by sampling error due to Mackie and Law's reduced sample size (n=11).

The subsequent study, Mackie and Law (2014), presents group average scores, therefore it is not possible to compare prevalence rates. However in common with the present study they reported that their sample of children deemed to have 'externalising behaviours' had significantly lower group scores on all three composites (GCC; SIDC; PLCS). In referring to the GCC: SIDC ratio they comment that 'many' (pg. 98) children in the sample had these ratio scores.

The present study has then, in the broadest terms, replicated findings from previous studies which have evidenced a relationship between pragmatic competence and unwanted behaviour. Whilst methodological differences and presentation of findings prevents direct comparisons, taken together, this growing body of research suggests that a large proportion of children at-risk of school exclusion appear to have less well developed pragmatic language abilities.

### 5.3.2 The aetiology of pragmatic language 'difficulties'

The studies referred to above have in general interpreted their findings within a deficit model; that is, they conclude that there is evidence that a high proportion of children who

are perceived as misbehaving may actually have significant communication difficulties. Gilmour et al. (2004) and Donno et al. (2010) in particular, apply a clinical perspective. The former refer to their results indicating 'pragmatic skills that are as severe as those of children with clinical diagnoses on the autistic spectrum' (pg. 975). They conclude that within their sample some children have unidentified ASCs, and others have clinically significant presentations, but without autistic features. Donno et al. (2010) discuss the 'possibility that children presenting with conduct problems have covert neurodevelopmental disorders' (pg. 288).

Mackie and Law (2010) raise the possibility of the pragmatic language difficulties they identified developing as a consequence of behavioural difficulties. They posit that such children may have fewer opportunities, due to their behavioural presentation, to engage in social learning experiences. However they conclude by highlighting 'pervasive difficulties with underlying pragmatic skills' (pg. 408) as opposed to lack of exposure or practice. Even with the former differing aetiology the explanation remains within a deficit model; the children have a primary pervasive neurodevelopmental, communication or behavioural disorder and their unwanted behaviour is a consequence of it.

### 5.3.3 The development of pragmatic language competence

Disadvantaged or chaotic family backgrounds have been linked with increased risk of exclusion (Eastman, 2011; Evans, 2010; DCSF, 2008a); evidence has been presented suggesting that children in care (which suggests problematic family situations) may have less

well-developed language (Cross, 2001). Snow (2009) argues that children's experiences of neglect and abuse may be causally implicated in their language difficulties. Returning to Bloom and Lahey's (1978) theory, and the developmental trajectory they propose, this is theoretically plausible.

According to Bloom and Lahey, development of pragmatic language skills depends on consistent responses to infants (initially) instinctive behaviour. Through these interactions shared meaning is developed, through these shared experiences the infant begins to make sense of the social environment. If a child's early developmental environment is inconsistent or chaotic then the theory would suggest less well-developed pragmatic abilities. Also, this provides an uneven foundation for structural language learning, meaning that on arriving in school such a child is less skilled than typically developing peers, in all aspects of communication.

Donaldson (1978) argued that young children derive meaning, and therefore determine the best course of action, through 'reading' of a social situation rather than depending on 'sheer linguistic form' (pg. 63). It has also been noted that the classroom context is markedly different with new social rules to learn and internalise (Tizard and Hughes, 1983). Children who arrive at school pragmatically competent are able to achieve this, despite perhaps not understanding the verbal commands as fully as the adults giving them may presume. The child with less well-developed pragmatic abilities may not understand the verbal instruction, but does not have the same ability to take cues from the social context or understand



accompanying non-verbal communication. In the present study these two scales (G and H) provided the lowest scores within the pragmatic scale measures, at or below 2SD.

Whereas Gilmour et al. (2004) and Donno et al. (2010) interpreted their findings as evidence of potential undiagnosed social communication disorders, viewing the findings from a developmental perspective supports a different explanation. Such an explanation not only supports the integration of evidence linking disadvantaged familial backgrounds, but also the findings linking pragmatic competence with ADHD-type symptoms (Bignell and Cain, 2007; Leonard et al., 2011). Although this link has been explained as hyperactivity and inattention affecting the ability to take note of appropriate social information and determine an appropriate response within a given interaction (Leonard et al., 2011) the same explanation can be applied to early experiences. The development of pragmatic competence depends on shared attention, and on the infant being able to attend to their environment. If this ability is compromised either through a biological disposition or as a consequence of environmental stressors then it is likely that pragmatic development will be compromised.

This is not to say that there are not children who may have undiagnosed ASC, who are being wrongly perceived as misbehaving. Indeed three children in the sample had extreme (< -14) SIDC scores but GCCs within the normal range. An impoverished early developmental environment hypothesis does not support such a pattern of scores, which Bishop (2003) notes are frequently seen in children with Aspergers Syndrome.

Consideration of group scores in individual scales adds more weight to an impoverished developmental trajectory explanation, rather than previously unidentified neurodevelopment disorders. Stereotyped and repetitive patterns of language and behaviour are considered diagnostic markers of Autism, according to ICD-10 criteria (WHO, 1992), but group scores in scales measuring these areas (F and J) demonstrated that they were relatively less of a presenting feature in comparison to other pragmatic language and behavioural scales.

This argument moves away from a clinical paradigm in which results are interpreted as undiagnosed communication disorders, by suggesting a developmental trajectory that considers the interaction between the infant and their earliest environment informing subsequent levels of pragmatic competence. However, although this provides an interactionist account of the developmental trajectory of pragmatic language abilities if the explanation ends with a child arriving at school with pragmatic language difficulties which results in unwanted behaviour, it remains a deficit model.

#### 5.4 An interactionist account

For those children whose profile indicated disproportionate difficulties in pragmatic competence in comparison to their structural language abilities it is important to consider why these difficulties have not been detected. The most straightforward response is that in having better developed structural language abilities, which are perhaps the more obvious

aspects of communication to observe, less well-developed pragmatic language skills are masked.

Considering the issue from an interactionist perspective broadens the focus to the demands of the environment, and allows consideration of the others' perceptions within the environment. Identification of additional needs within the school environment requires an adult to identify an issue. If the child appears to have typically developed verbal language, less well-developed pragmatic abilities may not be noted. The interpretation of ensuing behaviour will depend on staffs' position on unwanted behaviour, in terms of its potential causes and the best way to address it (Maras et al., 1997). These factors interact in the context of the schools' norms and procedures relating to additional needs and behaviour of pupils.

The disproportionate number of children with identified SEN being excluded, and the findings from this study of unidentified need in children at-risk of school exclusion suggests a dichotomy in which additional needs and behaviour are, in some schools at least, viewed as separate issues. This matter was referred to by Professor Maras in the Select Education Committee's discussion on 'Behaviour and Discipline in Schools', who noted that due to disciplinary procedures, schools find interpreting SEN policies in relation to behaviour difficult (DfE, 2011). If separate systems exist to address behaviour and other additional needs, either explicitly through school policy and practical arrangements, or implicitly through staffs' value bases, it becomes clearer to see how less well-developed pragmatic

language difficulties are not identified. This account is particularly complementary to the school exclusion's literature which denotes organisational factors as causal in exclusion rates (Macrae et al., 2003; Gibbs and Powell, 2012; Hatton, 2013).

With this framing, and an interactionist perspective, an understanding of less well-developed pragmatic abilities as being causally implicated in increasing risk of school exclusion is supported. de Vaus (2001) argues that due to the 'complexity [and] subjective, meaningful and voluntaristic components of human behaviour' (pg. 5) the concept of probabilistic causation is more appropriate in human research. By this he is referring to an understanding of cause whereby one factor increases the chances of a particular outcome, rather than definitively and always causing it. Such a relationship is likely to be indirect, with the outcome being dependent on intervening variables.

In discussing identifying causal relationships de Vaus highlights that cause cannot be observed, only inferred. It has been noted that a task of research from a critical realist perspective is to consider the unobservable mechanisms that are producing a particular phenomenon (Bryman, 2004). The present study has demonstrated evidence of lower levels of pragmatic language abilities in children at risk of school exclusion, that are disproportionate to structural language abilities. In hypothesising unobservable mechanisms that may produce this observable phenomenon a theoretical causal relationship is being proposed. Unobservable mechanisms are the structures, arrangements and values that interact with less well-developed pragmatic abilities. These may be in terms of the

environmental demands placed on children or in the interpretations of behaviour and the response to it. In de Vaus' terminology this would be an indirect probabilistic causal relationship. Figure 4 depicts the relationship proposed to explain the results reported in the present study.

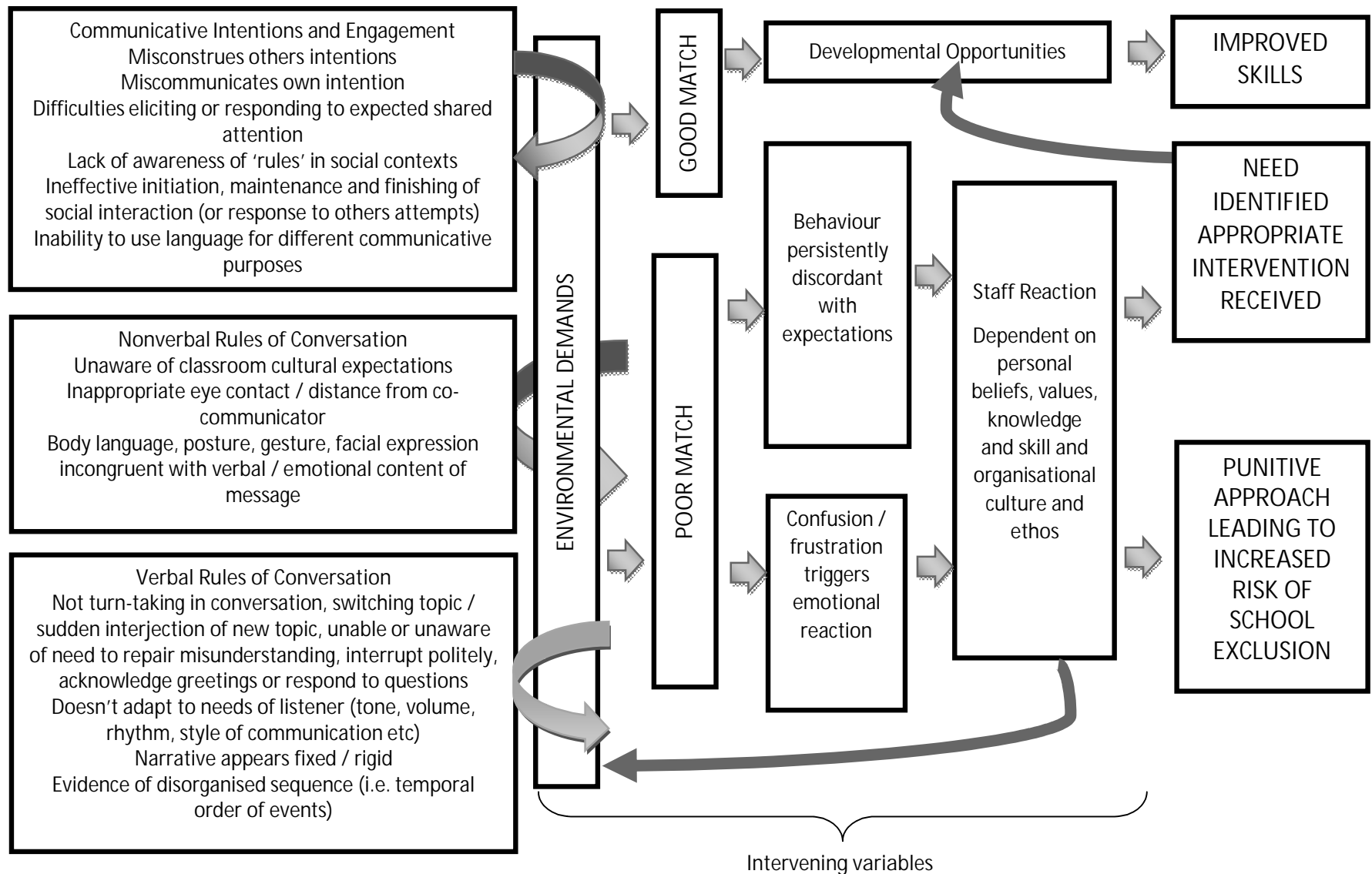
The model suggests that in the first instance behavioural presentation will depend on the interaction between a child's pragmatic language abilities and the environmental demands. For example, a child may be unaware of the expectation in a 'news' sharing activity, each child has a turn to speak, and others should listen. If this activity has been introduced as, 'we are all going to tell the class our news'; such a child may continually shout-out their 'news'. If the task is introduced with clear instructions, with a visual prompt (e.g. a teddy bear) being passed from child to child as it becomes their turn to speak, and reminders to look and listen quietly to the child whose turn it is, the same child may not behave discordantly with expectations. In the latter example there has been much less demand placed on their ability to take cues from the social context, 'read' others non-verbal communications, understand 'unwritten rules' regarding turn-taking in conversation and listening when others are speaking.

Therefore, the first potential bifurcation in the relationship trajectory relates to the goodness-of-fit between the child's pragmatic language ability level and their environment. A good match could provide opportunities for development of pragmatic language abilities. A poor match however is likely to be a catalyst for unwanted behaviour; this may be the

child unwittingly behaving in a manner discordant with social expectations (e.g. shouting-out as others speak), or it may stem from an emotional response to feeling confused or frustrated at not understanding the expectations and demands being put on them. This bifurcation could crudely be likened to either 'persistently disruptive' or 'aggressive' behaviour, the most common 'reasons' provided for school exclusion (DfE, 2013a).

The next pivotal set of factors in determining the behavioural trajectory is dependent on the adults' reaction to the child's behavioural response. Here links are made with the exclusion literature which identifies organisational factors as implicated in school exclusion rates. For example, a staff member in a setting that shares a collective belief in their efficacy in addressing unwanted behaviour (Gibbs and Powell, 2012) may interpret behaviour as a sign of additional need, and determine an appropriate supportive intervention to address it. A school with a deeply embedded ethos that incorporates a 'strong' interpretation of inclusion (Macrae, 2003) may have systems in place which encourage a staff member to reflect on the match between the environmental demands being placed on the child and their current developmental stage. A school where there is little shared responsibility for pupils' behaviour and an inconsistent and punitive approach to addressing unwanted behaviour (Hatton, 2013) may result in the child becoming at risk of exclusion. There is likely to be many, overlapping and recursive incidents of these events occurring, involving other adults' reactions and different patterns of interaction between the child and their environment.

Figure 4. Indirect causal model of the relationship between pragmatic competence and risk of school exclusion  
(Less well- developed pragmatic language descriptors reproduced from ECICMC assessment guidelines, 2004)



In terms of de Vaus' (2001) terminology, the goodness-of-fit, behavioural and emotional responses and staff reactions are intervening variables, which interact in a certain way resulting in greater, or lesser, risk of school exclusion

#### 5.4.1 Social Information Processing Theory

The explanation above referred to recursive interaction occurring within the proposed causal relationship, and it is here that links are made to the interactionist theory of unwanted behaviour introduced in the literature review. In discussing the theory it was outlined how less-well developed pragmatic language abilities may cause errors to be made at various steps of information processing. It was suggested that an account proposing less-well developed pragmatic abilities as implicated in unwanted behaviour may be a description of the same phenomenon via another theoretical conceptualisation. In terms of the causal relationship proposed above however, SIP provides another intervening variable, which highlights the complexity of the interactions occurring around unwanted behaviour situations.

Dodge and Pettit (2003) argue that '...dispositions, context and life experiences lead children to develop idiosyncratic social knowledge about their world' (pg. 361). Although the SIP literature does not consider adults' patterns of SIP, persistence of individualised patterns in children has been evidenced (Lansford et al., 2006), so it seems reasonable to suggest that adults too have individualised patterns. The evidence presented regarding the interactive nature of social cognitions (Dodge et al., 2003; Lansford et al., 2010) in children may equally apply to the adult – child relationship. Although at one level such a complex enmeshed set of



interactions may seem unhelpful in terms of determining a solution, it does support the incorporation of seemingly disparate exclusion and unwanted behaviour literature, and accommodates the principle of multifinality called for by Dodge and Pettit (2003) in understanding the developmental trajectory of unwanted behaviour.

### 5.5 Alternative explanations

There is a much greater body of literature evidencing a relationship between structural language abilities and unwanted behaviour (e.g. Law and Sivy, 2003; Heneker, 2005; Ripley and Yuill, 2005; Clegg et al., 2009). The results of the present study demonstrated that the at-risk group had significantly lower structural language abilities than the matched sample. It could be argued that the lower pragmatic scale scores are a result of poorly developed structural language abilities. Ketelaars et al. (2010) refer to evidence of restricted language skills inhibiting social learning experiences, therefore impacting on pragmatic language development.

Although the direction of this relationship cannot be definitively ascertained without longitudinal investigations, from this author's viewpoint it is unlikely that structural language abilities underpin pragmatic language competence. The theoretical basis, and proposed developmental trajectory of language development underpinning this thesis has been stated; Bloom and Lahey (1978) and Donaldson's (1978) influential theories support the opposite trajectory. Botting and Conti-Ramsden (1999; 2003) have reported that children with less well-developed pragmatic skills tend also to have difficulties with structural

language abilities. They report qualitative differences in errors made in comparison to children with specific language impairment diagnoses, arguing that such errors are a consequence of primary pragmatic language difficulties. This adds further support to a differing developmental profile, rather than pragmatic language abilities resulting from a primary structural language difficulty.

The point was made in the literature review that much research relating to reasons for exclusion has been informed by official exclusions data (Vulliamy and Webb, 2000). The same authors raise methodological concerns regarding the socially constructed nature of these data. It has also been noted however that certain patterns within exclusions data, in relation to the characteristics of who gets excluded, and the reasons provided for the exclusion have remained constant (Evans, 2010; Daniels and Cole, 2010; OCC, 2012).

The literature reviewed demonstrated interactions between communication abilities and groups that share characteristics that are overrepresented in exclusions data. Children with SEN, of Black and Minority Ethnic (BME) origin, and those who are eligible for FSMs have consistently featured in exclusions data, as have male pupils in general (Daniels and Cole, 2010).

The type of SEN most strongly linked with school exclusion was BESD, most commonly this was for persistent disruptive behaviour. Children with ASC and SLCN were overrepresented

in aggression-based categories (DfE, 2013c). A hypothesis of less well-developed pragmatic language abilities and the proposed indirect causal relationship presented above outlines how miscommunication and misconstruing in the classroom may lead to continually not meeting behavioural expectations (persistent disruptive behaviour). Equally, feeling frustrated and confused in the classroom context is likely to be stressful, especially if reprimanded for behaviour that you had not intended, or felt reasonable given your interpretation of a situation. It seems plausible that in combination these factors could lead to aggressive responses.

Higher rates of SLCN are reported in boys (Tommerdahl, 2009), and there is some suggestion this may be the case for children from minority ethnic groups (Law and Sivyer, 2003). It has been argued that boys and certain ethnic groups are overrepresented in exclusions data due to a cultural disconnect between children's norms and those of the school environment (e.g. Jackson, 2002; Skiba et al., 2000). These accounts are not mutually exclusive; discussions regarding the cultural bias in psychometric testing are well rehearsed (e.g. Gould, 1994), and cognitive theories generally consider verbal abilities to be more dependent on learning through experience than non-verbal abilities (e.g. Cattell, 1971). It may be that certain boys and minority ethnic groups have different styles of communication, an account that would implicate pragmatic language differences. These may be suited to developmental contexts outside of the school environment, but disharmonious within, where different cultural norms result in differing behavioural expectations.

Other authors have argued that the overrepresentation of minority ethnic groups in exclusions and SEN actually highlights a relationship between socio-economic disadvantage and these factors (Theriot et al., 2010; Lindsay et al., 2006). A strong relationship between language and communication development and socio-economic disadvantage has been reported (e.g. Clegg and Ginsbourg, 2006; Law et al., 2008) and being entitled to FSM increases the likelihood of exclusion fourfold (DfE, 2013b). In the present study it was only possible to ascertain if the sample were in receipt of (rather than entitled to FSM). Approximately half of the children in the at-risk sample were in receipt of FSM. Although further measures of socio-economic status (SES) were not possible, due to anonymity, the schools from which the matched samples were drawn were purposefully selected to be high-referring schools, and all were in catchment areas of lower socio-economic status; they were also matched on basis of FSM status. The children in the matched sample scored between 9 and 14 on all scales of the CCC-2 (population mean being 10, with a SD of 3). Therefore it is possible to discount less well-developed abilities in the at-risk group being a consequence of socio-economic backgrounds. Mackie and Law (2014) also reached this conclusion, but using a more sophisticated measure of SES, an index of multiple deprivation, in order to match participants in their control group.

## 5.6 Methodological considerations

There are a number of methodological issues that should be considered when interpreting these results. The method used to gather data, the CCC-2, has been developed as a clinical screen and is underpinned with a conceptualisation of differing types of communication

disorders. The Checklist was validated with samples of children with pre-existing diagnoses, or typically developing communication (Bishop, 2003; Norbury et al., 2004). The method, then, is grounded in a positivist paradigm and as such it is expected that providing it has robust psychometric properties the responses will represent an objective measure of reality (Robson, 2011). However in using a method that is reliant on third person response subjectivity is unavoidably introduced, as it requires the respondent to recall and report upon the behaviour they have observed and interpret it within the framing of questions and rating scale (Bryman, 2004).

This inherent subjectivity is not considered problematic to this research design for a number of reasons. Firstly the tool is being used for research, not clinical diagnostic purposes. The critical realist epistemological position of the thesis, and the conceptual basis of an interactionist understanding of additional needs, supports a view in which experiences and constructions of observable events interact with 'reality'. Subjectivity associated with the positioning of the population under discussion is also acknowledged (e.g. Kaufmannn, 2002; Billington, 2000). Therefore, a method which allows the respondents subjectivity to influence the data is considered of value, as these adults are influencing the outcomes for that same child through their constructions and experiences of the unwanted behaviour. This was argued to be an important intervening variable in the proposed causal relationship outlined above.

Mackie and Law (2014) report that within their sample, teacher-reported scores for structural language abilities on the CCC-2 illustrated poorer language skills than those measured by standardised assessment. One interpretation they suggest is that teachers' subjective views resulted in overly negative responses. If so, this casts doubt over the methodological validity of the measure used and such a finding would have implications for proposed interventions to reduce exclusion rates. If a child does not have less well-developed communicative abilities but is perceived to have, interventions aimed at improving language ability would not be most appropriate.

An alternative explanation refers to the constructs being measured in each assessment type. Although discussing pragmatic language assessment, the point that Vickers (2003) makes regarding the testing of discrete abilities to denote an overall ability score is relevant; standardised structural language measures provide scores for clearly defined, necessarily narrow, abilities. The population under discussion are in focus because of how they are perceived to be functioning in the school context. Assessments that measure skills in other contexts (i.e. a test situation) are arguably assessing a different functional skill set. It may be that a proportion of this population are able to achieve average scores in narrow verbal ability measures in the false environment of a test situation, but this does not provide information regarding their functional use of these abilities. The CCC-2 therefore arguably has great ecological validity.

While the adoption of a critical realist epistemology navigates these tensions, it must be noted that a conflict remains between the aims of the research to consider the phenomenon from beyond a clinical paradigm, but continuing to use a tool firmly situated within it. However, this allows a wider consideration of what phenomenon has been observed. Remaining in a clinical, positivist paradigm the results would be simply interpreted as evidence of previously unidentified communication disorders in the at-risk sample. Bishop and Norbury (2002) reject the categorical distinction between ASCs, specific and pragmatic language impairments, arguing a dimensional model provides a better account for empirical observations. Interpretation in this manner does not necessarily mean the children meet clinical thresholds for specific disorders; they may not neatly fit into a category but are considered to have a communicative profile of clinical significance.

Statistical analysis demonstrates that there are significant differences between the two groups across all scales, and that within the at-risk group their group scores (and in most cases, individual scores) support a hypothesis that pragmatic language abilities are disproportionately less well developed than structural language abilities. These findings result from the GCC: SIDC ratio, which is computed by subtracting two pragmatic scales and two behaviour scales from the sum of structural language scales. Arguably then the resulting score is a measure of social functioning, as oppose to disproportionate pragmatic language ability in comparison to structural language ability. It may be, for example, that this communication screen, when used in this population is an effective marker of qualitative differences in social functioning abilities, perhaps even measuring the behavioural correlates of certain patterns of Social Information Processing.

Whilst this is an important epistemological point in terms of rigour in research methodology, it is perhaps less important in practice. What the method, and resulting data have been able to demonstrate is that the majority of a sample of primary-aged children who are at risk of school exclusion are reported by the adults tasked with supporting them as being less able in social interactions. Individual Checklists, by providing a communicative profile, would add one strand of information used to devise interventions that build on any identified strengths while addressing areas of development.

Recruiting the at-risk sample from referrals made to the Early Intervention (EI) Teams of the pupil referral units provided clear criteria in order to operationalise the definition of 'at-risk' of school exclusion. However this also presents a limitation that may have resulted in sample bias. Although schools are expected to have used such a service before excluding a child, there is no formal requirement for them to do so. Therefore the sample may have had certain characteristics that are not shared with other children who may be 'at-risk' but attend schools who choose not to use this service. Any impact on the validity of the results is considered to be minimal however. Firstly, it would be expected that differences between schools that do and do not tend to use the service relate to organisational factors, perhaps at the level of ethos or culture. Therefore differences would be noted in the way in which they choose to address unwanted behaviour, rather than differences being expected in the characteristics or developmental profile of the children. Secondly the matched samples were drawn from high referring schools, so comparisons were made within (broadly speaking) the same population, other than the difference of 'at-risk' or not, of school exclusion.



The reliance on one measure presents another potential limitation. Other studies have looked at the interaction between behavioural types and pragmatic language abilities (e.g. Mackie and Law, 2014; Law et al. 2014; Bignell and Cain, 2007; Leonard et al., 2011). Using a behavioural measure in the research design was not deemed necessary, as in focussing on the population of children at-risk of exclusion it could be said that their behaviour is already defined. Such children are seriously or persistently breaching the school behaviour policy (DfE, 2012a) through (mostly) disruptive or aggressive behaviour (DfE, 2013a). Also these studies used measures underpinned by clinical conceptualisations of behavioural 'disorders'. The SDQ (Goodman, 1987) used by Mackie and Law (2014) and Law et al. (2014), whilst used widely in general populations, was developed to identify risk of developing particular psychiatric diagnoses (Goodman, 1987). Bignell and Cain (2007) and Leonard et al. (2011) used tools associated with diagnostic procedures for ADHD. Such measures were not felt appropriate given the conceptual bases underpinning this thesis. Also due to initial expectation of a much larger sample size, and the use of the EI workers in data gathering procedures it was felt that adding another activity into an already time pressured situation would be impractical and therefore potentially compromise validity of data or take-up in the project.

The original research design had involved a content analysis of information contained in the EI referral documentation, to identify whether perhaps there were any common features in terms of behaviour presentations, or in background information. However on receipt of a

sample of these documents it was obvious that the quality of referral information varied drastically and it was felt that this would not provide a valid data set.

As a whole the results of the study highlight a relationship between the types of behavioural presentations that are conceptualised as markers of less well developed pragmatic language abilities and the types of behaviour that may, in some schools, result in increased risk of school exclusion. The literature reviewed, in conjunction with the results presented, supports a plausible proposed probabilistic causal relationship, however the main limitation of the present study is that findings are only correlational. However, evidencing a phenomenon is an essential first step in theory building (de Vaus, 2001), it is the task of future research to test the theory proposed.

### 5.7 Implications for practice

The implications for practice are wide-reaching. Although this thesis has focussed on primary aged-children at-risk of school exclusion, evidence linking less well-developed pragmatic language abilities has been reported in secondary age pupils 'at-risk' of exclusion (Owen, 2010), the young offending population (e.g. Gregory and Bryan, 2009) and associated with externalising disorders (e.g. Bignell and Cain, 2007). The overlap between these populations has been noted (Visser, 2003). Also, these findings have now been replicated in a number of studies, which although differing in methodologies, have consistently found a strong association between less well-developed pragmatic language abilities and unwanted behaviour (e.g. Gilmour et al., 2004; Donno et al., 2010; Mackie and Law, 2010 & 2014).

Therefore it appears reasonable to consider such findings generalizable and as such they are equally relevant to professionals working within education, Child and Adolescent Mental Health Services (CAMHS) and the youth justice system.

Understanding these findings through an interactionist lens supports consideration of implications in terms of support to the individual child, whilst also considering the environmental demands being placed on them. It is important that professionals in CAMHS and the youth justice services ascertain if there are unidentified communicative difficulties contributing to the behavioural presentation of the children and young people on their case-loads, but they should also consider the demands placed through service arrangements. For example, attending a clinic setting or formal criminal justice proceedings may be particularly challenging for an individual who is less skilled at noting cues in the social context and using them to inform their behavioural choices.

The changes in SEN legislation and the accompanying SEN CoP (DfE & DoH, 2014) support improved joint working between education and health services. Statutory functions regarding the identification of and provision for, SEN will extend to young people in custody. This provides a useful opportunity for awareness raising among the professionals working in these different sectors in terms of the overlap of children and young people between services, the large body of evidence associating unidentified language difficulties, and the smaller but consistent body, linking pragmatic language ability with unwanted behaviour. Educational Psychologists may be particularly well placed to provide training and support on

this topic as new links are made between LAs, health services and the youth justice system, in line with the requirement of the new legislation and guidance.

Given the robust links between communication ability and unwanted behaviour it would seem a useful endeavour to integrate Speech and Language Therapy (SALT) Services within procedural pathways devised to address unwanted behaviour. Clegg and Hartshorne (2004) argue for Speech and Language Therapists to have greater involvement in services for children with externalising disorders. It seems reasonable to suggest that such involvement could be of benefit to Pupil Referral Units and Youth Offending Teams also. Key to this involvement though is an understanding of the area of communicative need extending beyond structural language difficulties, particularly as Mackie and Law (2014) presented evidence of children scoring higher on psychometric language tests than on functional measures of language use, as measured by the CCC-2. Involving SALT services in terms of children attending clinics for formal language assessment may compound the problem. In presenting the rationale for the development of the CCC and CCC-2 Bishop (2003) argues that clinic based tests are '...largely insensitive to communicative problems that come under the domain of pragmatics...' as pragmatic abilities are '...by definition [...] dependent on context.' (p. 10). It would be important to involve the SALT services, but this would need to be in a context of partnership working. Otherwise there is a risk that children would receive a language test, be found to be functioning within the 'average range', leaving the setting potentially ruling out communication skills as part of the presenting issue.

Educational Psychologists (EPs) can play a pivotal role in supporting professionals and families to understand the factors contributing to the behavioural presentation through their core functions of consultation, assessment and training delivery (Fallon et al., 2010). This then has implications for how EPs conceptualise cases of unwanted behaviour, and the assessment procedures they choose to undertake. It has been noted that despite a bio-psycho-social approach encompassing an ecosystemic perspective being judged most appropriate to addressing unwanted behaviour (e.g. Frederickson and Cline, 2009; Maras, 2012) proposed interventions are more often situated in a behaviourist paradigm (Maras, 2012) with EPs more commonly advising behavioural strategies for primary-aged children and cognitive interventions for secondary-aged children (Frederickson and Cline, 2009). If communication difficulties are not suspected, they may not be investigated, or may be ruled out on the basis of verbal ability measures in psychometric cognitive ability tests, if administered. This carries the same risk as presented above in relation to structural language testing with SALT services.

A gap has been highlighted between the EP's theoretical understanding of the importance of context in a child's development, and the practice of assessing contexts thoroughly when investigating additional needs and devising interventions (Frederickson and Cline, 2009). The proposed causal relationship outlined makes clear the importance of environmental demands in determining the behavioural and developmental trajectory for a child arriving in a setting with less well-developed pragmatic language skills. This suggests two particular approaches for EPs in conceptualising cases of unwanted behaviour: screening and

investigation to ascertain a child's level of functional ability in the environment in which the unwanted behaviour is observed, and an environmental audit which focusses on the communicative demands of the environment. Intervention at the environmental level has the benefit of providing a potentially better communicative environment for other children also. It may be that the latter approach is to be preferred given the poor evidence base for the delivery of small group social skill programmes in addressing unwanted behaviour (see Law and Plunkett, 2009, for a discussion).

One such tool that could be used to assess the communication environment of the classroom is the 'Communication Supporting Classrooms Observation Tool' (CSCOT; Dockrell et al., 2012). Although explicitly referring to oral language, if used to assess and provide a better communicative environment this might be expected to support children's understanding, whilst providing an environment that fosters development of their oral and social use of language.

## 5.8 Future directions

de Vaus (2001) discusses the requirement, when aiming to infer cause, of making explicit the proposed theoretical relationship and any intervening variables. It is from this relationship that propositions are derived, and subsequent research is designed to test these propositions. This process would be the next step in this research journey. From the proposed relationship in Figure 4 the following points outline potential propositions that can be deduced:

1. In a sample of children at-risk of school exclusion a higher proportion will have pragmatic language abilities below age-expected levels than in the general population.
2. In a sample of children at-risk of school exclusion there will be evidence of less well-developed pragmatic language skills than in a matched sample of children not at-risk of school exclusion.
3. Incidents of unwanted behaviour that are judged to be placing a child at-risk of school exclusion will be comparable to behavioural descriptors of poor pragmatic development.
4. There will be qualitative differences between high and low excluding schools in terms of the quality of the classroom communicative environment.
5. There will be qualitative differences between high and low excluding schools in terms of staffs' perceptions of the communicative abilities and motivations of children whose behaviour is unwanted.

As much research regarding pragmatic language abilities has been conducted in the clinical domain, on special populations, (Perkins, 2007) information regarding proportions of children with less well-developed pragmatic skills in the general population is not available. Ketelaars et al. (2010) completed the CCC on a community sample of 1,364 Dutch children.

From the presentations of results it is not possible to ascertain how many of the sample were judged to have pragmatic language difficulties, however this data if available from the authors, would be a tentative starting point in determining a comparison rate. Caution would need to be applied given the use of the earlier version of the CCC and the Dutch nationality sample. The second proposition has been tested in the present study, with evidence found to support it. Future research to test the remaining three propositions would benefit from mixed-method approaches, involving gathering qualitative information from staff and classroom observations, perhaps using the CSCOT, for example. A case study approach would also be useful to provide detailed and rich information that could allow the developmental trajectory of the unwanted behaviour to be fully explored.

## 5.9 Conclusion

The present study has found evidence that a high proportion of primary-aged children at risk of school exclusion have significantly less well-developed communicative abilities in comparison to their peers not at-risk of school exclusions. Specifically, the majority of the children in the sample appear to have disproportionate differences between better developed structural language abilities in comparison to less-well developed pragmatic language abilities. These findings support a growing body of evidence linking pragmatic language abilities with unwanted behaviour. Considering the evidence from a developmental and interactionist perspective supported the incorporation of previously presented findings which have linked familial disadvantage, social information processing and certain characteristics to school exclusion and unwanted behaviour. Further research is required to



consider this relationship in more detail, to test whether the behaviours resulting in the pattern of scores provided by the CCC-2, and types of classroom communication environments, can be causally linked to increased risk of school exclusion. However in the interim this thesis adds to the evidence base that suggests approaches that support the development of all children's communication, and increases the knowledge of professionals working with them to know how to identify and support communicative development is an important and worthwhile endeavour in promoting positive outcomes for all children.

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## APPENDIX ONE: Scores for participants removed from sample (all passed consistency check)

HB1: Children's Communication Checklist Second Edition: Summary data

SCALE	RAW SCORE	SCALED SCORE	PERCENTILE
A. SPEECH	9	3	3
B. SYNTAX	7	3	3
C. SEMANTIC	9	4	4
D. COHERENCE	11	4	4
E. INAPPROPRIATE INITIATION	16	5	5
F. STEREOTYPED	7	5	6
G. USE OF CONTEXT	8	5	5
H. NONVERBAL	11	3	1
I. SOCIAL	7	3	2
J. INTERESTS	12	5	5
GENERAL COMMUNICATION COMPOSITE - GCC <sup>1</sup>		32	1
SOCIAL INTERACTION DEVIANCE COMPOSITE - SIDC <sup>2</sup>		2	

HB3: Children's Communication Checklist Second Edition: Summary data

SCALE	RAW SCORE	SCALED SCORE	PERCENTILE
A. SPEECH	1	10	45
B. SYNTAX	2	8	28
C. SEMANTIC	0	16	>99
D. COHERENCE	4	7	22
E. INAPPROPRIATE INITIATION	19	4	1
F. STEREOTYPED	5	6	14
G. USE OF CONTEXT	10	5	5
H. NONVERBAL	12	3	1
I. SOCIAL	8	3	2
J. INTERESTS	14	5	5
GENERAL COMMUNICATION COMPOSITE - GCC <sup>1</sup>		59	15
SOCIAL INTERACTION DEVIANCE COMPOSITE - SIDC <sup>2</sup>		-26	

HB4: Children's Communication Checklist Second Edition: Summary data

SCALE	RAW SCORE	SCALED SCORE	PERCENTILE
A. SPEECH	6	5	10
B. SYNTAX	13	1	1
C. SEMANTIC	8	6	12
D. COHERENCE	15	3	2
E. INAPPROPRIATE INITIATION	18	6	10
F. STEREOTYPED	9	5	6
G. USE OF CONTEXT	18	4	3
H. NONVERBAL	16	2	1
I. SOCIAL	14	1	<1
J. INTERESTS	16	5	5
GENERAL COMMUNICATION COMPOSITE - GCC <sup>1</sup>		32	1
SOCIAL INTERACTION DEVIANCE COMPOSITE - SIDC <sup>2</sup>		-1	

## APPENDIX TWO: Procedure sheet for Early Intervention workers

The relationship between pragmatic language competence and risk of school exclusion:

### Research project procedure for data collection

1. Create a record sheet of referrals, and the code assigned to each child so that feedback can easily be matched. It may be useful to have columns to tick when CCC-2 is completed and sent, and another to note when feedback is received and acted upon.
2. At initial meeting with parent explain the project; go through the participant information sheet with them, and if they consent for their child's data to be included, have them sign the consent form.
3. At a point convenient to yourself, but between referral and the start of any intervention, arrange to complete the CCC-2 with a member of staff at the referring school, providing the child meets the following requirements:
  - a. English is the main language spoken at home
  - b. No hearing or speech and language difficulties have previously been formally identified / diagnosed
  - c. The child is able to string words together in sentences
4. The member of staff must have known the child for at least 3 months and have regular contact 3-4 times a week.
5. The following information should be on the front of the CCC-2:
  - a. Identifying code
  - b. Date of birth
  - c. Sex
  - d. Ethnicity
  - e. Whether or not the child is eligible for free school meals
6. Send, either by secure email or post, the following 3 documents (I must have all 3 as a package to ensure I store and use the data correctly):
  - a. Signed consent form (marked with child's code)
  - b. Cover sheet
  - c. Completed CCC-2
7. A summary of the child's communicative profile will be provided by email to the EI manager within two working weeks. This summary should be shared with the parent, the SENCo of the referring school and any staff supporting the child. As discussed in the briefing, it is essential that any identified difficulties are appropriately addressed. Responses required will be at one of the following levels:
  - a. Communication difficulties not identified – no specific action relating to communication
  - b. Lower scores, but most within typical range – staff in contact with child to fully understand nature of difficulties and how they can support in day to day interactions
  - c. Low level difficulties identified – As above, and targeted intervention provided by school staff in either 1-to-1 or small group setting to improve communication skills
  - d. Identified profile indicated need for further investigation – may require discussion with school EP or speech and language therapist

### APPENDIX 3: Participant information sheet and consent form (at-risk sample)

## PARTICIPANT INFORMATION SHEET

### INVITATION FOR YOUR CHILD TO BE PART OF A RESEARCH STUDY

Title: Unidentified and underlying pragmatic language impairment in primary aged children at risk of school exclusion

Researcher: Zoe Owen, Trainee Educational Psychologist

Supervised by:

(Local Authority Placement)

(University of Birmingham)

- I am studying for a Doctorate of Applied Educational and Child Psychology at the University of Birmingham, on placement at XXXXX County Council until July 2014.
- As part of my course requirements I am undertaking a piece of research and am interested in underlying factors that may cause children to be at risk of school exclusion.
- There is a large body of research evidence linking underdeveloped language skills with behaviour that is problematic for schools.
- In particular I am interested in 'pragmatic language abilities' – that is the social use of language. It includes non-verbal communication, body language, knowing how to use language in different ways in different situations with different people and understanding social conventions.

What does it involve?

1. If you wish your child to be included in the study the Early Intervention worker will complete a communication checklist with a member of school staff who knows your child well.
2. The completed checklist will be sent to me and I will examine the responses and provide feedback (within 2 weeks) as to your child's communication profile. The checklist is only a screen, and cannot provide a diagnosis, but it can provide a profile of strengths and weaknesses that can help the Early Intervention team to plan the best way to help your child.
3. If it seems your child has particular difficulties with their language and communication development this may involve a referral for specialist advice from a Speech and Language Therapist, or Educational Psychologist, but they will discuss that with you if that is the case.
4. The completed form will NOT have your child's name on, so your child will remain anonymous to me, unless you choose to contact me. It WILL have the following details on it:

Date of birth

Sex

Ethnicity

Whether or not they are eligible for free school meals

#### How will the information be used?

- The information will be presented in a research report that will be submitted to the University of Birmingham as part of my course requirements. A shorter version of the research findings will be prepared for briefings to the schools taking part in the study. If you wish to have a copy of either document please contact me on the details below. The information in this report will be completely anonymous and your child WILL NOT be able to be identified from it.
- I will keep the completed checklists either in locked storage within Local Authority offices, if they are paper copies or if electronic, saved on the Local Authority server and computing equipment. Only once the information is completely anonymous (codes will be assigned for postcodes and term and years of birth), will the information be used on different computing equipment.

#### You and your child's right to withdraw

It is important that you know that you do not have to consent to your child's information being used in the study. It will not prevent the Early Intervention team providing advice and support for your child.

If you consent to your child's information being used you have the right to change your mind at any time, for any reason up until the report is formally submitted (this will be during the spring term of 2014). If you wish to withdraw your consent please contact your child's school or me directly on the contact details below.

#### FOR FURTHER INFORMATION ABOUT THIS RESEARCH STUDY

Please contact:

Zoe Owen  
Trainee Educational Psychologist  
[Work place address]

Email: xxxx

Tel: xxxx



## CONSENT FORM

### INVITATION FOR YOUR CHILD TO BE PART OF A RESEARCH STUDY

Title: Unidentified and underlying pragmatic language impairment in primary aged children at risk of school exclusion

Researcher: Zoe Owen, Trainee Educational Psychologist

Supervised by:

(Local Authority Placement) Stephen McCoy, Senior Educational Psychologist

(University of Birmingham) Dr Colette Soan, University Tutor and Educational Psychologist

	Please sign each box if the statement applies.
I have been given a copy of the participant information sheet and had it explained to me.	
I have had an opportunity to ask any questions I may have.	
I understand that I can withdraw my consent, and have my child's data removed from the study at any point up to [proposed submission date]	
I give consent for my child's information to be used in the study and understand that the information will be used for university purposes.	

Early Intervention worker: Please sign and date to confirm that you have explained fully the information on the participant sheet.

Sign\_\_\_\_\_

Print\_\_\_\_\_

Date\_\_\_\_\_

## APPENDIX FOUR: Checklist cover sheet

The relationship between pragmatic language competence and risk of school exclusion.

### Data Gathering Checklist

Completed by:	
Date completed:	
Child's Code	
Sex	
Month and Year of Birth	
Free School Meals?	
Ethnicity	
Has the participant information sheet been explained to parent?	
Has the parent signed the consent form?	
Has the respondent known the child for at least 3 months, and sees them at least 3-4 times a week?	
Have the tick boxes on the front of the CCC-2 been completed?	

To return this information either put this form, the CCC-2 and signed consent form together for me to collect

OR

Scan and email this form, the CCC-2 and signed consent form to:

zoe.owen@xxxxxxx.gov.uk

## APPENDIX FIVE: Feedback sheet example

### THE RELATIONSHIP BETWEEN PRAGMATIC LANGUAGE COMPETENCE AND RISK OF SCHOOL EXCLUSION:

#### RESEARCH PROJECT FEEDBACK SHEET

Please note that these interpretations should be applied with caution, as due to confidentiality the researcher is unable to compare resulting profiles with observations / reports of the child's presentation. It is also important to remember that the CCC-2, being a brief questionnaire covering many aspects of communication, relies on subjective responses and is an inappropriate tool to base diagnoses on.

NB: The phrase 'The GCC / SIDC ratio is suggestive of an Autistic Spectrum Disorder' DOES NOT indicate that the researcher is suggesting the pupil has that disorder or should necessarily have further investigations in that area. Such a profile can stem from other experiences that result in atypical social and emotional development. That said, strategies that prove beneficial for pupils with ASC are often suitable for children with such a GCC / SIDC ratio, regardless of aetiology.

GCC – General Communication Composite

SIDC – Social Interaction Deviance Composite

School:

Code	Feedback	Action required	Lower pragmatic language?
GH1	6 of the 10 scale scores for this child are well within the average range, giving an overall GCC also within the average range. This child's SIDC is markedly low however. If the GCC is normal, a negative SIDC is usually disregarded, excepting in cases where there is a significant discrepancy, as there is with this child. This suggests that the child is having great difficulties with social interaction, in particular with initiating and maintaining positive interactions, using and reading nonverbal communication and having shared interests with others. It is likely that the child's well developed structural verbal skills may be masking the significant difficulties they are experiencing with social interaction.	<ul style="list-style-type: none"><li>• Referral to an EP or SALT should be considered.</li><li>• Wave 2 and 3 interventions to support social use of language.</li><li>• All staff should be made aware of the discrepancy between the child's significant social language difficulties, and well developed verbal skills.</li></ul>	Yes

GH2	NB: Composite scores are not available as those scales relating to 'use of context' were not scored; there is a possibility that this child has a very significant negative SIDC score, which would warrant further investigation. Scales representing the structural use of language, ability to understand and convey meaning verbally, with coherence scored in the average range. Scores for the ability to initiate social interactions appropriately and communicate in a flexible manner were below average. Scores for the remaining scales (nonverbal communication and the behavioural scales of social relations and interests) scored in the very low range, suggesting that this child is experiencing significant difficulty with social communication.	<ul style="list-style-type: none"> <li>• Referral to an EP or SALT should be considered.</li> <li>• Wave 2 and 3 interventions to support social use of language.</li> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	Yes
GH3	Difficulties were evident in scores for all scales for this child. Relative strengths were in speech, initiating and maintaining social interactions and having shared and varied social interests. All other scales were at or below the 4 <sup>th</sup> percentile, with the overall GCC being < 1 <sup>st</sup> percentile. This child appears to have significant speech and language difficulties from the information provided.	<ul style="list-style-type: none"> <li>• Referral to SALT should be considered.</li> <li>• Wave 2 and 3 interventions to provide a language rich environment to support language development. Verbal information supported visually.</li> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	Yes, within a pattern of wider difficulties
GH4	8 of the 10 scale scores for this child are within the average range. Scales for the ability to initiate social interactions appropriately and the behavioural scale of social relations are below average. This suggests that whilst this child has well developed language and communication skills in structural aspects of verbal communication, ability to understand and convey meaning and most aspects of pragmatic language ability they are having difficulty with the social skills required for positive interpersonal interactions. Individual answers to items composing these scales suggest that this child's behaviour may be underpinned by egocentric thinking.	<ul style="list-style-type: none"> <li>• Wave 2 &amp; 3 activities designed to extend understanding of other people's views, feelings, motivations and perspectives; how such things differ in people experiencing the same situation.</li> <li>• Staff can support this child by verbalising their own views, feelings, motivations etc. when interacting with the child, or when the child observes them interacting with others, in a calm</li> </ul>	No

		matter-of-fact manner.	
GH5	<p>This child's communicative profile is very uneven. In general there appear to be broad speech and language difficulties; GCC is low, at the 9<sup>th</sup> percentile. Within this there are strengths in areas of semantics (understanding and using the meanings of words), ability to initiate and maintain social interactions, ability to modulate communication in accordance with and takes cues from the social context and having shared and varied social interests. Particular difficulties are evident in speech development, ability to convey verbal information coherently and make themselves understood, ability to use and read nonverbal communication. Most significantly affected is the score on the social interaction scale (1<sup>st</sup> percentile). From the information provided it would appear that difficulties with social interaction may stem from difficulties with spoken aspects of language, and using nonverbal communication to support use and understanding of social interaction.</p>	<ul style="list-style-type: none"> <li>• The uneven profile of this child would benefit from further investigation. Consideration should be given to a referral to SALT.</li> <li>• Wave 2 and 3 interventions to provide a language rich environment to support language development. Verbal information supported visually.</li> <li>• All staff should be made aware of the child's difficulties.</li> <li>• All staff should be made aware of the child's difficulties.</li> </ul>	No
GH6	<p>Scores suggest that this child has significant language and communication difficulties in all areas other than speech-sound production. Notable difficulties are evident in scores for constructing and understanding verbal meaning (&lt;7<sup>th</sup> percentile), with even greater difficulties evident in scales measuring pragmatic language abilities (&lt;3<sup>rd</sup> percentile). The GCC: SIDC ratio is suggestive of an autistic spectrum communicative profile.</p>	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT / EP.</li> <li>• Differentiation and support in line with TEACCH principles are likely to support this child's development.</li> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	No
GH7	<p>This child's communicative profile is suggestive of general pattern of significantly underdeveloped speech and language abilities. The strongest areas for this child are nonverbal abilities (communicating via and 'reading' nonverbal signals), and the ability to vary style of communication dependent on context / communicative partner; these scales are towards a normal range. Speech sound production is a relative strength, as is variation in interests. All other areas, including abilities to understand and create fluent meaning verbally, to initiate and maintain interactions and take cues from the social</p>	<ul style="list-style-type: none"> <li>• Consideration should be given to a SALT referral.</li> <li>• Wave 2 and 3 interventions to provide a language rich environment to support language development. Verbal information supported visually.</li> <li>• All staff should be made aware of</li> </ul>	No

	context are at or below the 5 <sup>th</sup> percentile.	the child's difficulties.	
GH8	All scales relating to the structural use of verbal language are within the average range, as were scales measuring abilities to vary communicative responses and have varied interests. Less well developed abilities were evident in three of the four pragmatic scales suggesting that this child has difficulties in taking cues from the social context, communicating via and 'reading' nonverbal messages and general social interaction. This child's structural language ability is likely to mask the less well developed social use of language.	<ul style="list-style-type: none"> <li>• Wave 2 and 3 interventions to support social use of language.</li> <li>• All staff should be made aware of the discrepancy between the child's significant social language difficulties, and well developed verbal skills</li> </ul>	Yes
GH9	This child's scores suggest a general pattern of significant speech and language difficulties. Relative strengths are evident in speech sound production and ability to vary communicative responses. All other scales are at or below the 5 <sup>th</sup> percentile.	<ul style="list-style-type: none"> <li>• Consideration should be given to a SALT referral.</li> <li>• All staff should be made aware of this child's significant speech and language difficulties</li> </ul>	No- general S&L difficulties
GH10	Other than ability to vary communicative responses, which scores just into the average range, all scores are below average. This suggests a general pattern of significant speech and language difficulties. The GCC:SIDC ratio is indicative of an autistic spectrum communicative profile suggesting that within a pattern of broader difficulties pragmatic aspects are particularly affected.	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT / EP.</li> <li>• Differentiation and support in line with TEACCH principles are likely to support this child's development.</li> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	Yes within a pattern of wider difficulties
GH11	In general all scales scores for this child suggest significant speech and language difficulties; 9 of the 10 scales are below average with a further 3 evidencing significant difficulties (in abilities to communicate coherently, read and communicate message nonverbally and general social interaction). The GCC:SIDC ratio is indicative of an autistic spectrum communicative profile. A disproportionately high score (in comparison to other scales scores) is evident in the scale measuring ability to construct sentences in a grammatically	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT / EP.</li> <li>• Differentiation and support in line with TEACCH principles are likely to support this child's development.</li> <li>• All staff should be made aware of</li> </ul>	Yes within a pattern of wider difficulties

	correct manner. This scale is at the top end of the average range. This may indicate a relative strength but equally may be an anomaly in responses.	the child's significant difficulties.	
GH12	These scores suggest a general pattern of significant speech and language difficulties. The GCC, a score of general communicative competence is below the 1 <sup>st</sup> percentile. The SIDC is a negative value, providing a ratio indicative of an autistic spectrum communicative profile, however the negative value is slight (-2) and is within a context of significant difficulties across all areas of competence.	<ul style="list-style-type: none"> <li>• Consideration should be given to a SALT referral.</li> <li>• Differentiation and support in line with TEACCH principles are likely to support this child's development.</li> <li>• All staff should be made aware of this child's significant speech and language difficulties</li> </ul>	Yes
GH13	This child's scale scores were in the main within the average range, as was the GCC (general communicative competence). It must be noted that whilst this score is in the average range it is only just so; therefore language and communication would not be considered strengths for this child. Particular difficulties were evident in scales measuring ability to communicate a coherent sequence of events, ability to communicate via and 'read' nonverbal messages and general social interaction, suggesting some underdeveloped pragmatic skills.	<ul style="list-style-type: none"> <li>• Wave 2 and 3 interventions to support social use of language.</li> <li>• All staff should be made aware of the discrepancy between the child's significant social language difficulties, and well developed verbal skills</li> </ul>	Yes but in limited areas
GH14	These scores suggest a general pattern of significant speech and language difficulties. The GCC, a score of general communicative competence is at the 1 <sup>st</sup> percentile. The SIDC is a negative value, providing a ratio indicative of an autistic spectrum communicative profile. Within the scales relative strengths are evident in scales that measure speech sound production and ability to vary communicative style according to the social context, however it appears that this child may have significant language and communication difficulties	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT / EP.</li> <li>• Differentiation and support in line with TEACCH principles are likely to support this child's development.</li> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	Yes within a pattern of wider difficulties
GH15	This child's scores provide a GCC:SIDC ratio that is indicative of an autistic spectrum communicative profile. Structural language abilities of speech and ability to construct sentences correctly are just within the average range and	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT / EP.</li> <li>• Differentiation and support in line</li> </ul>	Yes within a pattern of wider difficulties

	it is likely that these abilities may mask difficulties in conveying and ascertaining meaning from verbal communication, reading cues in the social context and nonverbal communications, initiating and maintaining social interactions appropriately.	<p>with TEACCH principles are likely to support this child's development.</p> <ul style="list-style-type: none"> <li>• All staff should be made aware of the child's significant difficulties.</li> </ul>	
GH16	<p>This child's scores provide a GCC:SIDC ratio that is indicative of an autistic spectrum communicative profile, however the pattern of scale demonstrates strengths in areas that would not be expected in a child with an ASC diagnosis (absence of stereotyped communication, varied interests). It is likely that this child's difficulties are related to their relatively late HI diagnosis which will have resulted in an atypical pragmatic and verbal language developmental trajectory during the early years. Scores for verbal language structure (speech sound production and syntactical ability) are below average, however scales measuring understanding and using the meaning of words, and ability to communicate coherently are well within the average range. Pragmatic scales relating to ability to initiate social interaction appropriately and the ability to vary style of communication dependent on context / communicative partner also score within the average range.</p> <p>Difficulties are particularly evident in scales measuring the pragmatic abilities of reading cues in the social context and communicating via and reading nonverbal communications (at or below the first percentile). This child's very uneven profile of skills and difficulties is likely a factor in the low score for 'social relations'; although the child has some well developed social skills these are not broad enough to maintain successful social relationships.</p>	<ul style="list-style-type: none"> <li>• Advice and guidance regarding the development of pragmatic language / social communication in HI children should be sought from a professional with experience and knowledge in this field.</li> <li>• Wave 2 and 3 interventions to support social use of language, in particular reading and using 'body language' and facial expression and observing the context to understand the social situation.</li> <li>• All staff should be made aware of this child's uneven profile of communicative skills and difficulties.</li> </ul>	Yes, with some structural verbal difficulties also.
GH17	Whilst this child had some pockets of ability in areas of ability to convey verbal communication coherently, appropriately initiate social interaction and have varied interests, generally the communicative profile suggested broad speech and language difficulties with a GCC at the 1 <sup>st</sup> percentile.	<ul style="list-style-type: none"> <li>• Consideration should be given to a referral to SALT.</li> <li>• All staff should be aware of the significant language difficulties this child experiences.</li> </ul>	No
GH18	This child's scores suggest that they have particularly well developed structural verbal skills in terms speech sound production and the ability to	<ul style="list-style-type: none"> <li>• Referral to an EP or SALT should be considered.</li> </ul>	



	construct sentences in a grammatically correct manner. All other scales are below the average range with particular difficulties evident in scales measuring the ability to vary style of communication dependent on context / communicative partner and in general social relations. Overall this child's GCC is just within normal parameters (58), although this is due to the very high scores in 2 of the structural verbal scales skewing the average. The child's SIDC is -16, which is viewed as an extreme score; this suggests that the child has significant difficulties in the social use of language that are likely masked by well developed structural skills.	<ul style="list-style-type: none"> <li>• Wave 2 and 3 interventions to support social use of language.</li> <li>• All staff should be made aware of the discrepancy between the child's significant social language difficulties, and well developed verbal skills.</li> </ul>	
GH19	Other than the scale measuring speech sound production, which is a relevant strength this child's scores are consistently low in all areas, scoring at or below the 5 <sup>th</sup> percentile. The speech scale is at the 10 <sup>th</sup> percentile, still considered low. These scores suggest a general speech and language difficulty.	<ul style="list-style-type: none"> <li>• Referral to SALT should be considered</li> <li>• Consideration should be given to a SALT referral.</li> <li>• All staff should be made aware of this child's significant speech and language difficulties</li> </ul>	No- general speech and language difficulties
GH20	This child scores just on the threshold for general communicative ability. A score below 55 is perceived as a difficulty, this child scores 55. Whilst this means that the child's scores do not suggest difficulties of a clinical significance language and communication would not be a strength. Aspects of social communication are not any more greatly affected than structural development; rather this child has in general a flat profile evidencing low average abilities in the majority of scales.	<ul style="list-style-type: none"> <li>• Wave 2 interventions to support language acquisition and use would be useful.</li> <li>• All staff should be made aware of this child's poorer language development and pitch their communications and explanations accordingly.</li> </ul>	No – general underdeveloped speech and language abilities.

## APPENDIX SIX: Participant information sheet and consent from (matched sample)

### PARTICIPANT INFORMATION SHEET

#### INVITATION TO PARTICIPATE IN A RESEARCH STUDY

Title: Unidentified and underlying pragmatic language impairment in primary aged children at risk of school exclusion

Researcher: Zoe Owen, Trainee Educational Psychologist

Supervised by:

(Local Authority Placement)

(University of Birmingham)

Your school is being asked to take part in a research study, which intends to investigate the pragmatic language competence in children at risk of exclusion from mainstream primary schools.

NB. Pragmatics may be defined as selection of the appropriate message or interpretation in relation to the communicative context (Bishop, 1997; cited in Bishop 2003).

#### Objectives of Research Study

- To investigate if there is evidence of lower levels of pragmatic language competence in primary-aged children at risk of school exclusion in xxxxx.
- To investigate if pragmatic language abilities are disproportionately less well-developed than verbal language abilities.

The study aims to gather data on children referred to xxxxxxxxxx's Early Intervention Support Services across one term to consider these areas. As part of the research design it is necessary to have a matched sample control group. These are children who are NOT at risk of exclusion, or displaying any concerning behaviours. The children selected must also not have any identified speech, language and communication difficulties or sensory impairments. They will be selected on basis of age, sex, ethnicity and free school meal status. The Children's Communication Checklist- 2, a screening tool developed to identify a child's communicative profile, will be used to assess the selected children's communication abilities and will be completed by nominated School staff.

NB – Respondents must have had regular contact with the child for at least 3-4 days per week for at least 3 months.

Schools can expect to receive feedback for each checklist within two weeks of completion.

#### Time Commitment

The study will require school staff to attend a briefing session, delivered at your school. The checklists will be completed by the researcher in conversation with the member of staff nominated for the selected child. This should take no longer than 15minutes per child, and can be done in person or over the phone.

## Termination of Participation

You may decide to stop being a part of the research study at any time, without prejudice.

## RISKS

As the children will remain anonymous and are not directly involved with data collection, individual risks are minimal. Schools however should consider their response should communication difficulties be identified in any children and how they will ensure any need is addressed. This could require any of the following, dependent on the profile identified:

- Communication difficulties not identified – no specific action relating to communication
- Lower scores, but most within typical range – staff in contact with child to fully understand nature of difficulties and how they can support in day to day interactions
- Low level difficulties identified – As above and targeted intervention provided by school staff in either 1-to-1 or small group setting to improve communication skills
- Identified profile indicated need for further investigation – may require discussion with school EP or speech and language therapist

## COST, REIMBURSEMENT AND COMPENSATION

Your participation in this study is voluntary. Costs of releasing staff will hopefully be compensated for by receipt of training in pragmatic language difficulties.

## CONFIDENTIALITY/ANONYMITY

The data collected will not contain any personal information relating to the children Checklists are completed for. The children will remain anonymous to the researcher throughout the study. If at any point the School feel that an individual discussion about a child is necessary where that child will be identified, or that will necessitate a request for further assessment / involvement parental consent must be obtained.

Schools will complete a sheet to remain confidentially in school that assigns a code to each child. Only the code will identify the participant on the completed checklist. This is necessary to ensure feedback can be matched to correct child when received.

## FOR FURTHER INFORMATION ABOUT THIS RESEARCH STUDY

Please contact:

Zoe Owen, Trainee Educational Psychologist

[Work place address to be added here]

Email: xxxxxx Tel: xxxxx

## CONSENT FORM

### INVITATION FOR YOUR SCHOOL TO BE PART OF A RESEARCH STUDY

Title: Unidentified and underlying pragmatic language impairment in primary aged children at risk of school exclusion

Researcher: Zoe Owen, Trainee Educational Psychologist

Supervised by:

(Local Authority Placement)

(University of Birmingham)

#### Aims of research

- To investigate if there is a prevalence of pragmatic language impairment in the population of primary aged children at risk of school exclusion in Lancashire.
- To look for evidence that pragmatic language impairment is causally implicated where children are at risk of school exclusion.

Taken from Code of Human Research Ethics; British Psychological Society (pg. 17):

'In relation to the gaining of consent from children and young people in school or other institutional settings, where the research procedures are judged by a senior member of staff or other appropriate professional within the institution to fall within the range of usual curriculum or other institutional activities, and where a risk assessment has identified no significant risks, consent from the participants and the granting of approval and access from a senior member of school staff legally responsible for such approval can be considered sufficient. Where these criteria are not met, it will be a matter of judgement as to the extent to which the difference between these criteria and the data gathering activities of the specific project warrants the seeking of parental consent from children under 16 years of age and young people of limited competence.'

By signing below you are agreeing that you have read and understood the Participant Information Sheet and that you agree for your School to take part in this research study.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Position

School \_\_\_\_\_

# APPENDIX SEVEN: Collated data for the at-risk sample and the matched sample

## At-risk sample

P. code	Sex F=1; M=2	Yr	Term of birth	Ethnicity	FSM	A	B	C	D	E	F	G	H	I	J	GCC	SIDC	PLCS	GCC: SIDC ratio 1= <pragmatic; 2= not
GH1	2	3	A	WB	N	12	9	11	11	4	13	7	3	0	5	70	-31	27	1
GH3	2	3	Sp	WB	N	5	0	4	3	6	3	4	2	2	6	27	4	15	2
GH4	2	6	A	WB	N	12	8	10	13	6	13	13	8	4	10	83	-15	40	1
GH5	2	2	Su	WB	Y	4	5	7	5	8	9	9	5	1	10	52	3	31	2
GH6	2	4	A	WB	N	12	4	5	3	4	5	3	0	0	3	36	-17	12	1
GH7	1	4	A	WB	N	5	0	2	3	5	6	3	6	0	6	30	7	20	2
GH8	1	4	A	WB	N	12	12	8	10	11	13	5	6	5	11	77	-9	35	1
GH9	1	1	Sp	WB	Y	8	0	4	2	5	6	3	1	2	5	29	-1	15	1
GH10	2	2	A	WB	Y	3	4	6	5	5	7	4	2	3	4	36	-4	18	1
GH11	2	1	Su	WB	Y	5	13	5	4	5	5	6	1	2	6	44	-13	17	1
GH12	1	1	A	WB	Y	3	2	4	4	4	5	3	2	0	5	27	-2	14	1
GH13	2	3	Su	WB	Y	10	9	7	6	7	9	8	4	5	7	60	-9	28	2
GH14	2	5	Sp	WB	Y	7	4	3	3	5	8	1	2	0	4	33	-6	16	1
GH15	2	5	Sp	WB	Y	7	7	6	5	5	6	4	5	3	4	45	-8	20	1
GH16	2	4	A	WB	Y	4	5	7	10	8	10	2	3	1	6	49	-8	23	1
GH17	2	3	A	WB	Y	2	1	5	6	7	4	4	5	5	8	34	11	20	2
GH18	2	2	Su	WB	Y	13	13	5	5	6	4	6	6	2	6	58	-16	22	2
GH19	1	4	Sp	WB	N	5	2	4	2	5	4	2	4	0	5	28	1	15	2
GH20	2	5	Su	WB	N	6	5	5	8	6	13	7	5	5	7	55	-1	31	2
SS1	2	5	Sp	WB	N	12	7	6	3	4	3	1	3	2	3	39	-16	11	1
SS2	2	5	A	WB	N	7	5	4	4	3	4	4	3	0	3	34	-11	14	1
SS3	2	6	Sp	WB	?	8	5	4	3	3	4	0	2	0	5	29	-10	9	1
SS5	2	1	Su	WB	N	4	0	5	4	9	9	7	3	5	10	41	14	28	2
SS7	2	1	A	WB	N	4	10	7	4	7	7	4	3	0	5	46	-10	21	1
SS8	2	6	A	WB	Y	12	5	10	5	6	5	1	0	0	3	44	-23	12	1
SS9	2	2	A	WB	N	8	3	7	5	5	11	4	2	3	3	45	-10	22	1
SS11	2	5	Su	Traveller	N	5	4	4	6	4	3	6	3	0	4	35	-8	16	1
SS14	2	4	Sp	WB	N	2	7	4	2	4	5	1	0	0	4	25	-7	10	1
HB2	2	4	Su	WB	Y	7	2	7	6	6	10	5	2	0	9	45	-5	23	1

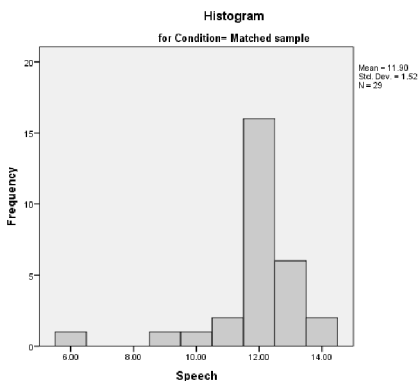
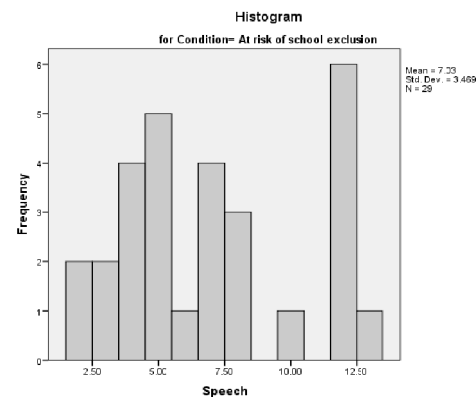
## Matched Sample

P. code	Sex F=1; M=2	Yr	Term of birth	Ethnicity	FSM	A	B	C	D	E	F	G	H	I	J	GCC	SIDC	PLCS	Full match?
GP1		2	3 A	WB	Y	12	9	4	5	7	6	4	3	5	6	50	-9	20	N-FSM
GP3		2	3 A	WB	Y	12	12	15	13	16	13	15	13	13	16	109	6	57	N-FSM
GP4		2	6 Sp	WB	Y	12	12	14	13	14	13	13	13	12	15	104	3	53	N-FSM/AGE
GP5		2	2 Su	WB	N	13	10	16	14	17	14	16	14	13	17	114	8	61	N-FSM
GP6		2	4 Sp	WB	N	12	12	14	8	5	13	7	10	9	5	81	-17	35	N-AGE
GP7		1	4 A	WB	N	12	12	14	13	15	13	14	13	13	16	106	6	55	Y
GP8		1	4 A	WB	N	12	12	14	13	15	13	14	13	13	16	106	6	55	Y
GP9		1	1 Sp	WB	Y	14	13	16	9	15	10	6	7	8	18	90	-4	38	Y
GP10		2	2 A	WB	Y	13	13	15	8	16	14	16	13	13	17	108	10	59	Y
GP11		2	1 A	WB	Y	10	13	16	8	11	14	9	14	10	11	95	-1	48	Y
GP12		1	1 A	WB	Y	14	13	16	9	17	14	17	14	13	17	114	9	62	Y
GP13		2	3 Su	WB	Y	13	12	12	11	9	11	10	9	10	13	87	-7	39	Y
GP14		2	5 Sp	WB	Y	12	12	14	13	15	13	14	13	7	9	106	-7	55	Y
GP15		2	5 A	WB	Y	12	12	14	7	12	13	14	13	12	12	97	4	52	Y
GP16		2	4 A	WB	Y	12	12	14	13	15	13	11	13	9	12	103	-2	52	Y
GP17		2	3 A	WB	Y	9	12	14	7	7	8	11	7	8	10	75	-10	33	y
GP18		2	2 Su	WB	Y	6	8	10	14	12	14	11	10	13	12	85	9	47	Y
GP19		1	4 Sp	WB	N	12	12	14	13	15	13	11	13	9	13	103	-1	52	Y
GP20		1	5 Su	WB	N	12	12	14	13	15	13	11	13	9	12	103	-2	52	N-SEX
SP1		2	5 Sp	WB	N	12	9	11	10	15	10	14	13	5	12	94	3	52	Y
SP2		2	5 A	WB	N	12	8	10	13	14	10	10	13	12	15	90	11	47	Y
SP3		2	5 Su	WB	N	12	12	14	13	15	13	14	13	7	10	106	-6	55	N-ETH
SP4		2	6 Sp	WB	y	12	12	14	13	14	13	13	13	9	12	104	-3	53	Y
SP5		2	6 A	WB	Y	11	12	13	12	14	13	13	10	9	12	98	-3	50	Y
SP7		2	1 Su	WB	N	13	13	10	14	11	14	16	13	10	12	104	-4	54	Y
SP8		2	1 A	WB	N	13	10	11	14	11	14	16	9	7	12	98	-9	50	Y
SP12		2	2 A	WB	N	13	12	15	11	16	14	15	13	13	16	109	7	58	Y
SP13		2	4 Su	WB	Y	11	11	8	9	9	12	8	12	9	9	80	0	41	Y
SP14		2	4 Sp	WB	N	12	12	9	10	13	13	9	10	8	16	88	4	45	Y

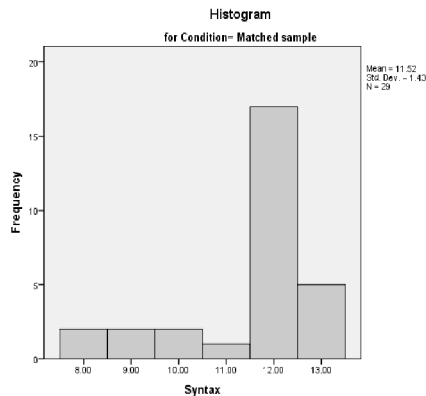
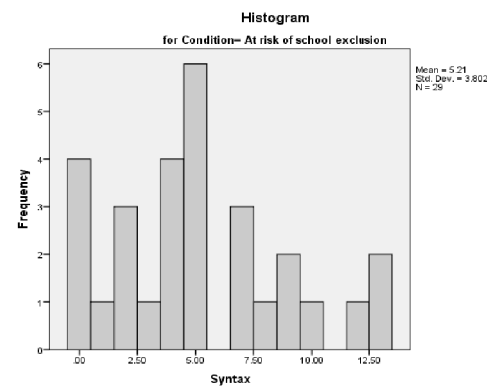
APPENDIX EIGHT: Frequency histograms of study variables

Individual scales:

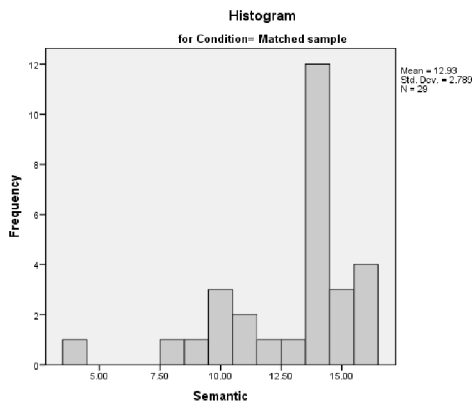
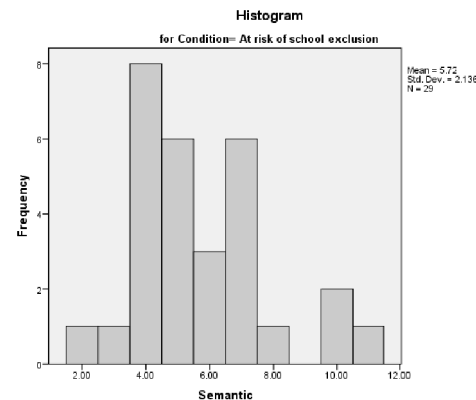
Speech



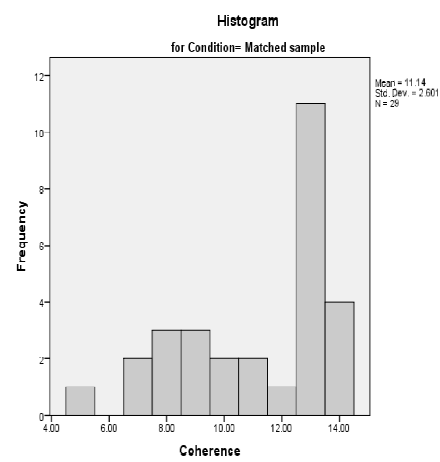
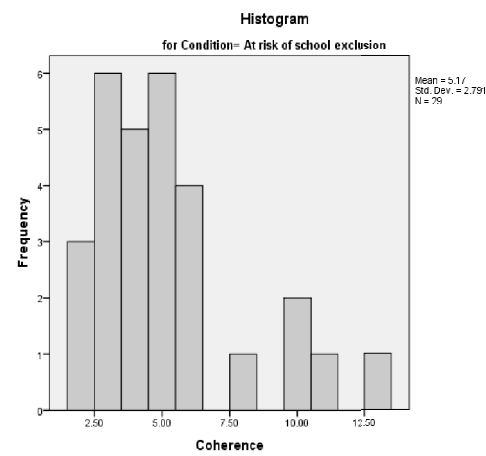
Syntax



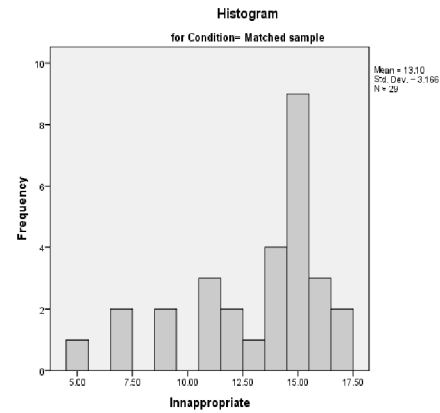
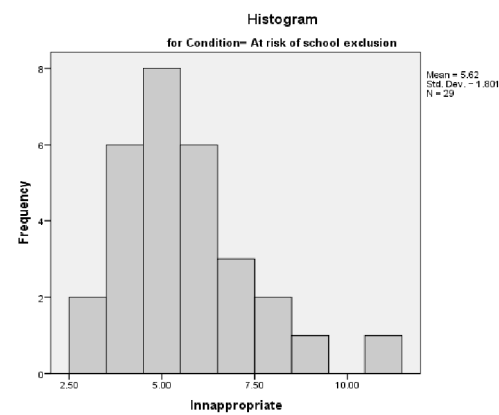
Semantic



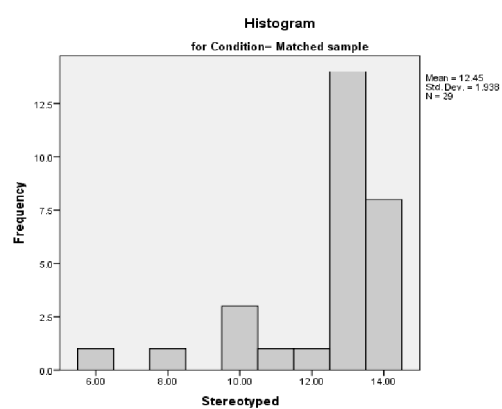
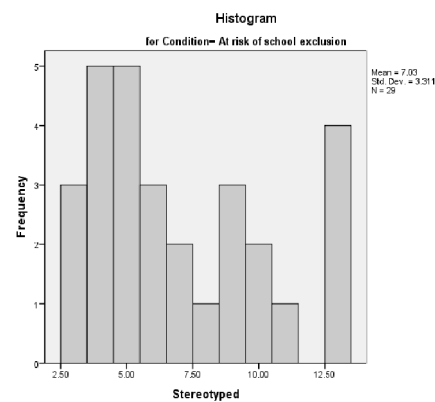
Coherence



Inappropriate Initiation

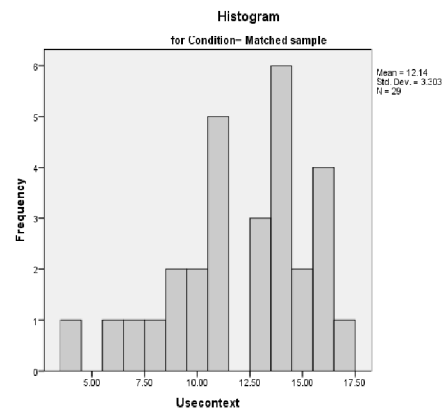
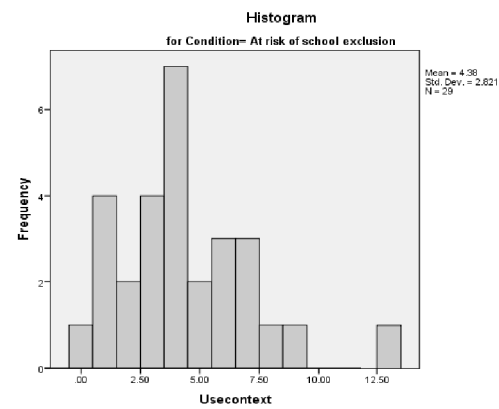


Stereotyped

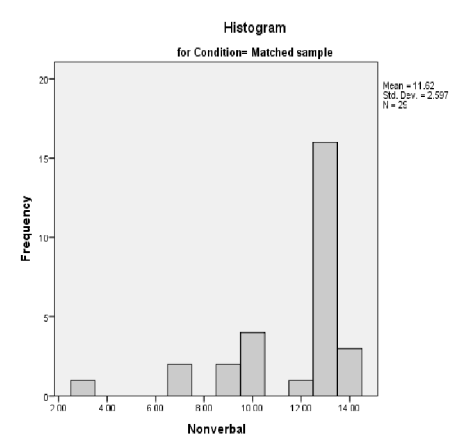
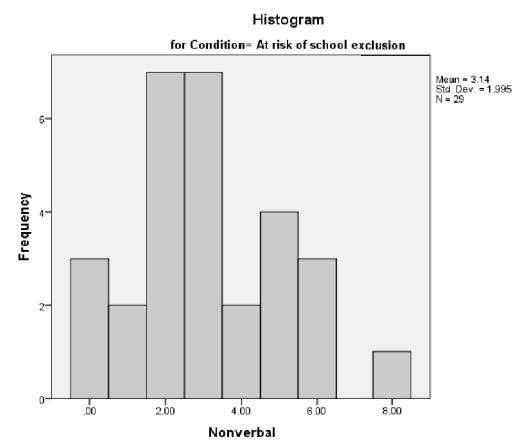




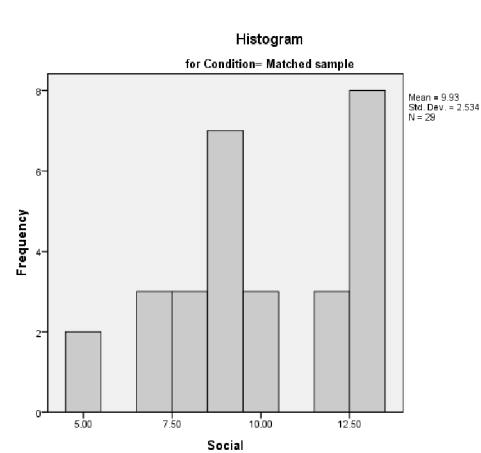
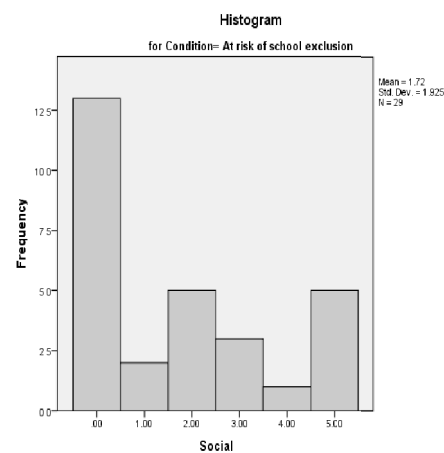
Use of Context



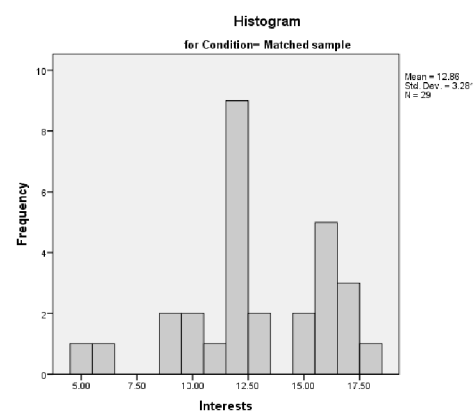
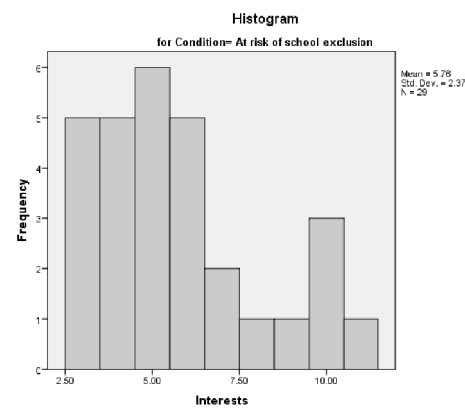
Nonverbal



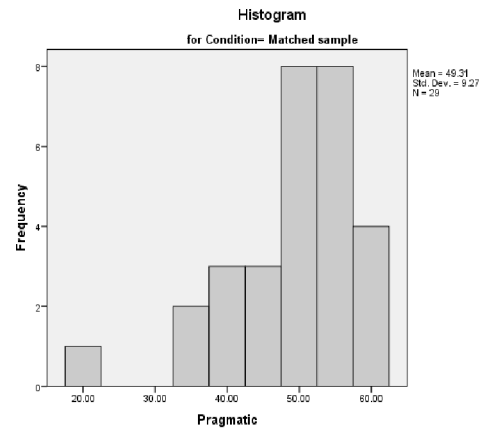
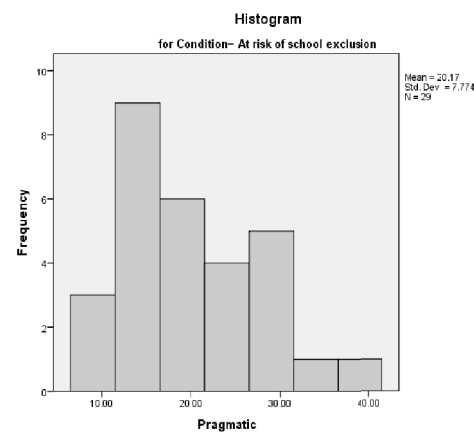
Social Relations



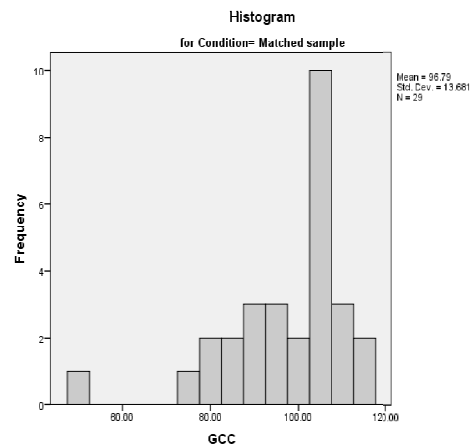
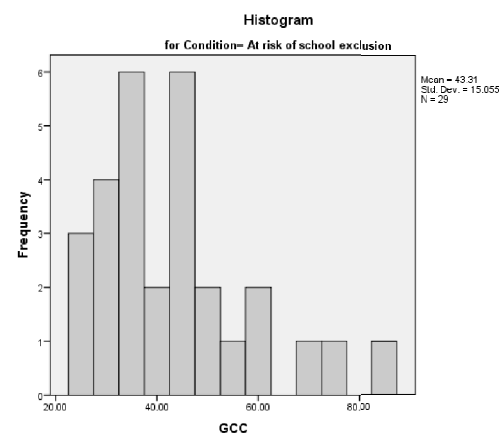
# Interests



# Composite Scores: Pragmatic Language Composite Score (PLCS)



# General Communication Composite (GCC)



Social Interaction Deviance Composite (SIDC)

