

# **The Language, Literacy and Communication Skills of Young Offenders and Non-Offenders: A Mixed Methods Study.**

**Thomas Hopkins**

---

**A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy.**

**Department of Human Communication Sciences, University of Sheffield.**

-

**August 2014.**



# Acknowledgements

I would firstly like to acknowledge the hard-work my supervisors (Dr Judy Clegg & Professor Joy Stackhouse) have put into the formation of this thesis. I can honestly say that I have never had such wonderful support by academic supervisors. You have both made this journey so much easier, especially during some tough times that I have faced personally and academically! Thanks Judy and Joy for all your help and for the opportunities you given me throughout my time here.

I would also like to thanks my family for their support and understanding during the last four years. The love you all give often goes without saying but I will always value it and give it all back.

Thanks to all my friends for being friendly and very understanding. All work and no play makes Tom a dull boy so all the nights out, parties and rock n roll has helped keep me sane. Cheers Aviva crowd and Alex! Special thanks goes to Lucy for her tremendous support (some Phd/work related), you're a great friend!

Another special thanks goes to Becky for deciding to love me without being coerced. You've made these final stages so much more bearable. I love you lots! Also thanks for reading through my whole thesis (you're the only one outside university who has) and correcting the many punctuation errors. It's your fault for being a linguist. I was also lucky to have Anna finishing her PhD in the department at the same time so thanks Anna for the formatting advice, it saved me a great deal of time.

Big love to all the HCS PGR crew, including those who have already finished. A list of great social events and nights out experienced with you all. Keep in contact. Christina, sharing an office with you for so long was fun and made coming into work enjoyable. Cheers.

I would like to offer my gratitude to all who took part in my research. This includes all the YR9 pupils and young people enrolled in the youth justice service. It's true to say this could not have been possible without you all and you are the reason I loved data collecting. Working with you all was rewarding in so many ways and has definitely made me into a more rounded individual. Thanks also to all the help and support from staff at the YJS (too many to list here but you know who you are) and secondary schools – (Dawn and Rebecca).

My last acknowledgement goes to music, tennis and comedy. The last four years has made me realize how important hobbies and interests are in life and so thanks to everyone I have met, jammed with, played and performed with in all the above. Sheffield, I consider you my home.

# Abstract

Research has identified young offenders (YOs) in custody as having low language, literacy and communication skills. However, the language, communication and literacy difficulties of YOs who are on court orders is still unknown and more research is required to fully understand the relationship between language and offending behaviour.

This study aims to investigate the association between language, communication, literacy, and behaviour in young offenders on court orders using; 1) appropriate and relevant quantitative methods of assessment to establish levels of performance and 2) qualitative interviews in order to examine participants' views on how language limitations affect social interaction. To address methodological limitations in previous research, confounds were controlled for by comparing YOs to a control group of non-offenders (N=25) matched on Socio-Economic Status (SES), Non-Verbal IQ and Educational Attendance (EA).

An opportunity sample of 57 young offenders (age range 12-18 years) was recruited from a Youth Offending Service in the UK. Inclusion criteria required all participants to have English as their first language and for none to be receiving any speech and language therapy.

The YOs performed below the expected level on all the language assessments based on comparisons with normative scores. Logistical regression analysis revealed that they were also performing significantly lower than their matched control group of non-offenders, especially on the spoken language and literacy components. Age, gender, ethnicity and looked after status were not significant contributors to the relationship between language and offending status.

Findings indicate that language, literacy, and communication performance is associated with offending behaviour in accordance with the social model of adaptation, independent of SES and EA. This highlights the importance of not only delivering language, literacy and communication support to this population, but also the need to collaborate and offer training to the range of staff working with YOs. The advantages of incorporating relevant and functional age appropriate language tests alongside interviews to gain a holistic view of language, literacy and communication needs in YOs are discussed.

# Contents

1.1 UK statistics of crime prevalence and cost .....	18
1.2 Education experience and needs of youth offenders .....	19
1.2.1 Educational experience .....	19
1.2.2 The educational needs of young offenders .....	20
1.3 Mental Health of youth offenders .....	20
1.4 Reform of the Youth Justice System (YJS) .....	20
1.4.1 Asset tools, Reprimands and Final Warnings .....	21
1.4.2 Referral order .....	22
1.4.3 Youth Rehabilitation Order (YRO), Intensive Supervision and Surveillance Programme (ISSP) and Detention Training Order (DTO). .....	22
1.5 Explaining offending behaviour using theories of adolescence .....	23
1.6 The influence of parenting on behaviour outcomes in adolescence: Environment and genes .	24
1.6.1 Genes .....	24
1.6.2 Environmental Stress .....	25
1.6.3 Parenting and family conflict .....	26
1.7 Self and social identity in adolescence and its effect on behaviour .....	28
1.7.1 Self-identity and behaviour in adolescence .....	28
1.7.2 The influence of parental identity development on adolescent identity and behaviour .....	29
1.7.3 Social identity and behaviour in adolescence .....	30
1.7.4 Ethnic Identity as an example of Social Identity. ....	30
1.7.5 The influence of peer rejection in establishing group identity with deviant peers .....	31
1.8 How learning disabilities and language and communication needs influence the formation of social identity. ....	32
1.9 Addressing the Language and communication needs of young offenders .....	33
1.10 Conclusion .....	34
2.1 Language, literacy and communication of young offenders .....	36
2.1.1 Methodological issue of control groups .....	39
2.2 Research investigating language and communication with non-incarcerated children .....	41
2.3 Research investigating children with language difficulties – longitudinal methods .....	44
2.4 The social model of social adaptation and deviance (Redmond and Rice, 1998). ....	47

## Contents

2.5 Testing the relationship between language, behaviour and SES using mediation and moderation analyses through regression. ....	49
2.5.1 Defining and measuring Social Economic Status, Social class and Social Disadvantage .....	50
2.6 Evidence showing the influence SES has on speech, language and communication. ....	51
2.6.1 The influence of SES on children’s literacy development .....	54
2.7 Parental and home impact on the relationship between SES and language and behaviour. ....	55
2.8 Evaluating capital as a measure of SES and its contribution to child language .....	57
2.8.1 Abusive and neglectful parenting .....	59
2.9 Using the theory of attachment to explain the development of language and offending behaviour. ....	62
2.9.1 Explaining the association between SES and attachment disorder. ....	66
2.10 A linguistic approach in defining SES as a theory of deficit or difference .....	67
2.10.1 Linguistic theory of deficit .....	67
2.10.2 Linguistic theory of difference .....	69
2.11 Conclusion .....	71
3.1 Defining SLI.....	73
3.2 Theory and research criticising the application of the cognitive referencing hypothesis on assessing language difficulty.....	74
3.3 Using standardised test norms to diagnose SLCN .....	76
3.4 Measuring and assessing functional language relevant to YOs.....	77
3.4.1 Language sampling.....	78
3.4.2 Qualitative interview .....	81
3.4.3 Self-reports .....	82
3.5 The present study .....	83
3.5.1 Quantitative research questions.....	83
3.5.2 Qualitative research questions .....	84
3.6 Conclusion.....	84
4.1 Design.....	85
4.2 Participants .....	85
4.2.1 Social Disadvantage .....	87
4.2.2 Education data .....	87
4.2.3 The looked after status of participants.....	89
4.3 Language Assessments .....	89
4.3.1 Expressive language.....	89
4.3.2 Literacy.....	90

## Contents

4.3.3 WIAT Tasks .....	90
4.3.4 Additional language measures .....	91
4.4 Qualitative Methodology .....	95
4.4.1 Framework Analysis .....	96
4.4.2 Interpretative Phenomenological Analysis (IPA) .....	96
4.4.3 Incorporating aspects of IPA within Framework Analysis.....	98
4.5 Procedure.....	98
4.5.1 Offender group .....	98
4.5.3 Non-offender comparison group .....	100
4.6 Ethics .....	100
4.7 Prize Draw .....	101
5.0.2 Controlling for education attendance.....	104
5.1 The language profiles of the offender group and non-offender groups based on normative assessment mean scores. ....	104
Summary of 5.1.....	106
5.2 Does language predict offender status? .....	109
5.2.1 Meeting the assumptions of a logistical regression: Testing for outliers and multi-co-linearity. ....	110
5.2.2 Regression analyses .....	111
Summary of section 5.2 .....	113
5.3 Composite predictor variables using Principal Component Analysis (PCA) to reduce type error and investigate shared variance between language predictors. ....	113
Summary of 5.3.....	115
5.4 Combining the individual language scores to form language composites for each factor using z scores. ....	115
5.4.1 Testing the assumptions of the composite language z scores in order to include these in a logistic regression model. ....	115
5.4.2 Do composite language scores predict offender status using logistical regression? .....	116
5.4.3 Which of the composite language assessments in the model contribute the most to offender status? .....	116
Summary of findings from 5.4 .....	117
5.5 Which elements of spoken language and literacy contribute most to offender status? .....	117
5.5.1 Spoken language composite .....	118
5.5.2 Literacy composite .....	118
Summary of findings from 5.5 .....	118

## Contents

5.6 Controlling for gender, ethnicity and looked after differences between the offender and non-offender groups. ....	119
5.6.1 Controlling for gender.....	119
5.6.2 Controlling for Looked after (LA) status.....	121
5.6.3 Controlling for ethnicity.....	122
Summary of findings from 5.6 .....	126
5.7 Investigating if education attainment and attendance predicts offender status and confounds the relationship between offender status and language. ....	126
5.7.1 Does education attainment predict offender status? .....	126
5.7.2 Which Key stage English sub-components predict offender status? .....	128
5.7.3 The relationship educational attendance has with offender status and language performance .....	129
5.7.4 Education attendance confounding the relationship between language and offending status.....	130
Summary of section 5.7 .....	131
5.8 Conclusion.....	132
6.1 Theme 1: What is communication? .....	134
6.2 Theme 2: Perceived level of language ability .....	135
6.3 Theme 3: Implications of language .....	136
6.3.1 Employment and Education.....	136
6.3.2 Youth Justice Service.....	137
<b>6.3.3 Avoiding punishment in the YJS .....</b>	<b>138</b>
6.4 Theme 4: Differences in language .....	138
6.4.1 Literacy practice.....	138
6.4.2 Technological literacy activities .....	139
6.4.3 Differences in Formality.....	139
6.4.4 No differences in formality .....	140
6.4.5 Gender differences .....	140
6.5 Theme 5: Attention and Understanding .....	141
6.5.1 Attention.....	141
6.5.2 Comprehension difficulties.....	142
<b>6.6 Theme 6: Avoidance and Confrontation .....</b>	<b>145</b>
6.6.1 Confiding.....	145
6.6.2 Confrontation.....	146
6.6.3 Explanations for conflict .....	147
6.6.4 Conflict Satisfaction .....	148



## Contents

6.7 Theme 7: Confidence and Self-Presentation .....	149
6.7.1 Positive self-presentation and self-comparison .....	149
6.7.2 Conformity .....	150
6.7.3 Lowering of self esteem .....	151
6.8 Theme 8: Reciprocal Respect and Power.....	152
6.8.1 Reciprocal respect.....	152
6.8.2 Equality of power .....	153
6.8.3 YOs .....	153
6.8.4 Non-offenders.....	155
6.9 Summary of qualitative analysis .....	156
7.1 Answering Research Question 1: To what extent can a group of YOs on community court orders be identified as having a speech-language, communication needs?.....	159
7.1.1 The language, literacy and communication abilities of YOs .....	159
7.1.2 Identifying SLCN using normative referencing .....	162
7.2 Research Question 2 and 3: Does a group of YOs on community court orders demonstrate lower language abilities than a group of non-offenders matched on education attendance, social disadvantage and non-verbal IQ? Are any differences specific to the components of language being assessed?.....	163
7.2.1 Non-offender performance on the quantitative language tests .....	163
7.2.2 Testing the relationship between offending behaviour and language.....	164
7.3 Research Question 4: What perceptions do young people have of their literacy and communication skills and do these perceptions validate the findings obtained from the quantitative language assessments? .....	166
7.4 Research Question 5: What experiences do young people have of using language in various settings such as school, home and the youth justice system and does this differ depending on whether they are offending or not? .....	168
7.4.1 Explaining differences in confiding in others.....	168
7.4.2 Explaining the frequency of conflict and aggression .....	168
7.4.3 Using language to solve conflict .....	169
7.4.4 Poor comprehension fuelling frustration .....	169
7.4.5 Pragmatics.....	170
7.4.6 Differences in the level of support experienced and how this affects behaviour.....	170
7.4.7 Self-perception and self-confidence affecting behaviour.....	171
7.5 Research Question 6: Do the results support either the social adaptation model or social deviance model of language and behaviour? .....	171
7.5.1 Model of social adaptation .....	171

## Contents

7.5.2 Model of social deviance .....	172
7.5.3 Evaluating the two models .....	173
7.6. Research Question 7: Do any of the demographics of young offenders confound the association between language, literacy communication and behaviour and how might these relate to the theories of social dis-advantage, adolescence and attachment discussed?.....	174
7.7 Using linguistic theories of deficit and difference to explain the relationship between language and offending behaviour.....	178
7.7.1 Theory of deficit.....	178
7.7.2 Theory of difference .....	180
7.8 Research Question 8: What are the implications for Speech and language support/services? .....	181
7.8.1 SLT intervention for YOs .....	181
7.8.2 SLT input for teachers and young people in secondary school education .....	182
7.8.3 Using modern technology for SLT intervention on young people.....	184
7.8.4 Supporting parents of YOs or young people with emotional-behavioural problems.....	185
7.8.5 Supporting young people's and YOs' social cognition and pragmatic skills .....	186
7.8.6 Encouraging a positive youth development to increase self-esteem and confidence in young people and young offenders.....	187
7.9 The benefits and limitations of incorporating mixed method research on YOs' language and behaviour. ....	189
7.9.1 Validity and reflection.....	191

## Contents

Appendix 1: Interview Schedule Questions.....	196
Section 1.....	196
Section 2.....	197
Section 3.....	198
Appendix 2 .....	199
Section 1 – Vocabulary.....	199
Second part: Recognition.....	199
Section 2: Statements .....	201
Appendix 3: Ethics Confirmation Form .....	202
Appendix 4: Table to show how many YO's met the 16 year old normative mean score of the language assessments.....	203
Appendix 5: Table to show how many YO's and non-offenders met the 14 year old normative mean score of the language assessments. ....	206
References .....	208_Toc39690271

# List of Tables

---

4.2 Table 4.1: The crimes committed by the offender group.....	86
4.7 Table 4.2: The frequency of participants in the offender group depending on gender, ethnicity, looked after status and crime committed. ....	102
5.1 Table 5.1: Mean and SD scores for the offender and non-offender group on each language test. ....	107
5.1 Table 5.2: The difference between the offender raw scores to the assessment norms expected of a 16 year old matched on number of utterances. ....	108
5.1 Table 5.3: The difference in SD between the assessment means expected for a 14 year old and the offender and non-offender mean scores. ....	109
5.2 Table 5.4: Reporting of binary logistical regression analyses for each language assessment on offender status.....	112
5.3 Table 5.5: Results from a PCA extracting 3 factors based on results from eigenvalues and a scree plot.....	114
5.6 Table 5.6: Mean and SD of language scores for male and females in the offender group .....	120
5.6 Table 5.7: Mean and SD of language scores for male and female non offenders.....	121
5.6 Table 5.8: Mean and SD scores for the looked after and non-looked after young offenders on each language test. ....	122
5.6 Table 5.9: Offenders Mean and SD language scores based on ethnicity grouping .....	124
5.6 Table 5.10: Non offenders mean and SD language scores based on ethnicity grouping .....	125
5.7 Table 5.11: Key stage 2 and 3 results for English, Maths and Science of offenders and non-offenders.....	126
5.7 Table 5.12: Key stage 2 and 3 results for English sub-components; Reading, Writing and Speaking and Listening of offenders and non-offenders. ....	129
5.7 Table 5.13: Predicting offender status by sub-components of Key Stage English key results using logistic regression analysis.....	130
6. Table 6.1: Table of super-ordinate themes and there associative sub-themes, obtained from analysis of all 28 interviews of the offender group and 25 interviews from the non-offender group. ....	134
6.2 Table 6.2: Participants' perceived language ability and satisfaction of language .....	135

# List of abbreviations (In order of appearance)

---

## Chapter 1

YJS = Youth Justice System/Service.

YOs = Young Offenders.

YOI = Young Offenders Institute.

SEN = Special Educational Needs.

EBD = Emotional Behavioural Difficulties.

SLCD = Speech, Language, Communication Difficulties.

YJB = Youth Justice Board.

YOT= Youth Offending Teams.

YRO = Youth Rehabilitation Order.

ISSP = Intensive Supervision and Surveillance Programme.

DTO = Detention Training Order.

STC = Secure Training Centres.

SES = Social Economic Status.

RSQ = Response to Stress Questionnaire.

SEM = Structural Equation Models.

NV = Non-Verbal.

SLI = Speech and Language Impairment.

SSLD = Specific Speech and Language Difficulties.

SLCN = Speech, Language and Communication Needs.

## Chapter 2

TROG = Test of Reception Of Grammar.

TOAL = Test of Adolescent Language.

BPVS = British Picture Vocabulary Scale.

## List of abbreviations

CELF = Clinical Evaluation of Language Fundamentals.

PPVT = Peabody Picture Vocabulary Test.

CASL = Comprehension Assessment of Spoken Language.

SLT = Speech Language Therapist.

SD = Standard Deviation.

TLC = Test of Language Competence.

WORD = Wechsler Objective Reading Dimension Test.

IQ = Intelligence Quotient.

SECAP = Secure Care Psycho-social Functioning.

TOPL = Test of Pragmatic Language.

TOLD = Test of Language Development.

ACE = Assessment of Comprehension and Expression.

MIRA = McMillan Individual Reading Analysis.

CBCL = Child Behaviour Checklist.

TRF = Teacher Report Forms.

VRT = Verbal Reasoning Task.

SDQ = Strengths and Difficulties Questionnaire.

JRS = Junior Rating Scale.

LI = Language Impairment.

BD = Behaviour Disorder.

RD = Reading Disorder.

CREV = Comprehensive Receptive and Expressive Vocabulary Test.

DSM = Diagnostic and Statistical Manual.

DLD = Developmental Language Disorder.

IMD = UK National Indices of Multiple Deprivation.

TOWRE = Test Of Word Reading Efficiency.

CNRep = Children's Test of Non-Word Repetition.

## **List of abbreviations**

WASI = Wechsler Abbreviated Scale of Intelligence.

CATS = Cognitive Ability Test Scores.

SAdv = Social Advantage.

SDis = Social Disadvantage.

EDI = Kindergarten Early Developmental Instrument.

FSA = Foundation Skills Assessment.

MCS = Millennium Cohort Study.

BAS = The British Ability Scale.

BSR = Bracken School Readiness.

NLSY = National Longitudinal Survey of Youth.

AFQT = Armed Forces Qualification Test.

HOME = Home Observation for Measurement of the Environment Scale.

MLU = Mean Length of Utterance.

PIAT = Peabody Individual Achievement Test.

BLOC = Objective Language Criteria Test.

TAMAI = Auto evaluative Multifactorial Child Adaptation Test.

ANOVA = Analysis of Variance.

## **Chapter 3**

ADHD = Attention Deficit Hyperactive Disorder.

ASD = Autism Spectrum Disorder.

BNT = Boston Naming Task.

SALT = Systematic Analysis of Language Transcripts.

NDW = Number of Different Words.

TNW = Total Number of Words.

SI = Subordination Index.

BOC = Broadmoor Observation of Communication.

## **List of abbreviations**

### **Chapter 4**

FSM = Free School Meal.

C unit = Communicative Units.

WIAT = Wechsler Individual Achievement Test.

WRAT = Wide Range Achievement Test.

CA = Chronological Age.

UP = Understanding Paragraphs.

RS = Recalling Sentences.

WISC = Wechsler Intelligence Scale for Children.

MANOVA = Multivariate Analysis of Variance.

IPA = Interpretative Phenomenological Analysis.

CV = Criminal Vocabulary.

### **Chapter 5**

N= Number of participants.

NVIQ = Non-Verbal Intelligence Quotient.

CVTOT = Criminal Vocabulary Total score

PCA = Principal Component Analysis.

DW = Durbin Watson.

LA = Looked after.

KS = Key stage.

### **Chapter 7**

ICT = Information Computer Technology.

YJB – Youth Justice Board.

ACT - Attachment Communication Training.

MST = Multi-Systematic Therapy.

SST = Social Skills Training.



# Chapter 1: Adolescent young offenders

---

This chapter will explore the demographics associated with the youth offending population and will discuss reasons for their offending behaviour that are relevant to the developmental period of adolescence.

The chapter will introduce:

- The prevalence of youth crime within England and Wales and the cost of this to the society (Section 1.1)
- Risk factors associated with offending rates such as education, mental health and employment (Section 1.2-1.3)
- The recent reform of the youth justice system (YJS) focusing on the government's aim to prioritise community involvement, reparation and rehabilitation for young offenders (YOs) as an alternative method to reduce offending rates (Section 1.4)
- The physical and psycho-social changes that are present during adolescence drawing upon the storm and stress theory and modern evolutionary socialization theory in explaining behaviour (Section 1.5).
- The influence parenting and communication has on the behaviour and development of adolescents with reference to conflict and environmental stress (Section 1.6).
- The self-identity theory and the associated empirical evidence that aims to explain and define the psycho-social outcomes associated with adolescence and offending behaviour (Section 1.7).
- The implications of speech and language impairments for adolescents in relation to forming social identities and relationships with others. The impact on self-esteem, shyness, and sociability is also addressed with reference to research evidence and in reference to the social adaptation model, used to explain behaviour (Section 1.8).
- The prevalence of speech language and communication needs in youth offenders (YOs) and the implications of this in relation to the YJS (Section 1.9).

## 1.1 Youth crime statistics

### 1.1 UK statistics of crime prevalence and cost

A large proportion of crime committed in England and Wales is committed by young people, with 70,000 young people entering the criminal justice system in 2007 (UK Prince of Wales Trust, 2007). Nearly all young people in custody are aged between 15-17 years old (Ministry of Justice: Transforming Youth Custody, 2013) and one third of anti-social behaviour crimes are committed by young people aged between 13-19 years (Youth Matters, 2005). The adult and youth prison population has also doubled since 1993 (Breaking the Cycle, 2010). England and Wales have the second to largest prison population in Western Europe with over 125,000 offenders being held in prison during the year of 2007 (Breakthrough Britain, 2009).

A slightly higher percentage of young males offend than females (Armstrong, 2005), with 94% of YOs in custody during 2011-12 being males, of which 29% were of mixed ethnicity (Transforming youth custody, 2013). In addition, 10% of children in care aged 10 years or over were offending. Children in care were also reported as being three times more likely to offend than children who were not in care (Care Matters, 2007).

Although crime rates are decreasing (Ministry of Justice: Transforming Youth Custody, 2013), re-offending rates remain high. For example, the Green paper (Breaking the Cycle, 2010) revealed that 68% of YOs on community orders and 75% of those in custody reoffended after completion of release. Similarly, the average number of previous offences committed by those in custody during the years 2010-2011 was at least 11 (Breaking the Cycle, 2010).

The financial costs of crime for society are high. Crime on average costs the tax payer 20 billion pounds a year (Swift and Sure Justice, 2012), partly due to the high reoffending rates found for those serving shorter custodial sentences (Breaking the Cycle, 2010). For each YO, costs can amount to around £1200 for police costs and £2500 for court costing (The Audit Commission, 1996). Furthermore, around 294 million pounds is spent on secure facilities for those in custody (The Audit Commission, 2004). However, around 90% of crime is not reported (Department for Children, Schools and Families, 2009) and so these figures may be underestimating the true cost of crime on society. It is predicted that the government could save around 80 million pounds a year on addressing youth crime and re-offending through successful intervention strategies (The Audit Commission, 2004).

### **1.2-1.3: Education experience and mental health needs of youth offenders**

## **1.2 Education experience and needs of youth offenders**

### **1.2.1 Educational experience**

YOs attend significantly less school in comparison to their peers. The 2004 Audit Commission reports that 9 out of 10 YOs residing in secure training missed out on several years of schooling. A third of those in custody for the first time had not received any education for 6 months. This is partly due to the option of reduced formal schooling timetables as a way of encouraging YOs and excluded young people to continue in education. However, it appears that these alternative options are not always available and so YOs and pupils who have been excluded are often not enrolled in formal schooling (Audit Commission, 2004).

School truancy is high in YOs with this demographic being ten times more likely to miss school (UK Princes Trust, 2007) and 30% being reported as regularly truanting from school (Centre for Social Justice, 2009). Of those YOs situated in a Youth Offending Institute (YOI), 36% of boys and 41% of the girls aged 14-15 were under 14 years of age when they had last attended school education (Ministry of Justice, 2013).

Young people excluded from school are far more likely to offend with 60% having done so compared to 26% of those enrolled in mainstream school (Department for Children, Schools and Families, 2009). The rate at which YOs are excluded from school has also increased since the 1990s, with recent figures showing three out of four YOs are excluded (Audit Commission, 2004). Additionally, 49% of men and 33% of females YOs in custody are excluded compared to 2% of the normal population (Centre for Social Justice, 2009).

Recent government statistics show that most school exclusions were a result of behaviour problems exhibited by boys and exclusions were more likely to occur in schools situated within areas of social disadvantage. Statistics reveal the mean age for exclusions for both boys and girls is 13-14 years and most of the young people excluded were of black Caribbean and mixed ethnicity, with the latter being three times more likely to be excluded (Department for Education, 2012).

The SEN Green Paper (DFES, 2011) describes young people with SEN as those who face learning difficulties that require extra educational support. The two most common forms of SEN are social, emotional and behavioural disorders (EBD) and speech communication language difficulties (SLCD), the latter being more common in primary than secondary school. Those with special educational needs (SEN) are eight times more likely to be excluded permanently from school in comparison to children with no SEN (Department for Education, 2012). The 2008 census showed that 64% of permanently excluded children had SEN (Department for Education 2011).

### **1.2-1.3: Education experience and mental health needs of youth offenders**

#### **1.2.2 The educational needs of young offenders**

Young people with SEN are less likely to gain employment, enter further education or training post school (DFES, 2005) and 15% of YOs are known to have SEN (Audit Commission, 2004). Government statistics highlight how SEN rates differ by gender, with boys being four times more likely to develop SEN during the secondary school years (DFES, 2011). Other findings show SEN to be more frequent in areas of social disadvantage (DFES, 2011, Freeman & Hartshorne, 2009).

Young people with SEN are less likely to gain 5 A-C GCSE grades. Follow-up findings also reveal that 30% of young people with SEN at year 11 were less likely to enter training or education at 18 years than those without SEN (13%), (DFES, 2011). Furthermore, with a significant proportion of YOs in care, it is noteworthy that only 12% of young people in care gained 5 A-C GCSE grades in comparison to 59% young people who were not in care (DFES and Skills, 2007).

Perhaps related to these educational risk factors, employment outcomes are poor for adult and YOs. For example, 67% of offenders are unemployed before they entered custody (Centre for Social Justice, 2004) and offenders are 13 times more likely to be unemployed compared to non-offenders (UK Princes Trust, 2007). Fletcher (1996), (cited in UK Princes Trust, 2007) found that 90% of prisoners left custody without securing any employment due to their lack of education and formal qualifications (UK Princes Trust, 2007). Studies have also shown that having a level 1 qualification in literacy increased the employment wage by around 7%, demonstrating the important role of language and literacy in young adult outcomes (UK Princes Trust, 2007).

#### **1.3 Mental Health of youth offenders**

Over 70% of male and female prisoners have some form of mental health disorder compared to 2-5% of the general population (Breakthrough Britain; The Centre for Social Justice, 2009).

A survey in 2011-2012 found that 27% of YOs in custody reported mental health difficulties, with one fifth having harmed themselves and one tenth having tried to commit suicide (Ministry of Justice, 2013). There are also higher incidences of depression, schizophrenia, personality disorders and neurotic disorders in the adult and youth offender population compared to the general population (Breakthrough Britain; The Centre for Social Justice, 2009, Audit Commission, 2004).

#### **1.4 Reform of the Youth Justice System (YJS)**

The government paper 'Misspent Youth' (Audit Commission, 1996) reviewed the current youth justice process, concluding that it was too costly and was not successfully addressing risk factors associated with youth crime, or allowing victims to be involved in a process of reparation. The 'White Paper; 'No more excuses' (Ministry of Justice, 1997) detailed a new approach involving

## **1.4: Reform of the youth justice system**

confronting YOs with the consequences of their offending by self-reflection; a process involving members of the community, such as parents and victims of crime. In this new approach, young people would be identified as being at risk of criminal involvement as early as possible and a multi-service approach to address the risk factors associated with offending would be implemented. Based on reports showing high re-offending rates for offenders' leaving custody, the government aimed to use custody as a last resort. Instead, the government promoted the use of alternative rehabilitation strategies that aimed to address the risk factors.

As a result of this reform, the 1998 Crime and Disorder Act was implemented. This new order created the youth justice board (YJB) and youth offending teams (YOT) assigned to different areas of the country. The aim of the YJB is to monitor and co-ordinate the running of the YJS. The YOT conduct and support the use of assessment and intervention programmes, whilst supervising the community reparation order, bail supervision, secure accommodation, parent and child orders and preparing court reports. The YOTs include staff from varied occupational backgrounds including probation, education, and health and social care (Ministry of Justice, 1997).

### **1.4.1 Asset tools, Reprimands and Final Warnings**

The needs and risks of YOs are identified and collated using of an assessment tool- ASSET. This encourages the YOT worker and young offender to jointly decide on the best intervention programmes for addressing identified needs. The ASSET is completed at the beginning and end of a sentence and then is monitored every three months. This reduces the need for court referral or custody and in some cases the individual can complete their intervention without receiving a criminal record (Audit Commission, 2004).

Before the 1998 Crime and Disorders Bill, young people who committed a non-serious offence for the first time would be cautioned by police as a method of deterring further criminal activity. These cautions were replaced by verbal warnings given by police named reprimands and final warnings (FW) with the latter involving offence related programmes implemented by the YOT to reduce re-offending (Audit Commission, 2004).

Other pre-court measures available within the YJS include curfews for YOs less than 16 years of age. These curfews prevent YOs from entering areas without supervision during certain times. Where these curfews are breached a court can apply a child safety order in which a social worker or member of a YOT will then supervise the YO. The court can also impose electronic tags as a means of monitoring behaviour and preventing a breach of contract (Ministry of Justice 2011).

## **1.4: Reform of the youth justice system**

### **1.4.2 Referral order**

When a young person goes to court for the first time and pleads guilty to their offence, the court decides on the length of punishment and then refers the case to the YOT and a panel of trained community volunteers. This is known as a referral order and together the volunteers compile a contract with the YO, their parent (or appropriate adult), the YOT worker and where applicable the victim. This method is embedded in the philosophy of restorative justice, which aims to allow the victim to seek compensation through having an input on the contract. The community panel decide on what programmes of support suit the young person with regards to the risk factors they present and programmes can involve family counselling, drug rehabilitation, community reparation, educational training and attendance monitoring as well as curfews (Ministry of Justice: Restorative Justice Action Plan, 2012).

### **1.4.3 Youth Rehabilitation Order (YRO), Intensive Supervision and Surveillance Programme (ISSP) and Detention Training Order (DTO).**

The main community sentence for YOs is the Youth Rehabilitation Order (YRO). The YRO comprises of many community sentences (18 in total) to enable flexibility in meeting the demands of the offender and victim (Audit Commission, 2004). Since 2001, a more intense community court order known as an intensive supervision and surveillance programme (ISSP) may be delivered. ISSPs run for a maximum of 6 months and include weekly 25 hours victim reparation placements, education and various offending courses, and are intensely supervised through electronic tagging. For offenders aged between 10-17 years who are persistent offenders or whose offence is considered very serious, a Detention Training Order (DTO) can be imposed on them by the youth court. This sentence involves the offender spending half the time in custody and the other half serving community service. The sentence may be reduced if the youth court and YOT believe the offender has shown to have followed the sentence requirements. For those that breach the sentence, a further fine or custodial period may be put in place along with access to secure accommodation (Audit Commission, 2004).

There are three types of custodial accommodation available for YOs under 18 years old. Secure Training Centres (STC) accommodate 15-17 year olds in England and Wales and hold around 40-440 beds. These centres provide 15 hours of education and 10 hours of purposeful work a week. SCTs are available for 12-17 year olds and are run by private contractors, holding a smaller number of 58-87 beds. The number of hours provided by SCTs equates to 25 weekly sessions of education. Finally, for YOs aged 10-17 years, smaller local authority run secure children's homes are available. These are also used for looked after children who reside there for welfare reasons and 30 hours of education training is provided a week (Ministry of Justice: Transforming Youth Custody, 2013).

## 1.5: Explaining offending behaviour using theories of adolescence

### 1.5 Explaining offending behaviour using theories of adolescence

There are various explanations that define the period of adolescence. These are often based on the psycho-social and behavioural changes that occur within young people during this stage of development. Hall (1904) first developed the storm and stress theory in order to explain the high rates of risky behaviour, negative affect and parental conflict often observed during adolescence (Williams & Thurlow, 2005; Smith, Cowie and Blades, 2003). It was proposed that such behaviour is universally present in all adolescents and is caused by the biological hormonal changes within the body, plus environmental cues and stressors.

Research evidence shows associations between norm violation and puberty onset in girls. Early maturing girls experienced more under-age drinking, more sexual behaviours, and displayed more negative attitudes towards school education compared to girls who had not yet reached this level of pubertal maturation (Magnusson, 1985). Parental conflicts are shown to increase during early onset of puberty, as well as higher rates of negative mood (Arnett, 1999; Steinberg, 1987). An experience sampling method was incorporated by Buchanan and Holmbeck (1998) to show how adolescents would often report high mood swings during the day. Rutter, Graham, Chadwick and Yule (1976) found from a random sample of 200 14-15 year old adolescents living on the Isle of Man that a third of the group reportedly criticised their parents, with 1 in three arguing with them and one fifth of the sample feeling miserable or sad. In addition, 16.3% of the group displayed psychiatric symptoms based on interview assessment.

Behaviours explained by the storm and stress theory may not occur universally during adolescence as the theory proposes. The evolutionary socialization theory suggests that family interaction and parenting in particular are crucial in influencing the extent to which adolescents' partake in risky behaviour (Belsky, Steinberg and Draper, 1991). In this case the degree of family stressors that exist in the environment influence pubertal onset, which then leads to risky behaviour (Draper and Harpending, 1982). From an evolutionary perspective, the emergence of environmental stress speeds up the pubertal maturation process in order to fully maximise the chance of sexual reproduction. The authors acknowledge the fact that some behaviours deemed risky such as substance misuse, may not have anything to do with promoting sexual reproduction. However, the onset of puberty is associated with early sexual activity, which in turn encourages riskiness at a broader level (Belsky et al 1991). Evidence shows early maturing boys and girls to demonstrate behaviour problems, with boys displaying more instances of external conduct disorder and girls showing more instances of internalised behaviour problems, such as depression and anxiety (Belsky, et al 1991).

## **1.6: The influence of parenting on behaviour outcomes in adolescence: Environment and genes**

Magnusson (1985) discusses a theory that explains that the deviant behaviour encompassing early pubertal onset may be due to the young person aspiring to an adult social role. The young person is developing and maturing into an adult and so because of this begins to partake in adult-like activities, such as socialising with older aged children, drinking and having sexual relationships. This is partly as preparation for parenthood and is more likely to ensue for adolescents' that develop pubertal maturation earlier (Magnusson, 1985).

### **1.6 The influence of parenting on behaviour outcomes in adolescence: Environment and genes**

The parenting styles and interactions experienced by children can explain their risky behaviour because of the way in which children internalise this behaviour. Children will model their parent's behaviour, using it to aid their own developmental model of attachment (Ainsworth Blehar, Waters and Wall, 1978). Children who are reared in a more secure loving home in which strong bonded relationships are common, develop a strong bond with their parents and then are more likely to continue this level of emotional support through their own child rearing (Ainsworth Blehar, Waters and Wall 1978; Bowlby, 1969). Based on the evolutionary perspective of adolescence, young people are also more likely to mature at a steady rate compared to those who experience more stressful upbringings, or who develop abnormal internal models of relationships. The latter group will develop at a faster rate, participating in more risky behaviour in order to maximise reproductive opportunities (Belsky, et al 1991).

#### **1.6.1 Genes**

Ellis and Garber (2000) found maternal psychopathology to predict development of early pubertal onset in girls, which was also mediated by mother's stress and father absence. Furthermore, when mothers were having an intimate relationship with either a stepfather or boyfriend that was not the biological father of the child, this increased the relationship between pubertal onset in the girls and family stress. A relationship was also found between the onset of puberty between both mother and child. This finding emphasizes the effect of environment stress on pubertal onset as well as the alternative interpretation that behaviour be based on the genetic similarities found between the mother and child.



## **1.6: The influence of parenting on behaviour outcomes in adolescence: Environment and genes**

### **1.6.2 Environmental Stress**

Economic strain can also affect how adolescents and parents communicate. Wadsworth and Compass (2002) measured the behaviours of adolescents in families residing within areas of low Social Economic Status (SES) using the *Youth Self-Report Scale* (Achenbach, 1991), as well as measuring their coping behaviour using the *Response to Stress Questionnaire* (RSQ) by Conner-Smith, Compass, Wadsworth, Thomsen and Saltzman (2000). Results revealed significant positive correlations between economic stress and both anxiety-depression rates and family disengagement. Structural Equation Models (SEM) reported low SES to correlate with family conflict, which in turn predicted 34% and 45% of variance for anxiety-depression and aggression respectively.

Significant life events in adolescence are likely to speed up the process of pubertal development and associated risky behaviours. Ham and Larson (1993) conducted a study with 483 5<sup>th</sup>-9<sup>th</sup> grade adolescents aged between 14-15 years, in which they were all asked to report their mood states during any time of the day when notified by a bleeper. This type of method is known as experience sampling (Csikszentmihilia, and Larson, 1987). External and internalising behaviours were also recorded by teachers completing classroom adjustment scales and by parents completing the *Child Behaviour Checklist* (Achenbach and Edelbrock, 1986). In addition, the adolescents completed the *Child Depression Inventory* (Kovacks, 1985) and a life event questionnaire (Ham and Larson, 1992), which asked whether the child had experienced any of the 51 life events. School grades were also obtained. Ham and Larson (1993) found that the older adolescents and in particular boys reported more negative life events. This may have been due to the older adolescents having more experience and knowledge of what constitutes a life event and the younger adolescents not adequately labelling and reporting an affect in relation to complicated events. However, a hierarchical regression found that these negative life events statistically predicted 10% of variance in negative affect. This was the case when gender and grade were also controlled for. Additional analyses of the life events revealed that family life events to be the largest predictor negative affect for students. Education attainment and school adjustment are negatively correlated with negative life events, but parent reports of bad behaviour were positively related to negative life events, as were the student's self-reports of depression.

## **1.6: The influence of parenting on behaviour outcomes in adolescence: Environment and genes**

### **1.6.3 Parenting and family conflict**

Research has shown that inconsistent aggressive and harsh parenting can promote problem behaviour in adolescents. Based on questionnaire responses from 608 parents and their adolescent children, Ary et al (1999) found that poor parenting had a direct influence on problem behaviour in adolescent development. A longitudinal design involving three time points was used to test the hypothesis that family conflict would lead to less family involvement, which in turn would increase problem behaviour in the adolescent at time 2 and 3. Using SEM, a model was developed accounting for 46% of the total variance. In addition, parental monitoring had a direct effect on problem behaviour as did the association with deviant peers, which mediated the relationship between the former variables. Family involvement and family conflict were negatively correlated as predicted and family conflict directly influenced the association with deviant peers, which was further mediated by parental monitoring. Thus, family input was shown to be a key contributor to deviant participation whether it was direct or through peer influence.

The occurrence of family conflict is high during adolescence. Galambos and Almeida (1992) also found differences in the type of conflict present between parents and adolescents. Parents argued more about household chores, appearance and politeness, while adolescents focused on behaviour and substance abuse. One explanation for this was adolescents' perception of parental invasion. The longitudinal design adopted in this study revealed a linear trajectory of declining conflict as adolescent age increased. Noller and Callan (1990) also found gender differences on the degree of reported adolescent openness, with girls disclosing more than boys and girls disclosing more to their mothers than their fathers.

Steinberg (2001) comments on the developmental impact authoritative parenting can have, with a central focus on autonomy. Steinberg defines authoritative parenting as warm and supportive, yet consistent in its provisions, rules and expectations. This method of parenting encourages independence and exploration, enabling the child to develop a strong sense of identity (Wiley and Berman, 2012). Research has identified positive outcomes that are associated with authoritative parenting. This includes reducing delinquency and depression as well as increasing self-esteem, educational attainment and peer interaction (Steinberg, 2001).

## **1.6: The influence of parenting on behaviour outcomes in adolescence: Environment and genes**

### **1.6.4 Communication between parent and adolescent**

The influence parents have on the development of offending behaviour in adolescence is largely based on socialization, in the form of parental-child communication (Ary et al, 1999). Communication can be defined as the expression and receipt of ideas and feelings (Riesch, 2006). Using canonical correlation, Hartos and Power (2000) tested the association between communication and two categories of psycho-social outcomes of mothers with that of their adolescents'. *The Youth Self Report* and *Child Behaviour Checklist* (Achenbach and Edelbrock, 1986) measured psycho-social outcome and communication using the *Parent-Adolescent Communication Scale* (Olson, 1985). Communication considered low in quality by adolescents along with higher rates of anxious-depressed behaviour from adolescents, correlated positively with communication that was rated as high in quality and with lower ratings of anxiety-depression from the mother. An agreement on the relationship between communication and aggression was found between mother and adolescent with positive correlations found for low quality communication and aggressive behaviour ratings. This finding highlights the impact that family communication can have on both externalising and internalising behaviour, as well as the difference in perception that can occur between parent and child. This could promote further psycho-social problems for the adolescent if their parent is unaware of any difficulties, as the first canonical correlation revealed parents to rate their adolescent child as less anxious-depressed in comparison to the adolescents' self-report rating.

The degree of positive communication present between parents and adolescents has also been shown to affect participation in risky behaviour (Jackson, 1998). Positive communication has been defined as involving a shared consensus of perception and understanding (Fogel, 1993). Marta (1997) researched the degree of support and openness present in family communication in Italy, between 279 adolescents aged between 16 and 19 years and their parents. They measured responses using the *Parent-Adolescent Scale* (Olson, 1985) and also outcomes of risk that were associated with self-esteem, behaviour and education. A negative relationship was found between adolescent perceived support and openness within their family communication, with increased risk and a positive relationship regarding increased risk was found with the frequency of problems encountered within their family communication. More support was evident in mothers' accounts of communication experience, and less openness was present in fathers' communication.

Drury (1998) asked a group of adolescents aged between 12-20yrs to report more instances of negative communication with authority figures, which included parents. The perception of being unfairly treated by such figures was one explanation for this dis-satisfaction. However, this finding

## **1.7: Self and social identity in adolescence**

was not found for the older aged adolescents, suggesting they may feel less inclined to challenge authority and may have already achieved a sufficient level of autonomy.

### **1.6.5 Limitation of cross-sectional designs**

Most of the research discussed incorporate cross-sectional methods of comparing groups of children matched on pubertal onset or pubertal stage. This removes the control either for chronological age or pubertal physical maturity, of which both can affect behaviour (Steinberg, 1987). Furthermore, the cross sectional method removes the ability to infer causation between pubertal onset, stress and behaviour. Despite the evolutionary interpretation that stress causes pubertal onset and risky behaviour, the opposite may also be true (Belsky and Steinberg, 1991).

One study that used a longitudinal approach to assess the behavioural differences of children's pubertal development was that of Magnusson (1985). Magnusson collected the different dates of a large group of girls' menarche by using self-report questionnaires. Four different groups were then formed based on these results and further information regarding education attainment, norm violation and alcohol consumption was also recorded by self-report. There was a higher frequency of norm violations for girls earlier on in their menarche stage, who also perceived education more negatively than the later developers. In addition, the early maturing girls had more contact with the opposite sex, more instances of sexual intercourse and often socialised with girls older than themselves. Furthermore, there was a relationship between associating with these older girls and the frequency of norm breaking behaviour, with the older girls being more likely to participate in such behaviour.

## **1.7 Self and social identity in adolescence and its effect on behaviour**

### **1.7.1 Self-identity and behaviour in adolescence**

Erikson (1968) views identity is an essential part of the development of adulthood, appearing predominantly within the adolescent period. This identity theory states that adolescents go through a transition of identity confusion and turmoil, through which they seek out a stable identity towards the later stages of adolescence. It is through the period of identity experimentation that individuals find their true identity and it is this that also explains their increased participation in risky behaviour. Identities can refer to sexual identity, political, religious, occupation and social identity. Marcia (1966) developed an identity developmental trend based on Erikson's theory, which incorporated different stages and levels of both exploration and commitment.

Marcia's theory focuses on the interaction of various trends of exploration and commitment, which differs from Erikson's description of a more linear trend of stages in reaching identity achievement.

## **1.7: Self and social identity in adolescence**

Marcia's (1966) stages were also grounded within responses to a large survey conducted on 86 male psychology students, in which they were asked about their identity commitment to religion, occupation and politics through semi-structured interviews. Four stages emerged: Foreclosure, Diffusion, Moratorium and Achievement. The foreclosure stage involves committing to an identity without prior experimentation or experiencing alternate views. One example of this refers to accepting parental or peer views unconditionally. The diffusion state involves a lack of either exploration or commitment resulting in indifference whereas the moratorium stage involves being faced with an 'identity crisis' through which different identities are explored. The identity achievement often comes after some level of moratorium, whereby commitment is formed after several potential identities have been explored and tried.

Research evidence showing higher levels of anxiety, depression and delinquency in individuals who have not yet committed to an identity supports Marcia's (1966) theory (Wiley and Berman, 2012). The theory assumes the importance of committing to an identity in relation to wellbeing and positive development, by avoiding the likelihood of possible identity confusion and distress (Erikson, 1968; Marcia, 1966). Individuals who may be considered highly stressed or anxious may also face higher incidence of anxiety in relation to their identity development. This can then result in a further increase of internalized and externalized behaviour problems (Kroger, 2007; Wiley and Berman, 2012; Meeus 1999; Marcia and Friedman, 1970).

### **1.7.2 The influence of parental identity development on adolescent identity and behaviour**

Children and adolescents who develop a strong secure attachment bond with their parents tend to develop their own healthy identity, because of the way in which their parents support and trust their choices (Crocetti, Rubini and Meeus, 2008; Samuolis, Layburn and Schiaffino, 2001, Beyers and Goosens, 2008; Blustein, Walbridge, Friedlander and Palladino, 1991). This strategy enables parents to guide their child in committing to certain attitudes and behaviours, rather than pressurising them to adopt one. Research has shown that parents who are emotionally supportive in providing a secure attachment increase their child's participation of identity exploration and commitment compared to those parents who lack this encouragement and support (See Wiley and Berman 2012; Elliot and Thrash, 2004; Lucykx, 2007).

## **1.7: Self and social identity in adolescence**

### **1.7.3 Social identity and behaviour in adolescence**

Social identity is both important and prominent during adolescence, when the peer group is most influential and individuals often compare themselves to their peers as a way of developing their own self-identity (Kroger, 2000). The social identity theory provides an explanation of how individuals form and adhere to their own group identity in order to feel attached to their group's membership. This feeling of being connected to a social peers group is often sought during the adolescent period (see Tanti, Stukas, Halloran and Foddy, 2011; Tajfel and Turner, 1979). Feeling part of a group also results in increased self-esteem and often positive outcomes in psychological wellbeing and behaviour (Jerome 2002; Tajfel and Turner, 1979). Social identity also increased self-efficacy, which is defined as the belief one has about coping and managing certain tasks and functions and this belief has positive implications for the psychological functioning of individuals (Bandura, 1986).

Self-categorisation theory (Turner, Hogg, Oakes, Reicher and Wetherell, 1987) also explains the cognitive processes involved in forming a social identity through conforming to a group's norms relating to behaviour, physical appearance or in attitude. This is dependent on the current meaningful cognitive representations one has of oneself. Furthermore, differences between this 'in-group' and other 'out-groups' are then highlighted and exaggerated, in order to further promote the feeling of an intact, tight and cohesive group membership (Turner et al 1987). The process of de-personalisation also begins to merge once this cohesive group identity is formed, which often results in self-stereotyping by which the self is positively perceived in relation to the group's characteristics (Crawford, Sherman and Hamilton, 2002; Rydell, Hugenberg, Ray and Mackie, 2007).

### **1.7.4 Ethnic Identity as an example of Social Identity.**

Ethnic identity can be defined as belonging to an ethnic group that affects an individual's cognition emotion and behaviour in accordance to the group's ideas and philosophy (see Swenson and Prelow, 2005). Swenson and Prelow (2005) tested a mediation model, in which adolescents with high levels of high self-efficacy would engage less in deviant behaviour and display positive levels of psychological functioning and that this would more likely occur with supportive parenting (Swenson et al 2005; Wiley and Berman 2012; Crocetti et al ,2008, Samuolis et al, 2001; Beyers and Goosens, 2008; Blustein et al, 1991). Ethnic Identity was also predicted to be more dominant in the ethnic minority group due to their increased sense of cohesion (Wissink, 2008). The adolescents were aged between 13-19 years of age and analysis was conducted on two ethnic groups of African American students who were considered a minority group and European American students. Swenson measured ethnic identity using the *Multi-Ethnic Measure* (MEIM; Phinney, 1992), self-esteem using the *Rosenberg (1965) Scale*, self-efficacy from the *Coping Efficacy Scale*, (Sandler, Tein, Mehta,

## **1.7: Self and social identity in adolescence**

Wolchik, & Ayers, 2000) behaviour using the *Problem Behaviour Frequency Scale* (Farrell, Danish, & Howard, 1992) and depression was measured using the *Centre for Epidemiological Studies Depression Scale* (Roberts & Sobhan, 1992). Ethnic identity was found to be more dominant for the minority group (African American). This also resulted in lower depression rates, which were due to more supportive parenting and higher efficacy rates. As predicted, supportive parenting predicted ethnic identity, self-efficacy as well as promoting better behaviour as did self-efficacy for both groups. However, self-esteem mediated the relationship supportive parenting had on ethnic identity and self-efficacy for the European Americans.

The authors acknowledge the large difference in socio-economic status found between both ethnic groups with more of the minority group's students and parents' having less educational achievement, subsidized lunch and more lived in single parent households. This could have acted as an additional confound in explaining the findings, especially in relation to the parenting on both efficacy and depression. This is based on evidence showing higher rates of depression and stress in families of low SES (Wadsworth and Compass, 2002, see chapter 3).

### **1.7.5 The influence of peer rejection in establishing group identity with deviant peers**

Adolescents that form peer relationships with other deviant peers are more likely to participate in deviant behaviour (Fergusson, Woodward and Horwood, 1999; Simons, Whitbeck, Conger and Conger, 1991; Quinton, Pickles, Maughan & Rutter, 1993). One explanation for this association is based on peer rejection. There is evidence to suggest that rejection from a non-delinquent peer group can result in affiliation with a group that is considered deviant in order to enhance self-esteem (Loeber and Hay, 1997; Simons et al 1991).

Fergusson Woodward and Horwood (1999) tested the relationship between peer relationships and later deviance using a large cohort of 942 children in New Zealand that formed part of a longitudinal project. The students were followed up annually from 4 months up until age 16 and then again at age 18 years. Relationship problems and conduct problems were assessed using the relevant items from the *Rutter and Conners Child Behavioural Rating Scales* (Rutter, Tizard, & Whitmore, 1970; Conners, 1969) in which teachers and parents were asked to complete on behalf of the child. The students (as well as their parents) were asked about their participation in anti-social behaviour and substance misuse, along with how much their peers were involved in these activities. Results revealed a moderate significant relationship between deviant peer involvement and school based relationship problems and a significant relationship between early peer relationship problems and later deviant peer relationships. However, the latter relationship was no longer significant when early conduct problems were added to the regression model, as conduct disorder significantly

## **1.8: SLCN influencing the formation of social identity**

related to both peer relationship problems and later deviant peer affiliations. This suggests that early behaviour is the deciding factor in influencing the association of deviant peers later in time, which would likely enhance the involvement of deviance. This process is labelled as social homophily and explains how children and young people often seek friends of similar personality, interests and other characteristics like behaviour (Kandel Davies and Baydar, 1990). There are limitations with this study regarding the fact that possible early involvement with deviant peers was not recorded and so this may have explained the early conduct disorders.

### **1.8 How learning disabilities and language and communication needs influence the formation of social identity.**

Peer rejection could also occur because of the difficulty some young people have in interacting with their peer group. Young people with learning disabilities or communication impairments may find social interaction and school participation difficult, which as a result can lead to social exclusion. These children may also experience reduced self-esteem (Marton, Abramoff and Rosenzweig, 2005). The recent Green Paper on SEN (2011) revealed that young people with SEN were more likely to express lower wellbeing, have fewer friends and were more likely to report being worried about being bullied.

Marton, Abramoff and Rosenzweig (2005) compared 19 children with Speech Language Impairment (SLI) to 19 typically developing children matched on age (range: 7-10 years). The children in the SLI group reported lower self-esteem levels and found a social pragmatic scenario task more difficult. They used more non-verbal strategies and had a higher incidence of inappropriate comments and questions within the task. Most of the SLI group who had low self-esteem also displayed lower levels of pragmatic ability but a sub-group of children with poor pragmatic ability did report high self-esteem, suggesting a lack of awareness of potential difficulties, socially and academically.

Lindsay and Dockrell (2000) found similar results when they followed up 59 children with Specific Speech and Language Difficulties (SSLD) attending mainstream and specialist schools from two local authorities, as well as an additional 10 children attending specialist residential schools years from ages 8-12 years. Despite all the children in each group showing positive ratings of self-esteem, the group were rated as showing emotional and behavioural difficulties that affected their ability to establish positive peer relationships. Jerome (2002) also compared the self-esteem levels of a slightly older group of SLI children ranging in 6-13 years with typically developing children matched on age. The SLI group reported lower social acceptance and scholastic competence.



## **1.10: conclusion to chapter 1**

### 1.8.1 Shyness and sociability in adolescents with language impairments

Shyness and sociability have also been associated with self-esteem and behaviour. Shyness can be defined as discomfort and inhibition in social situations and is positively related to sociability (See Cheek and Buss 1981). Adolescents with SLI may experience both low self-esteem and shyness, which can result in them becoming anxious of social situations and avoiding them (Conti-Ramsden and Botting, 2004; Coplan, Rubin, Fox, Calkins, and Stewart, 1994).

Sociability refers to the need for social interaction rather than isolation and this is also positively related to self-esteem (Cheek and Buss, 1981). Wadman, Durkin and Conti-Ramsden (2008) measured these traits in order to test both the social deviance and social adaptation model of behaviour in adolescents (Redmond and Rice, 1998). According to the Social Adaptation model, individuals with language limitations will adapt their behaviour by withdrawing from social situations and interactions, thereby lowering their self-esteem further. Based on this interpretation, a relationship between language and self-esteem will occur with the internalised behaviour (shyness) being the mediator. The social deviance model would predict less of an association between language and the social behaviour of shyness and sociability, as this assumes that language and behaviour are both results of a personality or cognitive factor such as mental health. Wadman et al (2008) recruited a sample of 54 adolescents with SLI, aged between 16-17 years as well as a control group of typically developing adolescents matched on age. *The Rosenberg Scale* (1965) was used to assess self-esteem and the revised *Cheek and Bus Shyness and Sociability Scale* (Stritzke, Nguyen, & Durkin, 2004) was used to assess social behaviour. Differences were found between both groups on the shyness and esteem scales, with the SLI group scoring low on both and 62% of the SLI group could be classified as being shy using the Bus scale. There were no group differences on sociability ratings with both scoring fairly high. A hierarchical regression analyses confirmed shyness to contribute significantly to self-esteem, beyond the contribution found by language group. In addition, controlling for shyness led to a non-significant relationship between self-esteem and language, supporting the social adaptation model of language and behaviour (Redmond and Rice, 1998).

## **1.9 Addressing the Language and communication needs of young offenders.**

Speech Language and Communication Needs (SLCN) are a risk factor for Social Emotional Behavioural Disorder (SEBD) yet little has been done by the government in addressing the SLCN of YO's and young people at risk of offending. This is especially important as programmes implemented in youth justice often rely heavily on language ability, such as the family intervention programmes and restorative justice panels (DFES and Skills, 2007; YJB, 2013; Ministry of Justice: Restorative

### **1.10: conclusion to chapter 1**

Justice Action Plan, 2012). For example, the youth justice department stress how important it is that YOs understand the court process and the language used within court. The government acknowledges that magistrates require training on alternative methods of communication in order to successfully engage with young people entering the youth justice system (Audit Commission, 2004). This is even more important when surveys show that 60% court magistrates experience some level of difficulty in conversing with YOs. Furthermore, 80% also report that a young persons' expressive attitude would often influence their decision making process (Audit Commission, 2004).

Addressing, identifying and supporting the speech and language needs of young people has recently been given high priority. The Bercow report (2008) set out key aims for the government to meet with regards to the SLCN of young people. This was to 1); promote the importance and impact of SLCN by establishing a communication champion to help raise this awareness and disseminate council led initiatives and 2); enhance positive child development by increasing parent awareness of SLCN. The early identification and intervention of SLCN through a multi-disciplinary approach was also a key aim established within the report. Lastly, the importance of addressing the SLCN of YOs within the YJS was also given priority. In response to the Bercow report (2008), the Better Communication Project was established by the government. This provides policy makers, researchers and practitioners with aims to effectively meet the SLCN of young people based on a series of research projects. The aims were in relation to developing more evidence based practice in order to produce high quality effective intervention supporting all young people at risk (DFES 2013; Better Communication Research Project).

### **1.10 Conclusion**

This chapter has:

- Revealed the cost youth crime has on society and demonstrated that a holistic approach to intervention is needed to address the risk factors associated with youth crime. This is in accordance to the values of rehabilitation and restorative justice described in the YJS reform.
- Discussed how genetics, environmental stress, family communication and social identity all contribute to the development of attitude, emotion and behaviour during the period of adolescence.
- Highlighted language and communication as necessary skills for progressing smoothly through adolescence.

### **1.10: conclusion to chapter 1**

- Revealed how adolescents with language difficulties struggle in forming identities, communicating positively with their family and coping with life stressors. Adolescents' self-esteem efficacy and sociability levels are more likely to reduce as a result of this.
- Discussed with reference to the social adaptation model, that language limitations are likely to increase withdrawn behaviour reducing esteem even more. In turn, this may increase YOs likelihood of participating in risky behaviour with other offending peers in order to enhance their self-esteem.
- Emphasised the need for more speech-language and communication awareness in the YJS especially when successful participation in the YJS interventions requires good language skills.

# Chapter 2: Examining the relationship between language, literacy, communication and offending behaviour.

---

This chapter will explore the relationship between language, literacy, communication and behaviour and will introduce:

- The association between language and behaviour in the youth offender population (Section 2.1).
- Language and behaviour in children and adolescents that are not incarcerated (Section 2.2)
- The causal relationship between language and behaviour found in longitudinal studies (Section 2.3).
- The theory of social adaptation and deviance and the difficulty in interpreting this with reference to children with pragmatic language problems (Section 2.4).
- Social Economic Status (SES) and the relationship this has with language and behaviour (Section 2.5), literacy outcome (Section 2.6) and parent-child communication (Section 2.7).
- The role attachment has in mediating the relationship between language and offending behaviour (Section 2.8).
- The theory of social capital and whether this can account for the relationship between language and behaviour in areas of low SES (Section 2.9).
- The linguistic theories of deficit and difference in explaining the differences found in language and behaviour dependent on SES (Section 2.10).

## 2.1 Language, literacy and communication of young offenders

Research has often used standardised tests that measure language and literacy against chronological age equivalent scores, to identify discrepancies which would warrant further investigation and possibly intervention. For example, in a study of YOs aged 15-18 years who had been sentenced to custody, Bryan, Freer and Furlong (2007) used the *Test of Reception Of Grammar* (TROG) (Bishop, 2003) to measure grammar through word order and inflections, the *British Picture Vocabulary Scale* (BPVS) (Dunn, Dunn, Whetton and Burley, 1997) for a test of vocabulary, and the *Test of Adolescent Language* (TOAL) (Hammill, Brown, Larsen and Wiederholt, 1994), which incorporates both expressive and receptive vocabulary as well as grammar. They found that the YOs were below the

## 2.1 language, communication and literacy of YOs

average age equivalent mean on all of these tests. On the TROG, 49 YOs met the expected mean score for a 12 year old, with the remainder of the group falling below it. Similarly, on the BPVS the offender group as a whole fell considerably below the tests highest mean score expected for a 15 year old. Thus, the YOs were unable to achieve a mean score equivalent to a much younger child, highlighting their poor grammar and vocabulary skills.

Sanger, Moore-Brown, Magnuson and Svoboda (2001) also used standardised tests to determine whether incarcerated female youths aged 13-18 would display language difficulties that warranted language intervention. They used subsets from the *Clinical Evaluation of Language Fundamentals* (CELF) (Semel, wig and Secord, 1995) to examine both expressive and receptive skills and the *Adolescent WORD test* (Zachman, Huisingh, Barrett, Orman, and Blagden, 1989) to identify problems in semantic processing and expressive word ability. They found that even though as a group the females performed in line with their age equivalent score on the CELF, almost 20% of them qualified for language therapy because of difficulties with word definition and naming synonyms. Furthermore, for those that were viewed as “eligible” for language intervention, their scores from the *Peabody Picture Vocabulary Test* (PPVT) (Dunn, 2007) demonstrated poor receptive vocabulary skills, with 6 of the 10 who had qualified for language intervention scoring 1.3 standard deviations below the test mean. However, in contrast, scores from the Pragmatic subset of the *Comprehension Assessment of Spoken Language* (CASL) (Carrow, 1999) demonstrated above average awareness of pragmatics, as all 9 who qualified for intervention met the norm mean of this test. The authors discuss the high figure of YOs in need of speech and language services that are not being identified and thus missing out on the much needed service. According to the facility records and self-reports obtained from this study, only 3 of the adults had previously received some form of SLT.

Gregory and Bryan (2011) conducted a pre-post intervention study with 72 YOs, who were part of an Intensive Supervision Surveillance Programme (ISSP). They incorporated the CELF as a standardised measure to assess language and communication skills as well as using other more functional measures such as the *Verbal Reasoning Deduction Task* (Johnson, 1998) and observational report checklists such as the *Broadmoor Observation of Communication* (Turner, Pring and Bryan, 2010) and *Communication Observation Schedule* (Semel et al, 2006). The chosen subtests of the CELF included the receptive measure of the Spoken Paragraphs test and expressive measures of word associations and formulated sentences subset. These were chosen to reflect the aspects of language and communication that have relevance to education and work training for YOs, of which previous studies failed to consider. These measures were used to identify problems in speech language ability, finding that only 14 of them had language and communication skills within normal limits.

## 2.1 language, communication and literacy of YOs

The rest were given the full assessment procedure and intervention with a Speech Language Therapist (SLT). The group of offenders scored below the standardised mean for both receptive and expressive measures of language, with only 8% scoring above the mean on the Spoken Paragraphs test and 6% on the Formulated Sentences. The group found the more functional tests easier to complete, especially as the deduction task removed additional memory load, but even so 18% still could not pass the Word Association task from the CELF. A significant improvement in assessment scores were found post SLT intervention, with 85% showing an average gain of 2.9 Standard Deviation (SD) in the spoken paragraph test, demonstrating improvement in processing, retaining and recalling information. A similar increase was found on the Sentence Formulation Assessment, with 88% showing an average improvement of 1.6 standard deviations, demonstrating an improvement in language expression. Finally, of the 12 individuals who failed to pass the word association test, 4 out of the 5 available for re-assessment managed to meet the standardised mean for this test. The fact that both assessments were completed in such a short time frame also means that test-retest effects could have played a part in the improvements found in most measures. The study also demonstrates the problem YOs have with completing the ISSP, with a considerable number leaving the programme early. This explains the low sample size found in the study and even though clear improvements were made the results were not statistically significant. One possible reason for this may be the small sample size reducing statistical power (Dancey and Reidy, 2004).

The studies mentioned so far highlight the difficulties YOs have with regards to expressive and receptive language skills but similar findings have also been shown in relation to their literacy abilities. Davis, Lewis, Byatt, Purvis and Cole (2004) examined the literacy skills of YOs via diagnostic assessment tools to find that 57% of the group were below level 1 for both reading and writing (below the equivalent of an 11 year old) and 17% were below level 2; the equivalent of a 7 year old. Only 9.7% of the group achieved level 2 in reading comprehension and 35% were below level 1 for their speaking and listening skills, with the younger aged offenders performing worse.

Similar results were found in Sweden in which a sample of 163 YOs aged 15 years in secure care youth institutions were assessed on their reading and spelling (Svensson, 2001). Word reading ability was assessed using the *Wordchains Test* (Jacobson, 1996) and spelling using a Norwegian dictation test (Björkquist & Järpsten, 1983). Reading comprehension was also measured using tasks obtained from a study conducted previously by the International Association for the Evaluation of Educational Achievement (See Svensson, 2001). As no comparison group was included, scores were compared to the test norms. The groups mean word reading score was significantly behind their normative comparison, although 28% of the group managed to meet the norm score. Spelling was

## 2.1 language, communication and literacy of YOs

also a problem with the group mean falling below that expected for a 12 year old, and 27% of the group fell behind the level expected for a 10 year old. In contrast, almost half of the group displayed age appropriate or above reading comprehension skills. However, the authors acknowledge that this test was relatively easy compared to the reading and spelling assessments.

### 2.1.1 Methodological issue of control groups

When research comparing groups, such as the pre-post-test design used by Gregory and Bryan (2011), does not include a control group this casts doubt on whether the improvements were due to the intervention. Snow and Powell (2008) measured language via standardised tests using a cross-sectional between groups design, matching a control group of non-offenders to a group of offenders from Victoria, Australia, who were completing a community order. The groups were matched on years of completed education, which were just under 8 years, as well as socio-economic area. Participants were excluded on the basis of having a history of any major psychiatric illness, hearing impairment, traumatic brain injury, and intellectual impairment and if they had received SLT. Because the groups were matched on education experience, the offender group were on average a year younger than the control group. A number of standardised tests were given in a randomised order, consisting of ambiguous sentences, making inferences test and the figurative language test from the *Test of Language Competence* (TLC) (Wiig and Secord, 1989) and the *Flower Pot Narrative Task* and the *Recalling Sentences* task from the CELF. The offenders scored significantly lower on all the language measures in comparison to the control group, even when a composite language score was calculated. Furthermore, using a criterion of 1 SD below the mean of the control group, 52% of the YOs were classified as language impaired. Both these findings are emphasized even more by the fact that the control group were on average 1 year younger than the offender group.

A number of standardised tests were also used by Snowling, Adams, Bowyer-Crane and Tobin (2000) in a study investigating the literacy and language skills of a group of YOs from a Young Offenders Institute (YOI) in England, compared to a control group of non-offenders who had reading attainment and offending rates expected for an inner city group. Both groups were in the age range of 15-17 years and none had any previous SLT. Literacy skills were measured by the *Wechsler Objective Reading Dimension Test* (WORD) (Rust, Golombok and Trickey, 1993) and receptive vocabulary was tested using the *Graded Non Word Reading Test* (Snowling, Stothard and McLean, 1996). Phonological awareness was also measured using a spoonerism task (Perin, 1993). Snowling et al (2000) found that literacy levels derived from totalling up both reading and spelling scores, were much lower in the offender group in comparison to the controls. The offenders had an average reading skill of one SD below their equivalent age range and also performed significantly less well on the spelling test. This study also examined reading difficulties further by applying several definitions

## 2.1 language, communication and literacy of YOs

of dyslexia to the offender group, to see how many could be diagnosed as having this disorder. Comparing the relationship between reading difficulty (defined as having 1.5 SE below the predicted score based on the control group) and non-verbal ability, it was apparent that 57% of the offender group could be diagnosed as dyslexic compared to only 5% of the controls. Using the verbal scores based on the vocabulary test, 43% of the offender group still fell into the category of dyslexia. Another criterion for dyslexia is having poor phonological awareness and scores on the spoonerism task revealed that of the offender group, 25% met the classification for dyslexia compared to only 6% of the controls. However, with regards to phonological awareness the differences in group means were not significant once overall reading ability was used as a covariate. Lastly, those labelled as dyslexic often display average Intelligence Quotient (IQ) scores as taken from tests such as the *Wechsler Intelligence Scale for Children Vocabulary scale* (Wechsler, 1992). Of those in the offender group who displayed poor reading, only 8% also scored an average IQ, a statistic which is in line with the general population. This therefore suggests that using this classification, the presence of dyslexia in YOs is actually not dissimilar from that of the rest of the population. However, the use of only one test to measure IQ is questionable, and may have reduced a possibly higher percentage of dyslexia in offenders. Furthermore, using the control groups reading scores in the regression model to predict the reading scores of the offender group is also problematic, as both groups' scores were very different from each other.

There is lack of clarity apparent in studies that have examined the occurrence of dyslexia within the youth offending population, with some arguing that the prevalence rates are no different to that expected within the typically developing population (Rice, 1998). Svensson (2011) argues that this disparity is dependent on the definition used to define dyslexia, with studies incorporating a phonological definition often failing to show a relationship between offending behaviour and dyslexia (Svensson, 2003).

The reading and spelling of a group of YOs in Australia aged 13-18 years and residing in secure care were quantitatively assessed by Putnins (1995). The group performed significantly worse in both assessments compared to a control group of non-offenders matched on age. When compared to the test norm scores, the YOs' reading age were equivalent to 10 years old. Literacy was measured using a word reading and spelling sub-test from the *Secure Care Psycho-social Functioning* (SECAP), with the



## **2.2 language, communication and literacy of non-incarcerated children**

spelling test requiring participants to spell a sentence containing all the letters of the alphabet. The relevance this has in assessing functional literacy in this population is questionable.

Davis, Sanger and Morris-Friehe (1991) compared the language skills of a group of institutionalised juvenile delinquents to a comparison group both aged between 14-17 years old, matched on age and intelligence. Language was tested by standardised tests, which included 8 subtests from the TOAL. Davis et al (1991) found that the offender group performed worse than the comparison group on an overall Adolescent Language Quotient, which totalled up the 8 subtests of the TOAL. Similar profiles were found for both groups as they performed worse on the subsets that measured grammar, written language and expressive language yet performed better on the tasks measuring receptive language and vocabulary. This seems to partially support the findings of Bryan et al (2007) in relation to obvious difficulties in grammar but less so in vocabulary.

## **2.2 Research investigating language and communication with non-incarcerated children**

Research on non-offending children who have behavioural problems has found similar results; strengthening the relationship between language and behaviour found in YOs.

Hyter, Rogers-Adkinson, Self, Simmons, and Jantz (2001) studied the language skills, in particular pragmatics, of 6 boys aged 8-12 years old who attended a special facility of children with emotional behaviour disorder (EBD). Emotional disturbance is defined by the US Department of Education (1994), as an 'inability to form relationships, and to learn, both of which are not down to intellectual, health or sensory problems, depression or unhappy mood and tendency to develop fear and physical symptoms that are associated with personal or school problems' (p6). The children selected for this study had no previous speech language therapy and had average IQ. The design used was a pre-post test, which involved a class intervention that worked on their pragmatic skills. The intervention lasted for 8 weeks in total, with two 30 minute sessions a week. To test any differences in the children's pragmatic ability, their performance on a functional scenario task was analysed by discourse analysis. In addition, standardised tests administered included the *Test of Pragmatic Language* (TOPL) (Phelps-Terasaki and Phelps-Gunn, 1992) and the *Test of Language Development* (TOLD) (Newcomer & Hammil, 1988), which cover both expressive and receptive language factors. On pre-testing, the children were below average on both of the standardised tests but after the intervention their scores were within the normal range for their age. However, no control group was included to ensure that any improvement was down solely to the intervention work in between tests. In addition, the time in between testing was fairly short, which could explain the positive trend of improvement that may not be present after long term intervention.

## 2.2 language, communication and literacy of non-incarcerated children

Mackie and Law (2010) investigated the language skills of children with EBD aged 7-11 years by incorporating a matched control group. Their main focus was also on the children's pragmatic ability but they used other standardised tests to measure overall language function of children who had been selected, because their behaviour was of concern to the school and they had been subsequently referred to an Educational Psychologist. A control group of children were matched with these 17 children who had behavioural problems on socio-economic background, age and sex, with the majority being boys in both groups. The standardised tests used in this study included the *Assessment of Comprehension and Expression (ACE)* (Adams, Crooke, Crutchley, Hesketh and Reeves, 2001), which measures both expressive and receptive language ability and the *McMillan Individual Reading Analysis (MIRA)* (Vincent and de la Mare, 1992) test was used to assess reading ability. Self-reports and checklists were also used to allow teachers to assess the children's pragmatic ability, behaviour and emotional levels. The referred group scored lower than the control on the ACE, although there was high heterogeneity present in the referred group's scores. Furthermore, 38% of the referred children scored below the 10<sup>th</sup> percentile indicating possible language impairment compared to none in the control group. Even though different standardised tests were used, this supports Snow and Powell's (2008) finding that most YO's could be classified as having SLI using a criteria of 1sd below the mean of their control group. Just over half of the referred group scored below average on the reading test, a finding which was significantly different from the control group (Mackie and Law, 2010).

Cohen and Lipsett (1991) studied the language abilities of a group of 4-12 year olds who had been referred to mental health clinics in Toronto for behavioural, psychological and emotional reasons. A number of standardised tests were administered to measure receptive semantics, morphosyntax, phonology, auditory memory and non-verbal intelligence. Behaviour was measured using self-reports from both parents and teachers using the *Child Behaviour Checklist (CBCL)* (Achenbach and Edelbrock, 1983) and the *Teacher Report Forms (TRF)* (Achenbach and Edelbrock, 1986). Family functioning and maternal depression were investigated via standardised questionnaires and socio-economic status was obtained by the head of the household's occupation. One of the aims of this study was to explore the occurrence of children who had either unrecognised or recognized language impairments. Those who scored 1 SD below the mean on two of the language tests, or 2sd below on one, were considered as having unrecognised difficulties if they had not received any previous speech language therapy or diagnosis. A control group of children with typically developing language but psychological disorders was also included. Of the total sample of 237, 27% had a diagnosed language impairment. Of those who were mainly referred to the clinic due to being psychologically disturbed (65) 38% met the criteria for unrecognised language impairment. A

## 2.2 language, communication and literacy of non-incarcerated children

significant effect of verbal and non-verbal IQ was also found. The children in the language impaired groups also scored lower on verbal and non-verbal IQ tests. Parents rated both the language impaired groups as higher in delinquency and lower in their social competence via the externalizing sub-test of the CBCL. Teachers rated the language impaired children as showing more internalized problems like anxiety and inattention and they too rated both LI groups as showing low social competence, with the recognized LI group rated as the worst. With regards to the externalised sub-test of the CBCL, teachers also rated both LI groups as worse than the control group and these differences were more profound in the teacher ratings than the parents. The author concluded that teachers may be more attentive than parents to the link between language difficulty and behaviour and social competence, highlighting the ease at which language problems often go un-noticed, especially in explaining a child's behaviour problems.

Ripley and Yuill (2005) measured the receptive and expressive language abilities of a group of 64 boys who had been permanently excluded from a mainstream secondary school. A comparison group containing children showing no behaviour problems was also matched on age and academic ability. Standardised tests of expressive language involved the *Word Definition Test* (WORD) from the *Wechsler Intelligence Scale* as well as a *Verbal Reasoning Task* (VRT) (Wechsler, 1991) Receptive language was tested via the BPVS and auditory memory via the recalling sentences task from the CELF. Non-verbal ability was also taken from the *Ravens Standard Progression Matrices Test* (Raven, 1998) and the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman, 1997) was used by teachers to assess each child's behaviour. The group of excluded boys had poorer verbal reasoning scores and their overall expressive and receptive skills were significantly lower than the comparison group. However, this significant main effect of exclusion was moderated by a significant interaction of language mode (expressive/receptive), with the difference being more predominant in the expressive language factor. In comparison to the sample of non-excluded boys, the behaviour of those who were excluded was rated by the teacher as being more aggressive, but contrary to previous literature; some boys who were excluded, had language skills that were at least average compared to the control group. The boys who were excluded all had poor verbal ability, emotional symptoms, and showed difficulties in social interaction and building relations with other children. This suggests that an emotional factor may mediate the relationship between poor expressive language and behaviour. This would support the theory that expressive language helps with the self-regulation of emotion, which in turn helps with social interaction and communication (Strauss, 2001).

### 2.3 Children with speech-language difficulties- longitudinal methods

It is difficult to assess the extent of the relationship between language and behaviour using cross-sectional comparison studies that often rely on correlation, whereby the direction of association cannot be inferred (Svensson, 2001). An alternative approach used to explain the causal relationship between language and behaviour has therefore been longitudinal methods.

### 2.3 Research investigating children with language difficulties – longitudinal methods

Lindsay, Dockrell and Strand (2007) studied 133 children who were identified with a specific speech-language difficulty (SSLD) in the north of England. An exclusion criterion involved excluding those who had hearing loss, autism, learning difficulties and who did not have English as their first language. To confirm the children had SSLD, further standardised language tests were administered and the majority of these children were receiving additional speech language therapy in their school settings. The children were first tested at age 8 and then 68 of the sample were tested again at age 10. The TROG and BPVS tests were used to assess syntax and receptive vocabulary. *The Bus Story* (Renfrew, 1997) was used as a measure of expressive language at age 8 which was replaced by subtests from the CELF at age 10. Other tests included the pragmatic subtest from the *Child Communication Checklist* (Bishop, 1998) and the behaviour sub-set from the *Strengths and Difficulties Questionnaire*, along with the *Junior Rating Scale*, (JRS; Abraham & Lindsay, 1990) which was completed by both teachers and parents. Both teachers and parents rated the children as having high behavioural, emotional and social difficulties, but this varied with regards to time and rater. Parent's scores on the *Strengths and Difficulties Questionnaire* increased as the child's age increased, but in contrast teacher ratings of the children on this measure decreased as the child's age increased. Certain subsets of this scale were also assessed differently by both parents and teachers, with the emotional symptoms being rated higher by parents for the older children, but this was not the case for the teacher ratings. This suggests that either different patterns of behaviour are seen in different contexts, supporting Cohen and Lipsett (1991) findings, or that parents are more aware than teachers of their child's emotional difficulties. However, different teachers were reporting on the same child at different times, due to changes in school from primary to secondary. A regression analysis showed Language Impairment (LI) to significantly predict behaviour problems despite controlling for early behaviour, supporting the theory that early language impairment may lead to behaviour problems. This trend was only found for the teacher ratings of behaviour, supporting the previous finding that teachers may be more likely to view poor behaviour as being due to low language ability (Cohen and Lipsett, 1991). Most of the language tests used in this study were only taken at ages 8 and 10, thus limiting the extent to which any change in later behaviour

### 2.3 Children with speech-language difficulties- longitudinal methods

may be due to language abilities measured in children of secondary school age when the relationship between behaviour and language may be more apparent.

Similar findings were found by Redmond and Rice (2002) who investigated behaviour reports from teachers and parents using the CBCL and TRF. The study included a group of 37 children who had already been diagnosed as having language impairment from their study in 1998, when the children were 5yrs old. This study aimed to assess their current behaviour and language at age 8. The children were still showing language impairment based on the test results from the TOLD and PPVT. Redmond and Rice (2002) found teachers to score lower on the two scales above as the child's age increased, especially on the withdrawn and internalizing subscales. However, this finding was not found for the parent ratings and both still rated the children's behaviour as normal within the three grades. The authors acknowledge how these teacher reports may change over time, especially as the children grow older and these internalizing self-regulated behaviours of emotion may change to more externalizing forms of aggression.

Brownlie, Beitchman, Escobar, Young, Atkinson, Johnson, Wilson and Douglas (2004) examined the causal link between language communication and behaviour longitudinally, by using regression and structural equation models (SEM). They used data from children who were classified as having SLI at age 5 and compared them to a control group. Both groups were then followed up at ages 12 and 19, when their behaviour was assessed via the CBCL, self-report and *Conners Teacher Rating Scale* (Conners, 1969). Other potential confounds were examined which focused on verbal IQ, family demographics, socio-economic status, parental distress and previous convictions. The results of this study show that children with early language impaired scored significantly higher in parent reported delinquency compared to the control group and a sub-sample of children from the SLI group who were diagnosed as having pure speech impairment by a speech pathologist. This was not found based on the self-report results however, showing how different methods can influence findings. Hierarchical regression controlling for verbal IQ, demographic and family variables revealed LI at age 5 to predict delinquency at age 19 and this relationship was not improved by adding verbal IQ or the other demographic/family variables. However, parental distress did account for some additional unique variance for early LI and later delinquency. These findings were also supported in their SEM, which also shows a relationship between LI and delinquency even when taking into account early behaviour problems. In addition, academic performance seemed to mediate this relationship at a later age as well as mediating the relationship found between early literacy and later delinquency, suggesting that school academic performance is more influential in the relationship between language and behaviour.

### 2.3 Children with speech-language difficulties- longitudinal methods

Tomblin, Zhang, Buckwalter and Catts (2000) aimed to extend this association further by examining the relationship that both BD (behaviour disorder) and RD (reading disorder) have on each other, specifically in children with and without LI. The study involved a sample of 581 children that had been selected from an original longitudinal study (1997, cited in Tomblin et al, 2000) when they were 8 years old. Of this sample, the children had been already screened using language tests when they were at nursery and 35% of the children were classified as having LI, with the remainder of children without LI acting as matched controls. A number of standardised tests were carried out for this study, which included assessments for spoken language using the PPVT, subtest from the CELF and the *Comprehensive Receptive and Expressive Vocabulary Test* (CREV) (Wallace and Hammill 2002). Reading was also assessed using the subsets of word attack, word identification and passage comprehension from the *Woodcock Reading Mastery Test*, (Woodcock, 1987) the passage comprehension test from the *Gray Oral Reading Test* (Wiederholt and Bryant, 1986) and a reading comprehension test from the *Diagnostic Reading Achievement Battery*. A total reading score was derived from adding together all the subsets above and word recognition from only the two relevant WRMT tests. Reading comprehension was derived from all of the comprehension tests. Behaviour was also measured via the use of teacher and parent report tests. Tomblin et al found that of those children who had LI, 52% of them also had RD compared to only 9% of controls. Furthermore, when taking into account only reading comprehension, 52% of LI had very poor scores compared to 10% of the controls and when with RD was defined as poor word recognition, 46% of children with LI scored low on these tests in comparison to 11% of the controls. All these group differences were statistically significant, showing what seems to be a positive relationship between reading and language. There were also behaviour problems that were more apparent in the LI group in comparison to the controls based on the teacher ratings, but Tomblin et al (2000) found that of those children diagnosed as BD only 9% had LI, in comparison to 45% of diagnosed LI children who had only RD. This suggests that RD had more of an influence on LI than behaviour. Moreover, out of those children that had both LI and BD, 68% also suffered from RD, compared to 14% of the control children. This would suggest that BD may be an outcome of LI and RD, particularly as they found through log-linear modelling that the best fitting model was one that showed RD as a mediating variable for BD in children that had LI.

Both the cross-sectional and longitudinal research show that a large number of children with behavioural problems and YOs have language, literacy and communication difficulties. In particular weaknesses in areas of both expressive and receptive language may lead to or possibly cause negative behaviour (Lindsay, Dockrell and Strand, 2007; Redmond and Rice, 2002). This may be due to frustration with not being listened to or being unable to communicate successfully (Sanger, 2003;

## **2.4 The social model of adaptation and deviance**

Bryan, 2004). However, this relationship may not be direct and may be mediated by other confounding variables. For example, higher instances of behaviour difficulties in children with low language, communication, and literacy skills is also associated with increased school disengagement (Brownlie et al, 2004; Svensson, 2011). The way in which language and behaviour is related may also depend on how these are measured. For example, Qui and Kaiser (2004) separated behaviour into either expressive or internal, with expressive behaviour involving physically aggressive, hyperactive, inattentive and impulsive compared to internalized behaviour, which involves social withdrawal, anxiety, worries and depression. The authors propose that difficulties in expressive language may lead to more internalized behaviour, whereas deficits in receptive language may promote more externalized aggression. It has also been argued that early language problems may generally lead to higher instances of social inhibition and withdrawal, which may transpose into a more externalised aggressive form later on in life. This occurs as peer rejection and academic failure is experienced, lowering self-esteem (Redmond and Rice 1998; Redmond and Rice, 2002). Other longitudinal research supports this proposition, finding high occurrence of internalized behaviour in younger children with LI (Redmond and Rice, 1998).

### **2.4 The social model of social adaptation and deviance (Redmond and Rice, 1998).**

The finding that the youth offender population and children with behavioural difficulties display language, literacy and communication difficulties, supports the adaptation model proposed by Redmond and Rice (1998) in explaining socio-emotional behaviour. This model argues that every child has similar personality or psychosocial traits and characteristics, but it is their language and communication skills in relation to setting and context that actually influences their socio-emotional behaviour. This is based on the assumption that poor speech-language skills result in negative behaviour strategies such as internal withdrawal or external aggression, that are used as a mechanism to compensate for poor language ability.

In contrast, Redmond and Rice (1998) also acknowledged the possibility that the behaviour could be caused by deviant personality traits that are linked with mental health. This alternative explanation is referred to as a model of Social Deviance. Research suggests that pragmatic language deficits may be explained by cognitive functional deficits. For example, working memory and executive function in particular support successful social cognition, which may involve emotional perception, problem solving and self-cognition (Marton Abramoff and Rosenzweig, 2005).

Snowling, Bishop, Stothard, Chipchase and Kaplan (2006) studied the psycho-social outcomes of adolescents aged 15 who had a pre-school history of speech-language impairment at age 4. The sample involved 71 15yr olds, 15 of whom had low non-verbal ability. Some children from this SLI

## 2.4 The social model of adaptation and deviance

group were also labelled as having persistent speech and language difficulties based on their language scores measured a little later at 5.5 years. A comparison group of 49 children matched on SES were also recruited. Social difficulty was measured using the ELMS questionnaire (Trower, Bryant, & Argyle, 1978) and test batteries from the *Wechsler Scale of Intelligence* (Wechsler, 1992) and *Cognitive Assessment Battery* (Stothard, Snowling, Bishop, Chipcase, and Kaplan, 1998) were also used along with subsets from the WORD, TROG, BPVS, non-word repetition, spoonerisms and recalling sentences from the CELF. This was used to obtain overall scores for literacy, expressive language and comprehension. Lastly, a psychiatric interview was also conducted to assign Diagnostic and Statistical Manual (DSM) criteria. According to the interview, the group with persisting language impairment had more symptoms of psychopathology than the control and resolved groups, with ADHD being the most common. Although this occurrence was low for all groups, 10 of the children had attention difficulties and 11 social difficulties, with 8 showing both. Those who had attention deficits alone had problems with expressive language and those with social difficulties had problems with both expressive and receptive language. Those who had both social and attention difficulties had global language difficulty as well as low IQ. This suggests that language may be an important contributor to specific aspects of mental health such as social difficulty and attention deficits, supporting the social deviance model as an explanation of the relationship between language and behaviour via mental health dispositions (Redmond and Rice, 1998). This study also highlights the importance IQ may play in determining the link between language and behaviour, particularly in psychiatric outcomes.

Ripley and Yuill (2005) examined the expressive and receptive language scores from a group of boys excluded from secondary school. They found that those who performed poorly on expressive verbal skills also showed high emotional symptoms as obtained from the SDQ. This supports the theory that poor behaviour results from emotional problems or social cognition, rather than from expressive language difficulties per se. The authors above state that their finding demonstrates how expressive language and not receptive language helps emotional regulation, which then affects other social cognitive acts and self-esteem. This theory would also support the very early developmental theories of language and cognition by Vygotsky (1962) who considered "language as being a tool for thought". Furthermore, Mouridsen (2009) found from a longitudinal study of 329 male children diagnosed with Developmental Language Disorder (DLD) at age 5 years, that they were 4.6 times more likely to be convicted of a sexual offence when followed up 22.5 years, demonstrating problems in their expressive communication. The author went on to propose a possible link between the offenders expressive language ability and their apparent inability to read or interpret gesture and others feelings or empathy, as a possible explanation for their behaviour. As discussed



## **2.5 Testing the relationship between language behaviour and SES**

previously, it may be difficult to distinguish the likely cause of such behaviour, as this finding suggests emotional regulation to play an important part in influencing behaviour but that this may well be caused or affected by expressive language ability. Therefore, elements of both the social deviance and adaptation model could explain this finding.

Thus, it is argued that both language and behaviour are influenced by higher order cognitive factors like working memory, information processing and executive function (Bishop, 1997). This argument would support Redmond and Rice's (1998) social deviance model in explaining socio-emotional behaviour and would also tie in with Rutter and Lords (1987) hypothesis that both psychiatric and language sharing a common cause. Rutter and Lord (1987) developed a theory to explain the relationship between language, communication and behaviour by creating a set of possible explanations or hypotheses that may explain their apparent association. Firstly, Rutter and Lord (1987) proposed that either language deficits or impairments may lead to negative, disruptive behaviour or the opposite may be true in that delinquent or disruptive behaviour may be the cause of poor language and communication skills. Rutter and Lord (1987) also propose that there may be a common cause that both language and behaviour share, this being an underlying learning/cognitive difficulty for example, like autism which may affect language, communication and behaviour. Svensson (2011) also proposes that other confounds may be more likely to explain the abundance of literacy difficulties that exist within the youth offending population, such as limited cognitive ability, attachment disorders, mental health problems and school absence.

Another possible explanation for this relationship is other separate but correlated causes (Rutter and Lord, 1987) that may mediate or moderate the relationship between both language and behaviour, such as social disadvantage or attachment disorder.

### **2.5 Testing the relationship between language, behaviour and SES using mediation and moderation analyses through regression.**

Evidence shows that the majority of YOs reside in areas considered to be low in SES (White and Cunneen, 2006; Gray, 2005; Meltzer, 2000; Rutter, 1998). Assuming that language is associated with offending behaviour, then the evidence for how SES mediates or moderates this relationship (i.e. how it affects language) needs addressing and evaluating.

Moderation and mediation analyses are common in testing the relationship between SES and language through other possible confounds, such as maternal language input. Using this example, for a mediation to exist within a regression model, the predictor (SES) would need to be significantly associated with outcome variable e.g. child vocabulary, as well as the mediator (parent input) and

## **2.5 Testing the relationship between language behaviour and SES**

the mediator would also need to be significantly associated with the outcome variable. Lastly, to satisfy a mediation, the association between the predictor and outcome would be significantly reduced once the mediator has been removed (or statistically controlled for) from the model. A moderation effect often exists when a statistical interaction occurs. This involves a third variable that influences the strength of the relationship between the predictor and the outcome variable without being the sole cause or explanation of this relationship. The association between child vocabulary and SES will still exist but would be stronger in situations when maternal language input is higher (Hoff, 2003).

Regression models are the most frequently used method of testing the relationship between two variables, through measuring the amount of variance that is shared between the two. By defining one variable as a predictor and one an outcome variable based on prior research or hypothesis, the strength of the relationship can be deduced by the amount of variance shared between both variables. The strength of prediction can then be inferred from this information. Other confounding variables can then be added into the model as additional predictors once the effects (shared variance) of the first one have been controlled for. The amount of additional variance that is uniquely shared between these additional predictors and the outcome variable can then be measured, which enable the testing of a mediation and moderation hypothesis (Field, 2009).

### **2.5.1 Defining and measuring Social Economic Status, Social class and Social Disadvantage**

Many different definitions relating to social class, deprivation and economic status are used throughout the literature. Not only does this inconsistency make comparison across findings difficult, but this also results in ambiguity on how best to measure social deprivation.

One factor that is commonly used throughout the terminology of class and social-economic disadvantage is income (Abercrombie and Warde, 1988). However, the problem with using income to define class is that it could be related to original income like wage but also to the disposable income such as state pensions and income tax. Furthermore, those from wealthier backgrounds are more likely to distribute their wealth to others, preventing a valid measurement of income and wealth (Abercrombie and Warde, 1988).

The concept of occupational structure is decisive in Lockwood's (1966) definition, with the type of occupation being crucial in determining status and prestige within the employment and family. Commonalities lie between occupational structure and occupation community in which individuals of a particular occupation form a cohesive group membership, which differs depending on job type. Occupation is therefore used as a common measure of social class and Social Economic Status (SES).

## **2.6 Evidence of a relationship between language behaviour and SES**

Historically, the working class has often been linked to blue collar jobs such as manual labour. The middle class on the other hand has emerged based on the managerial, professional occupations that often include higher wages, more stability and opportunities for promotion as well as higher occupational status and power. Shared familial political-social values based on occupation are also adopted by children of different social-economic backgrounds. For example, it has been suggested that children from working class families do not consider education as being important for their occupational success and achievement within blue collar work. Goldthorpe (1969) found that some manual workers that were classed as being middle class based on their income and wealth still displayed values in accordance with their occupation type. This highlights the importance of measuring for occupational community and structure as opposed to income alone.

However, occupation and occupational community as a measure of class and SES within the population can be problematic. For example, not everyone may be in employment and most people change employment, especially in pursuit of career. Therefore, current occupation may not be a true reflection of social class or SES and the social political views and values held within one occupational class may not be clear cut (Skidelski, 1969).

In conclusion, economic differences affect people socially, politically and culturally. Therefore, any measure of social deprivation should aim to include all these factors, rather than relying on income or occupation alone. Measures of deprivation are often taken via the use of indices that take into account many varied factors that are associated with social-economic differences and can be used to establish whether an individual is living in deprivation. One example of this is the *UK National Indices of Multiple Deprivation* (IMD, 2012).

The advantage of using terms like deprivation, disadvantage or social-economic status (SES) is that they acknowledge the fact that certain people may be excluded from some societal benefits without needing to ascertain the strict criteria that constitutes poverty as discussed. For the remainder of this chapter, these terms will be used but where terms are central to specific theories or used by researchers, these will be adhered to.

## **2.6 Evidence showing the influence SES has on speech, language and communication.**

Research supports the theory that low SES may be a potential cause of language-communication difficulty and overall education attainment, and speech language therapists also acknowledge that social economic circumstances have great influence on a child's language development (Marshall Golbert and Phillips, 2007). Locke, Ginsborg and Peers (2002) screened 240 children who were

## 2.6 Evidence of a relationship between language behaviour and SES

attending nursery schools in areas of social economic deprivation. Over half of the sample displayed either moderate or severe language delay. In this study schools that had higher than average free school meals data were considered to be in areas of social economic deprivation. The screening involved standardised language tests, which included the CELF pre-school (Wiig, Secord and Semel, 1992) to assess both spoken and receptive language and the *British Ability Scale ii* (BAS ii, Elliot, Smith and McCulloch, 1997) early years version, to measure non-verbal ability.

Law, McBean and Rush (2011) found a relationship between social disadvantage and language in a sample of 138 children attending a primary school in an area of social disadvantage within Scotland. Nearly all of the children within this sample resided in an area of Scotland that constituted the first quintile of the *Scottish Index of Multiple Deprivation* (2006). Using composite scores of expressive and receptive language from the CELF IV (Semel, Wigg and Secord, (2006), 39.9% of the group displayed a language delay using a cut of point of -1sd below the age appropriate mean of the test. Using a stricter cut off point of -2sd below the test mean, it resulted in 10% of the group displaying language delay. These figures were high when compared to the tests' standardized population (16% and 2% respectively). Using the common criteria of 1.5sd, 11.6% of children were diagnosed with SLI from the CELF composite score. This again is higher than the 7% figure of SLI occurrence within the general population (Tomblin et al, 1997). The children also performed below the standardized test mean on the *Children's Communication Checklist* (Bishop 2003), which measured social communication and on the BPVS (Dunn et al, 1997). The children were within average range in comparison to their standardized normative scores on the narrative test (ERNNI, Bishop, 2004), the Non-Verbal IQ test (WASI, Wechsler 1999) and on the word reading tests; *Test Of Word Reading Efficiency*, (TOWRE, Torgeson, Wagner, and Rashotte, 1999) and *Children's Test of Non-Word Repetition* (CNRep, Gathercole and Badderly, 1996). Law et al (2011) conclude that social disadvantage may have more of a detrimental effect on certain specific language aspects in comparison to others.

Recently, a cross-sectional study comparing two secondary schools differing in SES also found significant differences on children's language performance depending on the school they attended (Spencer, Clegg and Stackhouse 2012). One secondary school was considered as residing in an area of social disadvantage (SDis) in the North of England, with it being located in the 2<sup>nd</sup> lowest percentile of the *Indices of Deprivation* (2007). In addition, the school had lower than average A\*-C GCSE pass rates. In comparison, the school labelled as being situated in an area of social advantage (SAdv) was situated within the 50% percentile based on the *Indices of Deprivation* (2007) and had higher than average GCSE pass rates. A total of 103 Year 9 students from the SDis school were

## 2.6 Evidence of a relationship between language behaviour and SES

recruited, as well as 48 year 9 students from the SAdv school. The SDis group performed significantly below the language test means, which included the *Test of Reception of Grammar* (TROG, Bishop 2003), *ERNNI*, *British Picture Vocabulary Scale* (BPVS, Dunn, 1997), *Wechsler Abbreviated Scale of Intelligence Vocabulary* (WASI VOCAB, Wechsler, 1999) and the CELF- Listening to paragraphs test. In addition, the groups' school *Cognitive Ability Test Scores* (CATS, Smith, Fernandes and Strand, 2001) were also below average for their age group. However, Non-Verbal performance using the WASI block design was at an age expected level. In comparison, none of the mean scores for the SAdv group were below their age expected standardized scores using the same tests. The SAdv group also performed significantly better based on the large effect sizes in the language components that specifically measured vocabulary, as well as the CELF Listening to Paragraphs test. Similarly, to Law et al (2011) the authors report higher classification rates of Specific language impairment (SLI) for the SDis group, which varied depending on the strictness of criteria being adopted. The authors highlight the implications this can have on undetected language difficulties, which are more likely when stricter SLI classifications like -2sd below test means are used. In this study a classification of -1.5sd below test means resulted in undetected language difficulties for 60% of the participants'.

Lloyd, Li and Hertzman (2010) assessed the relationship between SES and language and cognition, longitudinally comparing children from different neighbourhoods, whilst accounting for a move of neighbourhood location. A sample of 2,648 children was recruited from the British Columbia database and children were tested initially at nursery and then again 7 years later at ages 12/13 years. Assessments used to measure language and cognition included the *Kindergarten Early Developmental Instrument* (EDI, Janus and Offord, 2007) and the *Grade 7 Foundation Skills Assessment* (FSA, British Columbia ministry of Education, 2003). Family's home postal codes were compared to the disposable income database from the Canadian Revenue Agency (Statistics Canada, 2004) to distinguish SES levels. In addition, deprivation indices were taken into account at both times, such as lone-parent families, income, male unemployment rate, education and families receiving any special assistance. The children were classified into neighbourhoods whereby 44% had moved by Grade 7. The frequency of moves was also included as a covariate on neighbourhood effect on the outcome measures of reading comprehension and numeracy. Results from the statistical model revealed that neighbourhoods at both time points significantly explained 10% of variance in reading comprehension and numeracy. Concentrated disadvantage in kindergarten neighbourhoods also significantly predicted poor reading comprehension results even when neighbourhood mobility, child gender ethnicity, and neighbourhood at grade 7 were controlled for. Neighbourhood at grade 7 failed to significantly predict reading comprehension scores. Family SES at grade 7 significantly predicted reading comprehension above and beyond that of the above

## 2.6 Evidence of a relationship between language behaviour and SES

covariates, but this was not found for family SES at kindergarten. One unique contribution this study adds to the literature is how overall family SES can have a lagged effect on language development, whereas neighbourhood specific social disadvantage experienced early is still detrimental and persistent in language development.

Jerrim and Vignoles (2013) highlight one possible reason for why some longitudinal research studies have found significant affects between social disadvantage and language, with children of low SES gradually declining in cognitive performance compared to their peers of high SES. This is due to failing to control for regression to the mean effects that occur in longitudinal research studies that incorporate a repeated measures design. The likelihood of performance error is high during initial testing, whereby an individual who scores significantly away from the group mean may have done so by chance. When tested again at a later timeframe, their score is likely to reflect their true ability by becoming closer (regressing) to the group mean score. If initial test error is controlled for then it may reduce possible group differences, which are more likely to affect apparent 'high achievers' in the low SES groups who perform better than their less able peers of high SES at initial testing. Jerrim and Vignoles (2013) compared three groups' cognitive and language ability from the Millennium Cohort Study (MCS, 2000) differing on their SES, which was defined using household income data. *The British Ability Scale (BAS)* and the *Bracken School Readiness (BSR, Bracken, 2002)* scale were used to assess cognition and language. All children were first tested at age 3 years and then again at age 5 using the BSR and at age 7 years using the BAS. The children's ability was defined using the BACS and then the BAS was used as the first initial testing point in order to control for initial test error. The authors found that by controlling for this initial test error, group differences were no longer apparent. This was due to high and low performing children from both SES groups continuing to perform consistently at the same level. Although they note how complete removal of initial test error may not have been possible, due to the high possibility of test error correlations based on administering both on the same day.

### 2.6.1 The influence of SES on children's literacy development

Research has also highlighted how the literacy environment within the home of the child can affect the child's later literacy skills and that this differs depending on social class. For example, McCormick and Mason (1986) found that nearly half of the parents of pre-schoolers who were working class (based on receiving income-support), reported having no alphabet books compared to 1% of professional parents. Similarly, research has found low income families read less frequently than those from higher socio-economic groups (Adams, 1990).

## 2.7 Parental and home influence

Payne, Whitehurst and Angell (1994) found the literacy environment to be a significant contributor to literacy development in a large sample of 236 children aged 4 years, who were enrolled on Head Start programs. A literacy environment score based on parent reports of frequency of book reading was obtained in addition to the child's age at onset of reading, duration of parent reading to child, frequency of child requests to read, frequency of child's private play with books, frequency of trips to the library and frequency of the parent reading privately. The children completed the PPVT and EWPVT, which were entered into a hierarchical regression with maternal education and IQ. The first two variables of maternal education and maternal IQ accounted for 11.6% of shared variance as predictors of children language scores. The total literacy environment score accounted for an additional 12% of shared variance, suggesting literacy environment to be a strong predictor of children's language development.

### **2.7 Parental and home impact on the relationship between SES and language and behaviour.**

Child-parental interaction could be one possible explanation as to why young people in areas of social disadvantage display speech and language difficulties (see section 3.9). For example, Hart and Risley (1995) examined audio recordings of parental interactions of families who were of different social class. Families' social class was separated into those on welfare. Parents with blue or white collar jobs were considered working class and parents who had advanced professional degrees were considered higher class. They found statistical differences between the social interactions of the families depending on their social status. The parents of the upper class families had many more conversations with their children in comparison to the other two groups and these children were enriching and developing their vocabulary at a higher rate. The results of Hart and Riley's study show that by 36 months, the children of the 'professional' families had a vocabulary 100% larger than the working class children. A similar pattern was evident in the difference between the working class and welfare children. This not only shows the importance of parental interaction as already mentioned, but it suggests that such interactions are less common in areas of social economic disadvantage.

Farkas and Beron (2004) aimed to find out which aspects of low SES-families contribute largely to child language development. They measured a large sample of 3000 children at two time points using the *National Longitudinal Survey of Youth* in 1979 (NLSY79, Bureau of Labor Statistics) and their own sample of children who were longitudinally followed up from the years 1988-2000, when the children were 3 years and then 14 years old. In addition, oral vocabulary was measured using the PPVT from ages of 36-156 months, in order to gain a substantial timeframe for possible vocabulary growth. The mother's linguistic skills were measured using the *Armed Forces Qualification Test*

## 2.7 Parental and home influence

(AFQT). The AFQT is a test used for those seeking entry into the American Armed forces and includes a vocabulary task which was adopted in this study as well as other cognitive tasks that were not included. In this case the families SES level was measured by the mother's highest grade achieved during the study period in the year 2000, as well as their poverty status and grandmother's educational level. Finally, the *Home Observation for Measurement of the Environment Scale* (HOME, Bradley and Caldwell, 1984) was included to measure cognitive stimulation and emotional warmth provided by the parent to their child within their home. The results of this study show that the mother's verbal score and the HOME score significantly predicted the child's verbal ability and when both these two predictor variables were included alongside the SES in the regression model, they all produced a significant model to predict the child's oral vocabulary. This effect size was even greater during the pre-school years. This suggests that in addition to the mother's language ability, schooling and learning at home may also help diminish the effect SES has on a child's language development. It is also quite probable that both maternal language ability and HOME environment correlate positively, in that those with better language skills may create a better learning environment at home, which could be down to the mother's own educational experience. Hoff (2003) studied the relationship between SES and language by recording parent-child interaction. Their sample included 63 parents and children, half of whom were from high SES backgrounds based on maternal education and occupation and 30 were considered as being middle class. For control purposes the children's language level was screened before the study with the children beginning to combine words. The children's ages ranged from 16-31 months and even though they were not matched on age, the actual differences in both groups were small and non-significant. The mother-child interactions were recorded and transcribed using the SALT software and certain linguistic features were analysed, such as Mean Length of Utterance (MLU), number of words and root words. The number of utterances in episodes of joint attention and also the number of topic related replies to the child were counted. To find out if parental speech acted as a mediator to SES and language, a multiple regression analyses was carried out. The results from this study showed no differences between the SES groups on the number of words produced at time 1 and both showed significant improvement at time 2. The study did find that SES accounted for a significant 5% of the variance in child vocabulary growth between time 1 and time 2, which was beyond that of child vocabulary at time 1 and birth order. Birth order was statistically controlled for because of research demonstrating links between this and maternal speech and child vocabulary development (Hoff-Ginsberg, 1998). Furthermore, a larger number of late-born children were present in the higher SES group. The high SES mother's produced more utterances, word types, more topic replies and higher MLUs compared to the middle class mother's. As high multi co-linearity existed between these language measures,



## **2.8 Evaluating capital as measure of SES**

meaning they were regarded as measuring the same language construct, MLU was separately entered into the regression model as a maternal language predictor. MLU accounted for a significant additional 22% of unique variance in child vocabulary from time one to time two. In addition to this, when vocabulary at time 1, order of birth and maternal MLU were statistically controlled for, SES no longer significantly predicted child vocabulary at time 2. This supports the theory that mother's language input mediates the relationship between SES and child's language and that the quality and quantity of maternal input differs with respect to SES. However, this study did not include a family from low SES areas.

Parcel and Menaghan (1990) also studied the HOME characteristics and parental characteristics of families of different social classes. Their sample consisted of young people aged between 14-21 years from 795 families who lived in disadvantaged areas. A comparison group resembling the general household of social status was also obtained. The PPVT was used to measure verbal ability and overall cognitive function and SES was measured via the grandmother's education attainment. This was taken due to higher rates of missing data from the children's mothers and fathers. As this study also aimed to investigate the effects of parental working conditions like job complexity, hours of work and pay, this was also measured via self-report questionnaire. The HOME score was taken by conducting a factor analysis on the questionnaire items used in the original survey, producing factors of cognitive stimulation, physical environment and warmth response to the child. The mother's educational background was positively associated with the PPVT scores as was the HOME environment and SES, a finding supported by previous research (Farkas, 2004). Employment complexity, hourly pay and hours of work were all associated with PPVT scores, suggesting that employment type, money and hours may affect a child's language development. It was found that parents who worked more hours in a full-time position negatively affected the child's verbal ability. In addition, maternal income positively correlated with child verbal ability. Home environment taken from scores from the HOME scale significantly predicted child's vocabulary scores and this mediated the relationship child vocabulary had with the maternal hours worked. Thus it would seem that full-time mothers perhaps have less time to provide emotional warmth and cognitive stimulation to their child, which could have a negative effect on their child's language acquisition. However, this would also depend on the child-care care arrangements.

### **2.8 Evaluating capital as a measure of SES and its contribution to child language**

The HOME environment and the interaction between parent and child can also be defined as family capital which Parcel & Dufur (2001) found positively related to reading achievement. This relationship continued even when school capital was entered into the model again, which was measured by school location, finance and reputation. This supported previous research showing

## 2.8 Evaluating capital as measure of SES

maternal interaction and HOME environment to be influential in predicting literacy (McCormick and Mason, 1986; Payne, Whitehurst and Angell, 1994). Positive correlations were found between school capital and reading and maths scores. School communication with parents significant correlated with both reading and maths scores when the family capital was controlled for, suggesting this to independently contribute to the child's educational achievement. Parcel and Dufur recruited a sample of 12,686 young people aged between 14 and 21 who were interviewed in an original cohort in 1979 via the National Longitudinal Survey of Youth (Bureau of Labor Statistics). This survey also included data about the families and the HOME score was also taken via a 28 item questionnaire, which addressed factors of physical environment, cognitive stimulation, mothers affect and disciplinary style. The child's reading and maths ability was also measured through the *Peabody Individual Achievement Test* (PIAT, Markwardt-Frederick, 1989), resulting in a sample of 2034 reading scores. To measure school capital, perceptions from school head teachers were used which may question the validity of this factor, especially when other research articles have shown some possible bias from teachers on social class and school capital (Lynch, 1998; Berridge, 2007). The teacher-student interactions were also only obtained from the child's parents, which may also be problematic for those not involved much within the school. Parcel (2001) also found that better home environments were related to achievement and low working hours were associated with better reading scores, supporting Parcel's earlier research (1990).

Parents of low SES may not prioritise their children's education as much as do families from mid to high SES and because of this, choose not to actively participate in and monitor their children's education development within schools (Ogbu, 1974). Other theorists argue that the school social capital is biased towards middle-class families and that such children benefit more from the education system in comparison to lower class children (Bourdieu, 1977; Lynch 1998). Bourdieu's (1977) theory of cultural capital suggests that the knowledge of social locations and arrangements are important in the way children succeed in school and that middle class families are more aware and familiar with these arrangements.

This theory was supported by Lareau (1987), who interviewed parents, teachers and head-teachers within both a low and mid SES community. Observations within the two schools were also taken. Results show that both schools were very active in sending out important messages and alerts regarding their child's education and actively sought to include parents in the child's learning. Parents of the lower SES community were less likely to interact with the school, and often thought that their child's learning was best kept within the school only, shifting responsibility to the school teachers. This could also be seen by the Read at Home Program, in which only half of the parents

## **2.8 Evaluating capital as measure of SES**

within the low SES community read to their children. The frequency of this was lower in comparison to the middle SES community, who regarded their child's education as a joint interaction between the home and school. Parental education was also different between communities, with the low SES parents more likely to have lower school attendance and experience difficulties at school. The mid-SES parents regarded themselves as being more educationally experienced and as capable as the school teachers in educating their children. It was also observed that the mid-SES parents knew more about their child's learning experience at school and knew more about their fellow classmates suggesting better inter-communal links between other parents and children within the community. This was not found for the low SES group of parents.

This finding revealed that both sets of parents valued their child's education, but differed in the way they believed and pursued their child's educational success. The method chosen by the mid SES parents matched and therefore favoured their child's school social capital. This does not suggest this method is by any means better, but that the social link made between schools and parents better suit the needs and wants of the middle class parents. This highlights the importance of accounting for cultural capital within the social context. As a criticism of Bourdieu's work, Connell (1982) suggests looking at the individuals themselves in order to see how their culture affects the way they see and construct this relationship between school and family in more detail. To achieve this, a qualitative method of investigation may benefit and add more to the existing interaction found between social school, family capital and SES.

### **2.8.1 Abusive and neglectful parenting**

With such research showing that maternal input may mediate the negative relationship SES can have on language development, research has also shown that abusive and neglectful parenting negatively affects language development. According to the UK, the definition of abuse is the harm directed towards a child by an individual intentionally or not (Gelles and Cornell, 1983). This can take many different forms either through emotional, physical or sexual abuse (Radford et al, 2011). The UK also differentiates neglect from abuse, defining it as 'failure to meet a child's basic physical/psychological needs, which may result in serious impairment of the child's health and development' (Tanner and Turney, 2003, p1). This notion of neglect can be categorized as lack of food, clothing, protection, medication and emotional needs as defined by Radford et al (2011). Children are often 'looked after' because of either parental abuse and/or neglect or because parents are unable to manage their child's behaviour (House of Commons, 2008; DFES, 2010). The term 'looked after' refers to children who are put in care of either foster parents, residential care centres run by the local authorities or looked after by family members other than their birth parents. Children can become looked after as a result of a child care order made under the Child Act of 1989, in which the responsibility of the

## 2.8 Evaluating capital as measure of SES

child is shared between the parent and the local authority. It can also be achieved through voluntary means, often when the parent admits to being irresponsible or unable to cope with rearing and protecting the child (HOC, 2008).

Oates (1984) found differences between reading and verbal language abilities in children who have and have not been abused, despite both groups coming from areas of low SES. This suggests that SES may not have much of a direct influence on the child's development per se, unlike that of the abuse and neglect itself, which can be argued, does directly influence language and literacy development. However, there may be little difference between language ability of children matched on SES who have or have not been abused and neglected by their parents. For example, Allen and Wasserman (1985) found less recorded accounts of verbal interaction in the mothers who had abused and neglected their child. These mothers were also rated as ignoring their child more.

The majority of research on looked after children has only focused on families from low SES, making it difficult to generalise to those who may suffer similar abuse and neglect in less poverty stricken areas (Augustinos, 1987). One study that has compared families of different social class is by Lynch and Roberts (1982). They studied 42 abused children that fell into three categories of social class incorporating varied factors. The non-abused siblings of the children were classed as a control group. After a four year follow up, they found that on most of the developmental variables measured such as growth retardation, illness, neurological impairment, language and intellect, the abused children performed poorly but that there was little difference between them and their siblings. It may be that the neglectful and abusive parenting affected the language development of the abused children and their siblings. As the children came from varied SES backgrounds, social disadvantage may not play such an influential part in the cause of abuse or the effect it has on a child's development.

Coster, Gersten, Beeghly and Cicchetti (1989) studied the language and communication competence of a group of maltreated toddlers who had (based on social worker reports) been abused or neglected by their parents. They measured receptive language using the PPVT scale and expressive language from an observed recorded play session between mother and child, measuring MLU and amount of different words used. Pragmatics was also examined by measuring the child's ability to name, seek information, and discuss themselves and others. The mother's language was also measured from the play sessions, recording the frequency of interrogatives and whether they were open or closed ended questions. Using the same method as that used on their children, the parents' pragmatic language was also assessed. The maltreated group were then compared with a control group matched on age, SES, ethnicity mothers education level, marital status and whether a male was present in the household or not. On the expressive language scores, the maltreated group

## 2.8 Evaluating capital as measure of SES

performed significantly worse compared to the control group, based on MLU and number of words used and a main effect of sex was found, with boys performing significantly worse than girls who displayed longer MLUs. There were no group differences on the receptive language but differences were found in the pragmatic ratings. The maltreated group showed more repetitive utterances, more fillers, fewer information requests and they talked less about their own internal states as well as references to other people and objects. The authors deduce this as being due to a less positive interactive exchange between mother and child. Furthermore, in support of the above theory, the comparison group showed a stronger relationship between language complexity and the amount of self-related language concepts. In the maltreatment group, there was a significant positive relationship between the amount of references to internal emotion used by the mother and the amount of same self-rated references used by the child, indicating the importance of this language function in mother-child interactions.

One other possible explanation for how much a child uses references to internal states through their language, may be explained by the amount of exposure to negative, aggressive verbal responses a child receives from their parent. This could prevent the child from exposing their emotive states verbally (Coster, et al, 1989). This is partially supported by research on the effects of abusive and neglectful parenting on a child's language and communication (Manso, Sánchez and Alonso, 2009, Oates, 1984). However, Allen and Oliver, (1982) have only found evidence for neglect as being the main cause of language delay in children rather than the abuse and aggressive aspect of parenting.

Manso et al (2009) studied the effects abusive and neglectful parenting may have on children's pragmatic language ability. The importance of pragmatic language and communication in children has been highlighted with regards to social cognition. Social cognition enables the ability to converse appropriately in social situations, above and beyond the literal sense of discourse as well as understanding others mental states (See Manso et al 2009; Manso, Sanchez, Alonso, and Barona, 2010). This is perceived as being critical in developing positive social relationships (Denham, 1986; Garner et al 1994; Manso et al, 2010). Research has suggested that children who have been neglected by their parents suffer in these skills because of the poor interactions and insecure attachments the child has with their parent, in which such language and communication is absent. Manso et al (2009) studied this in a group of boys and girls aged between 6-18 years old who were based in residential care in Spain, due to neglect and abusive parents. They measured the child's overall language capability via the *Objective Language Criteria Test* (BLOC screening test, Puyuelo, Renom, Solanas, & Wiig, 2002,), which measures, morphology, syntax, semantics and pragmatics. The parent's educational style was also assessed via the *Auto evaluative Multifactorial Child*

## 2.9 Evaluating the theory of attachment

*Adaptation Test* (TAMAI, Hernández, 1996). They found that all the children displayed problems in the pragmatic language domain, with 88% scoring below the 70<sup>th</sup> percentile of the test. Furthermore, 63% of the group had scores defined as being emergency level, residing in the 30-60<sup>th</sup> percentiles. Percentage figures close to 20% were also found for the children aged between 8-18 in relation to scoring within the alarm level (bottom 30<sup>th</sup> percentile), in which 33% of the younger aged children (6-8years) scored. On other language aspects, almost three quarters of the children had morphological and syntactical problems in either the alarm or emergency levels and most of these children were classed as socially introverted.

A variety of different styles was obtained for each parent but a series of one factor Analysis of Variance (ANOVA) revealed significant differences on pragmatic scores based on father's rejection, with greater rejection towards the child leading to lower pragmatic scores. For mothers it was a more punitive style of parenting and restrictiveness that lead to lower pragmatic scores in the children.

It was concluded that neglect and aggression based on the communicative parenting styles lead to lower pragmatic awareness of children. This was more apparent in aspects of forming demands, using pro-nouns, comprehending long sentences and using of interrogative adverbs, all of which aid in the child's social cognitive development. However, the parents' language capacity and vocabulary size was not accounted for and may be an explanation for the child's poor language rather than the parenting style.

### **2.9 Using the theory of attachment to explain the development of language and offending behaviour.**

Studies comparing the language development of children from varied SES, suggests the interaction between parent and child is crucial in developing the linguistic, social and cognitive skills of children. The amount of both verbal and non-verbal communication can strengthen the reciprocity between child and parent, particularly if the language is of an emotive context (Manso et al 2009; Coster et al 1989). For example, a strong correlation has been found between the frequency of emotional state words used by parents and those used by children (Beeghly, Bretherton and Mervis, 1986), as well as positive relationships between the emotional state of children observed through behaviour and their use of emotionally charged words (Denham, 1992). Furthermore, children progress from using emotional words that refer to themselves to producing these emotional words for others as they become toddlers (Bretherton and Beeghle, 1982). This may then lead to formation of stronger mutual understanding and relationships (Howe, 2006). In line with the theory of attachment such positive interactions can help the child develop good emotional intelligence and theory of mind,

## 2.9 Evaluating the theory of attachment

which in turn aids the development of successful future relationships (Howe, 2006, Clegg, Hollis, Mawhood, and Rutter 2005; Dunn & Brown, 1991). The child is also more likely to expand their linguistic domain and vocabulary if the mother responds to the child using more verbal responses (Coster, et al, 1989).

Attachment is defined as the close relationship between both the primary caregiver and their child (Bowlby, 1969; Ainsworth, 1978). A secure attachment will involve a joint interaction and conversation weighted equally between the child and carer, with the carer responding appropriately to any child anxiety or distress (Bowlby, 1969). This allows the child to understand that the carer is a secure, trusting base in which he or she can rely on in times of threatening danger and this is achieved by means of positive behaviour and communication between both parent and child. A secure base enables the child to explore its surroundings, a skill which has been associated with cognitive development (Bowlby, 1969). A secure attachment often revolves around emotive language, which then enables the child to learn to regulate his or her emotional state as well as being able to correctly recognise and respond to different types of emotions (Howe, 2006). Developing this emotional intelligence may help the child learn to form secure relationships in the future and increasing use of language/communication will also develop the child's cognitive skills (Coster, et al, 1989). Vygotsky's (1962) theory and research demonstrates how language is a tool for thought, enabling one's development of the self and others. However, looked-after children who suffer from abusive or neglectful parenting tend not to develop secure attachments and develop differently because of this. This is because they need to organise and develop other forms of coping mechanisms that maximise the availability of their carer where possible (Howe, 2006). In such cases, the children develop what is known as 'disordered attachment'. Due to parents' lack of positive response to their child's emotional anxiety, the child does not develop the acquired emotional intelligence and sense of self that securely attached children develop. As a result this may lead to poor cognitive representations of both emotion and the self, which will then affect the child's ability to form successful relationships in the future (Howe, 2003), (Howe, 2006).

There is evidence to show that looked after children show higher rates of behaviour and mental health problems in comparison to the typical population (National Children's Bureau, 2007). As in the UK, government statistics reveal figures showing that a high proportion of looked after children engage in criminal activity (see chapter 1). With the experience of abuse and neglect high in the looked after population, attachment disorder is one explanation for their high incidence of offending behaviour. Howe (2003) gives examples of the types of behaviour that are associated with children who have attachment disorders. These include lack of impulse control, self-destructive behaviours,

## 2.9 Evaluating the theory of attachment

hyperactivity, verbal and physical aggression to others, destruction of objects and inappropriate sexual conduct and attitudes. As is often the case for these children, their carer is the main source of their fear due to the physical abuse received. This contradicts their unconscious desire to seek support from them, resulting in confusion and disorganized thoughts/feelings (Howe, 2003). Because of this anxious fear of their primary caregiver, the child is continuously aiming to support oneself through safety precautions, checking their surrounding environments for any possible threat of danger (Howe, 2003; Phillips, 2007). In addition, because they have to develop their own sense of safety, control is a major advantage in avoiding possible threat or danger. This may explain why most looked after children who have disorganized attachment end up behaving aggressively or passively in quick successions to maximise attention where possible, as well as manipulating others to their own advantage (Howe, 2003; Phillips 2007).

Research evidence further supports the fact that looked after children often display and develop behavioural problems as a result of their attachment disorder. For example, Armsden, Pecora, Payne and Szatkiewicz (2000) reported findings from the Casey Family program study in America in which the behaviour of 362 children in long-term foster care, aged between 4-18 years was examined. The behaviour was rated by carers and other staff members familiar with the child, via the *Child Behaviour Check List* (CBCL, Achenbach and Edelbrock, 1986). They found that the sample of Casey children scored above a norm-referred sample of children, with externalizing behaviours and attention behaviours being rated the highest. In addition to this, 50% of the Casey sample had at least one problem behaviour in the clinical range and this was twice as likely for the pre-adolescent group compared to the adolescent group. Examples of the common items that were prevalent in the delinquent factor of the CBCL consisted of lying cheating and stealing. Scores varied depending on time of assessment as Armsden et al (2000) found that if this was before the child's evaluation for care intake, children were more likely to be on good behaviour.

Fernandez (2008) investigated the behavioural problems of children in a long-term foster care program in Australia. Their sample consisted of 60 children aged between 4-15 years, but in this case they were not separated under abuse or neglect. Teachers and carers were asked to complete the CBCL scale on two occasions separated by two years. They found that on the second year of assessment, carers rated 38% of children in the clinical range of total problems scale and almost 40% fell into the externalising problem, showing signs of aggression and frustration. Similarly, the teachers reported high means on the aggression items for boys and high mean scores on the social problems scale for the girls. Statistical differences were found on the behaving appropriately subscale between the children in care and a control group of children from their birth families



## 2.9 Evaluating the theory of attachment

matched on age and sex, with the clinical sub-group of children in care scoring much lower. In the second assessment that took place one year later, rating scores had reduced with less children in care scoring in the clinical range. This was especially seen in the externalisation scale for the children in care. The authors acknowledge potential design limitations for the second wave of assessments. Different teachers had rated the children at both time-points and this could have contributed to this change in results. In addition, the raters were not blind to the study's intentions and different raters perceived behaviour in children differently, as the carers were more likely to rate the care children as above clinical threshold than teachers. This raises the question of reliability in terms of third party reports.

Other studies that have used longitudinal research designs with children in care and have shown high occurrence of behaviour problems later on in life. Courtney and Dworsky, (2006) obtained data from the Midwest evaluation of adult functioning of former foster youth and conducted a 3 year longitudinal study in the US on foster care children aged 17-18 years old. The research looked at the second wave of interviews, (22 months after the first wave) of 732 children who were either still in care (47%) or had been discharged (53%). They found that most of the young people had some involvement in criminal activity, with 28% of them being arrested and almost one fifth imprisoned. This was more likely in those who had been discharged and a significant majority of these were males. Most of the criminal acts involved gang activity, with both men and women often using a weapon and likely to be involved in criminal damage, stealing and seriously hurting others.

In Australia, Oates (1984) asked teachers to rate 39 physically abused children with a mean age of 9 years, on the Rutter Behaviour Questionnaire (1967). Their behaviour scores were significantly worse in comparison to a control group of children who were not abused but matched on age, SES, gender and ethnicity. Similar differences were also found when the mothers of the children rated the children's behaviour, with 81% of the abused children's mothers rating their children's behaviour as abnormal, compared to 34% of the control children's mothers.

Hayden (2010) reports on secondary data from a research project, which focused on restorative justice in 10 children's homes in the UK. The aim of the project was to reduce offending and conflict. The staff in these care homes reported significant events of violent aggressive behaviour, which had led to police call outs, such as window smashing and other criminal offences occurring off premises. From a total of 1451 police calls made from the homes in a 1 month period, 22% were down to offending behaviour. Out of a small cohort (46) of young people in care after 1 year, three quarters had a history of offending, 20 being males. The most common type of criminal activity recorded was

## **2.9 Evaluating the theory of attachment**

violence towards another (48%), followed by theft. In addition to this, 11 of the 17 young people had been excluded from school.

This section has shown how language difficulties found in looked after children may be explained by attachment disorders and contributes to offending behaviour. Sanger, Moore-Brown, and Alt (2000) found evidence to show how YOs who are looked after display language limitations which could also explain the development of offending behaviour. The language abilities of 20 maltreated female delinquents aged 13-18 years who had been convicted of a felony offence were assessed. Most of the females had been subject to both abuse and neglect and so were combined into one group and tested on their language skills using the CELF. When a score 1.3 SD below the mean on this test was used to indicate language impairment, 20% of the group met this criteria. Sanger et al (2000) also conducted interviews about the young people's communicative behaviours and analysed them using the methodology of phenomenology. The analysis revealed participants as believing that their maltreatment made them angry and that communicating through anger and frustration was the only methods known to them. This was especially the case when faced with authoritarian figures, due to a lack of trust.

### **2.9.1 Explaining the association between SES and attachment disorder.**

Most children in care tend to come from areas of low socio-economic status (Bebbington and Miles, 1989). One reason for this could be that parents of children in areas of low Social-Economic Status (SES) experience more life stressors such as low income and over-crowding, which may lead to anger, frustration, aggression and family breakdown (McCauley and Davis, 2009, McClung and Gayle, 2010, See chapter 1). These negative emotions are then taken out and displaced onto the child. This theory is supported by Gaines and Sandrunga, (1978) who obtained questionnaire responses from 80 mothers in New York City, who were either known for abusing or neglecting their child and a control group of 80 mothers who did neither. Several questionnaires were used to obtain information about the mothers' child rearing attitudes, as well as obtaining information about experienced negative life events via the Family Life Form (See Gaines and Sandrunga, 1978) in order to assess risk of abusing. After performing a discriminate functions analyses they found that life events as well as the ability to cope with stress significantly separated the neglect group from the abuse and control group. This would suggest that the negative environmental stressors contribute towards the inability to cope, which then leads to parental neglect of the child. This environmental stress could also lead to the development of mental health problems in parents, increasing the risk of abuse/neglect (Leslie and Landsverk, 2000). The study also found that environmental stress and coping did not correctly classify the abusive parents as abusive, suggesting environmental stress may not cause parental abuse. The above findings only accounted for 12% of the group categorization, suggesting that other

## **2.10 A linguistic approach**

variables (that were not controlled for) may have more influence in differentiating the parental abusers and neglecters from the control group. In addition to this, the mothers who participated did so on a voluntarily basis, and it may be that those who volunteer may not be as serious or persistent abusers/neglecters as other parents who did not participate. There are other issues with self-reporting questionnaires, which will be discussed further in chapter 3, especially with such sensitive and personal issues in which an element of social desirability may have also affected the results (Sawyer, Carbone, Searle and Robinson, 2007).

One other explanation as to why the majority of looked after children come from areas of socio-economic disadvantage may be simply down to lack of resources and contacts for parents in these areas. For example, parental groups that teach parents about better parental practices are often unreachable for those to living in areas of low SES (Salveron, Lewig and Arney, 2009). Furthermore, as these parents often experience some shame and embarrassment because of their inability to cope with their children, this often prevents them from seeking help. This is especially so when these support groups often take place in what may be viewed as threatening environments, (White Paper, 2008) in which there is a fear of being judged by other group members (Salveron, Lewig and Arney, 2009).

According to sociologists, families of high SES experience fewer problems in accessing and engaging in education, due to the abundance of resources and opportunities that they have available to them to improve child education. Meanwhile, families of mid SES have to be more strategic by remaining in contact with both authority figures, schools and the upper class, in order to achieve similar access to make do. The lack of support, contact and resources with regards to education for families of lower SES has widened the social status gap (Berridge, 2007; Parcel & Dufur, 2001). Lees, Stackhouse and Grant (2009) interviewed parents from socially deprived areas of Sheffield who expressed problems in relation to acquiring knowledge and access of speech and language services. Examples included lack of knowledge about negotiating with such services, with some finding them inaccessible due to location and family size. Others commented on how low self-esteem and confidence often hindered their involvement with services, perceiving them to be confusing and hard to understand.

## **2.10 A linguistic approach in defining SES as a theory of deficit or difference**

### **2.10.1 Linguistic theory of deficit**

The research examined thus far presents young people situated in areas of low SES as having poor language, communication and literacy skills. An alternative method of assessing the impact SES has on language development is by linguistic analysis. This approach focuses specifically on the type of

## 2.10 A linguistic approach

language used in relation to societal differences. Bernstein (1960) explains how the difference in social status can be expressed by language differences, with the two groups using different forms of speech modes. Bernstein defines class by using education, with the working class receiving non-vocational grammar school education compared to the middle class who were receiving public school education. The middle class are said to use a speech mode that contains perceptual and theoretical attitude, which is produced by complex sentence structure to organise and elaborate on experience. The working class speech mode is described as being less complex and more limited to descriptive language, rather than to elaborate abstract theories. Bernstein suggests that this is because the working class focus more on the content of objects perceived in comparison to the structure of objects and the complex relationships they have with one another, a skill which is developed by the middle-classes. The difference in language also reflects the power difference in society between the two classes, as the elaborate speech codes used by the middle class are more associated with generating ideas and education rather than the productive restricted codes used by the working class. This difference is seen as a qualitative one that exists on a spectrum of variance rather than a dichotomous difference and that the reason for this preference to perception is down to the structure of the family and in particular the way in which the parents interact with their children. For example, working class parents are described as being more likely to use more concrete language as well as using more non-verbal communication. Bernstein demonstrated this in a study comparing two groups from a grammar school in London (working class) and a group of students from a public school in outer London (middle class). Both groups completed a vocabulary test and a non-verbal test of intelligence (using the *Ravens matrices test*, Raven, 1938). The working class groups' mean score was much lower than the middle class group mean on the vocabulary test, but the difference was small on the non-verbal test. Thus, the working class group have limited language compared to middle class group, independent of their non-verbal ability.

Other studies have also supported this theory. Tough (1977) conducted a longitudinal study of 24 children split into two groups differing on SES based on their parents occupation. They analysed children's talk at age 3 and found when comparing the two groups that the disadvantaged children were less likely to speculate about future events, solve problems, demonstrate theory of mind and generally talk about their present or past experiences. Similar differences were also found 2-4 years later, with the disadvantaged children using less complex language to convey their thoughts as well as using shorter answers to the questions. Tizard and Hughes (1984) also compared conversations of 30 4-year olds from either a low SES or mid SES background to find the mid SES children asked more questions and were more likely to answer them using more complex and wider vocabulary.

## **2.10 A linguistic approach**

Bernstein (1960) links the language differences found in social class with educational experience, describing the middle class children as favouring school more because of these differences. This is because of their curiosity and adaptation to elaborate symbolic rules, as well as being able to manipulate rule of language to adequately express meaning. They are also more able to adapt different styles of language because of this experience, becoming more suited to various social situations. In comparison, the working class children do not possess the adequate language skills to fulfil the schooling experience, and may rebel because of this. Furthermore, the fact that they may not have the skills to change their language style in different social situations means other authoritarian figures perceive them as being rude and disinterested. This results in the working class child not understanding the point or relevance of expanding their vocabulary, especially when it is not in accordance with their perceptual needs. This highlights why school curriculum and teaching style may appeal more to the middle classes rather than to the lower class and it also supports the common finding that children with behavioural problems who are often excluded from schools, come from lower social classes and demonstrate poor speech-language skills.

However, the possibility of individual difference and the language similarities that exist between low and high SES groups are often not recognised or commented on as much as the differences are. Wells (1986) found no difference between 128 children aged 1-10 years old on their speech interactions with family, peers and teachers. The only difference found was MLU, which was still small and may not be of practical significance due to reasons of dialectal difference or test conditions, which may have explained these small differences.

### **2.10.2 Linguistic theory of difference**

This theory deviates from the finding and perception that lower classes display poor off language and communicative ability. Language and communication is often presented in a variety of forms by people depending on the social situation and context. This often involves changing speech and language depending on the audience, the social interaction and the formality of context (Moore, 2004). This stylistic account of language and communication suggests that it is often used to create a social identity. Moore (2004) conducted an observation of young people and how they engage with one another and they observed two separate social groups, of which they named the Townies and the Populars. The groups involved female students who were aged between 12-13 when the fieldwork commenced and 14-15 years old on data completion. The authors found that the linguistic features used by both groups differed. For example, the Popular girls often used more tag questions, negative concord and right dislocation. In comparison, the Townie girls often used more non-standard syntactic forms, which were often linked with their local community dialect and local discourse, especially as they spent most of their time within their local community. These linguistic

## 2.10 A linguistic approach

features used by each group were also often negotiated and re-formed in accordance with the opposite groups usage and behaviour. This shows how social practices and the people involved in these interactions within these social environments affect the groups linguistic output, which in turn enhances their group identity.

The view that language and communication can help create social identity is important to consider when analysing language samples of young people. What may appear to be unconventional, incorrect or irregular through speech analysis may not necessarily mean the young person has speech-language difficulties. Instead it may be simply a way of presenting one's social identity as different from others of varying SES. Taking this point into consideration, it may be beneficial to use a variety of different measures as well as measuring different language components other than expressive language in adolescents, before reaching a diagnosis of a speech language difficulty or impairment.

This interpretation is also consistent with Labov's (1972) theory of difference, which describes children from areas of social deprivation or lower SES as not necessarily possessing poorer language skills but as expressing meaning differently. Labov (1972) refers to the language codes and rules used by individuals of lower SES as being just as effective and complex in form and structure in comparison those used by families and social groups of higher SES.

The theory of language difference is also based on the vernacular culture young people associate themselves with (Cheshire, 1982). Labov (1966; cited in Moore, 2004) states that people associate themselves within a sub-culture which is represented by a specific vernacular culture and that this results in how much non-standard English is used by certain people. With a sub-culture of young delinquents, Cheshire (1982) found differences in their use of non-standard English based on the extent to which they adhered to their vernacular culture of toughness, excitement, trouble and weapons. The more the young people associated with their vernacular culture, the more non-standard English was used. Labov argues that the use of non-standard English changes in social settings and may result in the use of language that opposes vernacular culture, such as within formal contexts like school. Cheshire & Gardner-Chloros (1998) studied the extent to which this was true for school children by focusing on the non-standard present tense verb forms, which were described as good indicators for their vernacular culture. Variation in the use of non-standard present tense forms was found both within school settings and in their vernacular cultures, failing to support Labov's theory. Some who strongly adhered to their vernacular culture made more nonstandard present tense verb forms in the school than in their own vernacular culture setting. The authors conclude that such unexpected change may be due to speech accommodation theory, which

## 2.11 Conclusion to chapter 2

explains how people alter their speech based on whether they are seen to be working with one another, towards favourable goals or against each other (Moore, 2004).

### 2.11 Conclusion

This chapter has:

- Described a range of research that has used different methods to suggest a strong association between language, communication and behaviour. This is evident from research on the young offender population, as well as non-incarcerated children with behavioural difficulties.
- Shown that longitudinal research presents language and communication as being the primary cause of behaviour problems, supporting the social adaptation model.
- Highlighted that the above interpretation is too simplistic, with evidence showing that many other variables such as SES and parental input mediate the relationship between language literacy and behaviour.
- Shown how differences in language and behaviour are also associated with parental abuse and neglect, as well as emotive language used between parent and child. This strengthens the role attachment has in influencing both language development and offending behaviour via social cognition.
- Revealed that the communication and relationship between families from low SES and schools termed 'social capital' may also contribute to social exclusion faced by families that reside in areas of low SES.
- Concluded that research often assumes a theory of deficit in relation to the language abilities of children and parents from low SES. Yet, it could be that such families adapt a linguistic style that is associated with their vernacular culture, to exhibit a unique social identity.

## Chapter 3: Extending the research- The present study.

---

The literature review has introduced the prevalence of adolescent behaviour problems that occur in the UK. Research has identified language difficulties as explaining the occurrence and development of behaviour problems and offending rates found in adolescents and that this may interact with other potential risk factors such as social disadvantage and attachment.

Despite research providing evidence of YOs having language difficulties and longitudinal methods showing children with a SLCN later developing behavioural problems, the following methodological limitations and gaps within this literature still exist:

- Currently, only the language abilities of YOs in custody have been measured within the UK and in most cases without the inclusion of a control group of non-offenders.
- Research investigating the relationship between language and behaviour needs to include language assessments that measure aspects of language that can be considered as relevant to secondary school education and the criminal justice system. Incorporating other language measures such as the analysis of expository discourse, criminal vocabulary and interview methods will enable this.
- More qualitative research is required to fully understand the relationship between language and behaviour by analysing the perceptions and experiences young people have using language in relevant settings such as school, family and within the youth justice system.
- Use of standardised language assessments to measure language difficulties such as SLI and determine the extent to which language support is received by young people.

In order to discuss these methodological issues arising from the research literature, this chapter will introduce:

- SLI and its relationship with Non-Verbal ability with particular reference to research on offenders (Section 3.1).
- The theoretical and practical limitations of diagnosing SLI or SLCN using cognitive referencing methods (Section 3.2).



### **3.1 Defining SLI**

- The application of standardised language test norms to diagnose SLCN and evaluate the usefulness of typical norm comparison (Section 3.3).
- Other methods of assessing SLCN in YOs such as speech extracts, interview methods and self-reports. Reference will be made to research studies that have incorporated these alternative methods of assessing language in youth offender population (Section 3.4).
- The rationale for the aims of the present study and the mixed quantitative/qualitative approach to addressing the research questions (Section 3.5).

### **3.1 Defining SLI**

Specific Language Impairment (SLI) is often defined as a language limitation present in the absence of other cognitive, emotional, environmental confounds as well as in the absence of any physical deficits such as brain damage (Kamhi, 1998). The American Psychological Association clinically defines SLI as a language impairment encompassing both expressive and receptive language that is not caused by cognitive delay hearing loss or autism (DSM IV; American Psychological Association, 1994).

These definitions assume that children with SLI possess adequate cognitive ability, which is often demonstrated through good performance on Non-Verbal (NV) tests. Thus, any child that presents a discrepancy between their language scores and their NV score, with their language score being below age expectation, can be considered as having SLI. This method is known as cognitive referencing and assumes that language is a by-product of the cognitive system in accordance with the cognitive hypothesis model (Cromer, 1976). Accepting that NV cognition is associated with language measures means that any individual who performs low in both is thus excluded from a diagnosis of SLI, but instead is viewed as having a global cognitive learning delay or deficit. This is opposed to viewing the problem as being primarily due to language. The Generalized Slowing Hypothesis (Kail, 1994) also predicts poor language performance to be associated with low Non-Verbal cognition, specifically in this case being processing speed. This theory therefore views cognition as the primary reason for any language delay or difficulty (not specific language

### **3.2 Evaluating the cognitive referencing hypothesis**

impairment), which can be resolved through processes of cognition and learning rather than language. In instances where NV performance is found to be adequate in comparison to language performance, then a deficit specific to language can be inferred.

Studies using cognitive referencing methods have demonstrated differences in language performance of children who are diagnosed with having SLI, compared to those with non-specific language impairment. Findings have shown NV IQ scores to be lower, though still average in range, in SLI groups compared to typically developing children supporting the strong association found between the two (Farrell and Phelps, 2000).

Snowling et al (2006) found Attention Deficit Hyperactive Disorder (ADHD) to be reported more in the non-resolved clinical language impaired group as opposed to the resolved language impaired group and the typically developing control group at 15 years of age. This fact that ADHD is indicative of a cognitive behavioural difficulty, highlights the common link between language impairment and cognition.

There is a link between social cognition and language often in explaining behaviour and emotional regulation as discussed in chapter 2 (Ripley and Yuill 2005, Strauss, 2001, Redmond and Rice 2002). This has mainly been in relation to social pragmatic language, by which emotional perception, regulation and problem solving are both related to successful social interaction (e.g. pragmatics) and working memory functions (Marton, Abramoff and Rosenzweig, 2005). However, these findings are often dependent on the method used to measure working memory, with studies finding associations between working memory and literacy difficulties when non-word repetition is incorporated (Gathercole and Baddeley (1990). Nonetheless successful performance on this method may be associated with aspects of linguistic knowledge (Snowling, 1991).

### **3.2 Theory and research criticising the application of the cognitive referencing hypothesis on assessing language difficulty**

Dethorne and Watkins (2006) argue that by using cognitive referencing to define and measure language difficulty, this assumes a relationship between language and cognition, as discussed. However, Dethorne and Watkins also highlight a possible contradiction in theory. If one assumes a link between cognition and language as in line with the diagnosis of SLI and cognitive referencing, then perhaps one should not be excluding individuals that may demonstrate both a language and Non-Verbal dysfunction, based on low test performance on both aspects. In this case, the result would be an exclusion of individuals of need of language intervention and support. This may also explain why a high number of children and adolescents who show other difficulties in addition to

### 3.6 Conclusion to chapter 3

language that are still associated with language, fail to receive the much needed language support. Examples of this include young people with mental health problems, emotional behavioural problems or learning difficulties. There is also a recognition of the high incident rate of traumatic brain injury (TBI) that is present within the youth offender population, which is much higher than that found in the general population (Perron and Howard, 2008; Williams et al, 2010). For example, Williams et al (2010) found that out of 186 YOs held in a YOI, 65% of them reported a history of TBI. Assuming that YOs possess language difficulties, then TBI should be a recognised confound to both language and offending. This is especially when TBI is associated with damage to the frontal lobe section of the brain, which is responsible for cognitive processes crucial to social communication, such as empathy (Williams et al, 2010). In addition to acknowledging the environment as a causal factor for language difficulty, research has highlighted a higher than average incidence rate of language impairment in families that possess a language difficulty. Thus, in addition to TBI, genetics should also be considered a potential cause of language impairment that SLI and cognitive referencing methods do not account for (Clegg and Ginsborg, 2005). In respect to this evidence and these theories, terms such as 'specific' language impairment should be altered in order to allow other potential confounds of language to be considered. This enables a certainty that all children who present these related risk factors are eligible to receive speech-language intervention. The umbrella term of SLI may be over-simplistic in its definition and one view of SLI is that it is a grammatical problem (See Guendozi, 2003) and Rapin (1996) identifies receptive and expressive phonology, syntax, semantics and pragmatics as being embedded in the term developmental language disorder. This theory also runs in accordance with the recent Better Communication projects' (DFES, 2012) recommendation that the broad term of speech, language and communication needs (SLCN) should be used. In addition, the Bercow report (2008) defines SLCN in children as including children with learning disabilities, hearing impairment and Autism Spectrum Disorder (ASD). This enables all children that present language related problems to receive the required intervention that a strict diagnostic criterion excludes them from having (Better Communication Project; DFES 2012).

Some research provides evidence that challenges the assumption that both language and Non-Verbal IQ are positively related (Cole 1999, Fey; Long and Cleve, 1994). There is an assumption that NV IQ and language are related but not strong enough to suggest a causal relationship but rather a more interactional one. Botting (2005) found that IQ did not remain stable when assessed longitudinally throughout a child development. This poses problems in using the cognitive referencing method in excluding children based on their IQ scores. This is because some children

### **3.6 Conclusion to chapter 3**

who first meet their mean equivalent may no longer do so a few years later, which could result in falsely excluding children who may eventually qualify for SLI diagnosis and subsequent intervention.

### **3.3 Using standardised test norms to diagnose SLCN**

The most frequent method of assessing a SLCN in the youth offender population is by using the standardised normative scores obtained via standardised language tests. In this case YOs' raw scores obtained from language assessments are often standardised and then compared to a mean score expected for the age of the individual, based on the language assessment norms. Diagnosing a SLCN using this method is based upon how many standard deviations the raw score (once standardized) is from the expected mean score. This difference can range in strictness from 1SD to 2SD and the extent to how much these two scores should differ (how many sds should suffice) in light of determining intervention is unclear. Lahey (1990) argues that this is especially so when the language test has been standardised using normative data that has derived from a small sample of children with language disorders. Thus, the extent of how different a language score needs to be from the normal population in order to be classed as clinically different becomes problematic. The usefulness of using standardised normative tests that are based upon typically developing samples has been criticized because of this problem (McFadden, 1996). By comparing someone with a suspected language disorder or impairment to a test aimed at a typically developing individual, a floor effect is probable, which may not provide the necessary information to enable a useful diagnosis. Use of these normative scores may also lead to an over-estimated prevalence of individuals with language need or disorder. Furthermore, Dethorne and Watkins (2006) explain the impact of different social and cultural backgrounds on language repertoire, which standardised tests are not sensitive too.

In accordance with a linguistic theory of difference (Labov, 1972), Pena, Iglesias and Lidz (2001) commented on the social linguistic differences that exist between groups of children from different social cultures and argued that these differences are often not reflected accurately in current language assessments. Thus, children from diverse language backgrounds embedded in a culture different to that expected by the education system, often perform poorly on such tests because of this. Rapin (1996) also suggests that the use of norm referencing (using standardised tests) encourages us to search for a unitary language factor that constitutes language impairment that is independent of other factors. Measuring conversation that occurs naturally, is most likely to produce these individual sub-groups, along with other factors that are perceived as influencing language development, such as social disadvantage (See Chapter 2).

Pena, Spaulding and Plante (2006) conclude that using a standardised normative test that accounts for a LI sub-group as a valid way of diagnosing a SLCN, depends both on the aim of the

### 3.6 Conclusion to chapter 3

researcher/clinician and the psychometric properties of the language test being used. When the aim of interpretation is to gauge how impaired a child is in “relative” comparison to the general population or the degree of impairment in comparison to peers of similar backgrounds, then the use of tests that provide normative scores from both typically developing and language impaired are required. However, if the aim is to decide whether a child meets an “absolute” criterion of language impairment, then this becomes an interpretation that may be better suited to tests that do not include sample norms of language impaired children to maintain diagnostic sensitivity.

Research has shown speech language practitioners to express dissatisfaction in the use of standardised tests as a means of identifying speech-language difficulties. Standardised tests were reported as being too time consuming, both in administration and analyses as well as some being insensitive to cultural differences. However, 53% responded neutrally on a questionnaire developed to measure overall satisfaction (Huang, Hopkins and Nippold, 1997).

### 3.4 Measuring and assessing functional language relevant to YOs

The extent to which standardised tests are able to adequately measure the functional aspects of language relevant for YOs also brings into question their ability to correctly diagnose SLCN. Researchers have argued for alternative methods to assess language, specifically the various linguistic and pragmatic demands required in YO’s daily communication. This also includes the subjective experience of using language socially (Ehren 2000; Whitmire 2000; Sanger, 2003). Bryan (2007) acknowledges that standardised language tests may not be very useful in measuring language and communication for the young offender population. This is due to the fact that current language tests have not been standardised for this population of young people who have often missed significantly large amounts of education and often reside in areas of social deprivation. As an alternative, language tests that have been standardised on non-offenders are used, which are often aimed at younger age groups and are predominately targeted at U.S. populations (Bryan, 2004).

Assessing functional measures of language alongside standardised tests have been used in the youth offender population. For example, Bryan (2004) investigated the language abilities of 30 YOs aged 18-21 years using the *Polmont Interview* (Hamilton, 1999), where the participant was asked about their literacy, memory communication, comprehension and listening; the *Boston Naming Task* (BNT, Kaplan, Goodglass & Weintraub, 1983) to measure vocabulary and the subsets from the *Fullerton Language Test for Adolescents* (Thorum, 1986), which assessed comprehension and grammar. On the BNT 43% of the group scored below their mean age, suggesting poor vocabulary and results from the Fullerton tests revealed 73% of the group scored below the norm on the grammar test and 23% on the comprehension test. The norm for this test was the equivalent of an 11year old, highlighting

### 3.6 Conclusion to chapter 3

the fact that the group were scoring well below their age expectation. According to the self-reports, 37% of the sample reported having literacy difficulty and 50% reported a memory difficulty. Memory performance also correlated significantly with school leaving age, finding those leaving school early to report worse memory. In addition, 17% of the group reported experiencing hearing difficulties and 47% reported difficulty in their spoken language. The use of an interview also led to greater insight into possible explanations for the relationship between language and behaviour, as some of the young adults reported using aggressive means when being teased about their speech or when they find it hard to express themselves. Furthermore, the YOs also reported how their poor language and communication skills affected their school attainment, attendance and behaviour.

This method of assessment highlights the way in which language and communication contribute to deviant behaviour in relation to other factors like education. Standardised tests were still used to assess certain aspects of language like grammar, on which the group scored significantly low. In this case it may well be that such results are due to the lack of relevance these tests have with the YOs' own experience and use of language. However, some YOs were recruited to this study because they suffered from poor language and so results from this study may not be truly representative of the offender population.

#### 3.4.1 Language sampling

The use of language sampling as a tool for assessing and diagnosing language impairment or difficulty in YOs is a method that aims to overcome the limitations discussed. Language sampling is the recording of naturally occurring language derived from social interactions, which is then analysed as a way of assuming this matches the YOs overall language ability. The language components that are coded are then compared to a set of normative language scores included in software programs like the *Systematic Analysis of Language Transcripts* (SALT) (Ukrainetz & Blomquist, 2002). One common language measure that is assessed through language sampling is the Mean Length of Utterance (MLU). MLU is also often used as an alternative clinical marker for language delay or impairment (Dethorne, 2005, Ukrainetz & Blomquist, 2002). For example, Aram (1993) found MLU to be a better match for identifying clinically diagnosed SLI in comparison to the use of standardized norms from language tests (cited in Ukrainetz & Blomquist, 2002). The extent to which MLU predicts language ability remains unclear. One suggestion is that MLU is associated strongly with semantics and that higher MLU would translate into longer and more complex sentences. Evidence has shown MLU to correlate strongly with number of different words (NDW); another language measure used to test vocabulary and semantics termed (Dethorne, 2005, Ukrainetz & Blomquist, 2002). There is also evidence suggesting it to be associated more with

### 3.6 Conclusion to chapter 3

language grammar (Ukrainetz & Blomquist, 2002). Similarly, other language measures often analysed through language sampling have also been used to clinically diagnose SLI. Watkins et al (1995) measured NDW from a sample of speech in 25 pre-school children and found it distinguished children who had SLI from those typically developing children. Klee (1992) found similar results for both NDW and Total Number of Words (TNW).

Ukrainetz & Blomquist (2002) measured the language samples of 28 typically developing children ranging from 3.11-6 years from various income levels within Wyoming (U.S.). The language samples covered both a narrative and expository method, which were recorded and analysed using the SALT software. The specific language measures that were coded were MLU, NDW and TNW and in addition to this, four standardized vocabulary tests were used. There was a significantly strong correlation between NDW and vocabulary but only a weak correlation between MLU and TNW. Additionally, the vocabulary tests suggested that these two measures may be more linked to other language domains like grammar and syntax than to semantics specifically, as previously discussed.

These results demonstrate how language measures taken from samples of natural conversation can aid in assessing a SLCN for the youth offender population and that these could be used either in addition or as an alternative option to standardized language measures. However, Dethorne, Johnson and Loeb (2005) argue that the testing situation used to obtain language samples may not be reliable in developing a true account of language ability in young people. This is especially likely when considering traits of individual differences like shyness, which may confound results and is often present in adolescents with a SLCN.

Davis (1991) obtained a sample of conversational discourse from a group of YOs with a mean age of 16 years and a matched control group, based on a response of their favourite TV, movie or book. This was then analysed through clinical discourse analysis (Damico, 1985) which involves analysis of the 15 discourse behaviours and word choice and morphological errors such as word omission or incomplete sentences. The YOs had significantly more errors per utterance, with the mean being twice as much in comparison to the control group. Furthermore, other behaviours that formed the 'manner' category of Grice co-operative principles (1975) occurred more in the offender group, for example; pauses, interjections, repetition, and word revision. The authors do note however, that these differences must be interpreted with some caution due to the fact that some of these errors present in discourse are quite common in conversational speech by adolescents and adults (Brinton and Fujiki, 1989). Moreover, the scoring system used for counting frequency of error per utterance may have slightly exaggerated the group differences.

### 3.6 Conclusion to chapter 3

Extracting a sample of conversational discourse and analysing it may be useful for measuring social communication and language, but there are other methods which have been used to measure functional language that are relevant for YOs. Expository discourse is considered a more formal and structured measure of language in comparison to conversation. Expository discourse is often used in secondary school teaching, especially in subjects that require inference, evaluation and analysis of the complex relationship between variables, such as maths and science (Nippold, 2005). Eliciting such functional language is therefore more relevant and important for adolescents. Research has shown expository language to be more complex in comparison to conversational discourse, due to the former being more syntactically advanced (Berman & Verhoeven, 2002). This is based on evidence from studies that have compared the number of T units involved in a sample of discourse (Nippold, 2005). A T unit is a measure of clausal density, which represents syntactic complexity and is defined as a main clause plus any subordinate clause that are attached to an utterance (Hunt, 1970). Nippold (2005) asked a group of adolescents and adults to converse about topics like school work and an expository sample was also elicited by both groups, in which they were asked to explain the rules of a particular sport or game. Language complexity was represented by the number of T units present in the speech extracts as well as the mean length of T units per utterance. Clausal density (Subordination Index; SI) was also investigated further by dividing the total number of T units by the total number of different clauses (Independent/adverbial/nominal). The transcription and T unit frequency was obtained using the SALT programme (Miller and Chapman, 1985), which can also measure other aspects of language like word error, word frequency, mazes etc. The adults produced more T units, which were also longer in length compared to the adolescents. The mean length of the T unit was also larger in the expository discourse extract compared to the conversational one. Similar findings were also found with regards to subordination index. The mean length of T unit per utterance was also deemed a good representation of syntactic complexity and development based on the strong significant correlations it shared with SI and percentage of subordination clauses. This finding demonstrates the useful application of using expository discourse to measure expressive language complexity, especially as it would only involve obtaining and analysing short extracts about a topic that may be of some interest and relevance to a group of YOs or adolescents. Furthermore, this method of eliciting expository discourse is more relevant to what may be expected of young children in education and in the criminal justice system where conveying information in a structured clear, concise manner is required. This is something which standardised tests of language may fail to achieve (Evans and Miller, 1999; Gillam, Pena & Miller, 1999).



### 3.6 Conclusion to chapter 3

#### 3.4.2 Qualitative interview

A method for assessing the social aspects of language ability in adolescents and YOs is the qualitative interview. For example Spencer, Clegg and Stackhouse (2010) used Framework Analysis (Ritchie and Lewis, 2003) to analyse semi-structured interviews with 20 adolescents from schools residing in areas of social disadvantage. Themes derived from the analysis related to language perception and experience could not have been obtained from the use of standardised quantitative tests. Furthermore, these themes of language difficulty emerged through the context of interactions and contexts that were considered as being relevant to the adolescents. Based on this finding, the authors recommend incorporating clinical interview techniques as an additional tool when diagnosing language difficulties.

Sanger, Moore-Brown, Montgomery, Rezac, & Keller (2003) used the CELF and the Adolescent WORD test to screen 13 female YOs aged between 13-17 years in custody, following up with the PPVT and CASL in order to assess vocabulary and pragmatic ability. YOs were then interviewed about their perception of communication, describing it in relation to different people and situations as well as initiating a description of their learning experience. None of the group had any form of previous language intervention. Results showed all participants to be performing 1.3sd below the mean on both the CELF and the adolescent WORD test. However, not all the participants were available to complete the testing procedure due to being dismissed from the correctional facility. This reveals the logistical problem of testing language skills in this environment with this population, especially in cases where a large number of standardised tests are to be administered. However, all participants managed to participate in the interview and completed the tests from the CELF and Adolescent Word test and the methodology of Phenomenology was adopted to analyse the interview data. This methodology allows good in- depth description of a person's subjective experience of a particular phenomenon (Smith Flowers & Larkin, 2009). In this case, language and communication and many common themes were derived. The interview analysis revealed that participants understood aspects that related to good communication and how to achieve this, as well as what could be considered as being negative communication. However, the group struggled with many aspects of language, such as understanding certain words, expressing themselves and listening attentively. In comparison to Bryan (2004), the group also reported how they 'often felt dumb' when they did not understand jokes or grasp certain concepts at school. This would often result in the group experiencing negative reactions from others, leading to an overall negative attitude towards education. Thus, the interview method allowed YOs with a range of literacy language abilities the opportunity to express their views and experiences of current practices that exist in education and the criminal justice system. Interviews have also been used to measure spoken language, particularly pragmatic skills (Spencer

### 3.6 Conclusion to chapter 3

et al, 2010). For example, Sanger, Hux and Ritzman (1999) found from interviews that YO's were able to grasp the conventions of pragmatic communication. This contradicts findings that have assessed pragmatic ability in YO's by using standardised tests (See chapter 2). By eliciting and analysing a sample of conversational speech, Sanger found that known language conventions were purposely not always being put into practice by these YO's. Sanger et al (1999) also explains that female offenders may be rebelling against the typical normal way of communicating socially, by not practicing their apparent knowledge of pragmatics.

#### 3.4.3 Self-reports

Self-reports have also been used to assess SLCN in the YO's. For example, Bryan (2007) found YO's demonstrated a high self-awareness of their own speech language problems. In addition to this, self-reports have been a useful tool for facilitating rapport between researcher and offender (Pugach, 2001; Zwiers and Morissette, 1999). Snow and Powell (2008) had similar findings when using self-reports from YO's, in that 36% of them reported their reading and writing skills as being 'not good' compared to 14% of the non-offender group. Davis (2004) incorporated interviews, self-reports and video observation to obtain the views and thoughts YO's' had of cognitive behaviour programmes and how these were delivered. They found a huge mismatch between the level of required literacy and language/communication levels needed for participation of these programmes in comparison to the actual language, literacy and communicative abilities of the YO's. This highlights how alternative methods of assessing language, communication difficulty can enable the evaluation of current intervention strategies.

Gregory and Bryan (2011) used third party reports through the *Broadmoor Observation of Communication* (BOC, Turner, Pring and Bryan 2010) to measure social skills, which were rated by the offender's key worker in different settings. Over half of the YO's showed difficulties in their social skills, with 70% being rated as very low on the scale. However, the key workers were very familiar with the ISSP staff, which could have biased their response. It is important to interpret the findings of parent or teacher reports with caution, particularly when these are collected in specific contexts, times or situations (Lindsay et al 2007; Redmond and Rice, 2002). The common finding that teacher and parent reports differ and that this difference is often context-dependent supports the social adaptation model in explaining socio-emotional behaviour. This theory predicts behaviour as deviating in line with change of time and context, unlike the alternate view that negative behaviour is down to a stable psychopathological trait (Redmond and Rice, 1998).

Despite the advantage of using self-report and interview methods, there does seem to be a problem with the over-reliance on such methods, in that contradictions may exist between what one knows

### **3.6 Conclusion to chapter 3**

about language and how this is expressed via language tests (Sanger, 2003). Furthermore, as Bryan (2004) stated, due to time constraints when assessing YOs, questionnaire measures and language tests may be easier to adopt.

### **3.5 The present study**

This study will therefore compare one group of YOs on community court orders on their language abilities to a group of non-offenders matched on education attendance, social disadvantage and Non-verbal IQ. Education attendance was chosen instead of age, due to the evidence of YOs often having poor school attendance which potentially could confound possible language differences. Similarly, social disadvantage is controlled for, showing this to possibly mediate the relationship between language and behaviour. Due to the possible associations between Non-Verbal IQ and language and behaviour, variations in this are also controlled for by a way of specifying language limitations independent of Non-verbal ability.

Language ability will be measured using standardised quantitative language assessments considered as suitable for adolescents' participation in secondary school and the youth justice service. Most of these tests have been standardised to a normative sample of typically developing adolescents and adolescents with learning difficulties and speech language impairments. Expository discourse will be used as a measure of expressive language ability and other language measures such as MLU, NDW and SI will be recorded and analysed using the SALT software.

Finally, the use of qualitative interview method will be incorporated in order to gain access to young people's own experiences and perceptions of using language within the contexts of school, home and youth justice.

#### **3.5.1 Quantitative research questions**

The following research questions will be answered using the method of quantitative language assessments and demographic data obtained from the youth justice service and secondary schools.

1. To what extent can a group of YOs on community court orders be identified as displaying a speech language communication need using standardised language assessments?
2. Do a group of YOs on community court orders demonstrate lower language abilities based on performance on language assessments relevant to this population, in comparison to a group of non-offenders matched on education attendance, social disadvantage and Non-verbal IQ?
3. Are any of these language differences specific to the type of language being assessed such as expressive, receptive language or literacy?

### **3.6 Conclusion to chapter 3**

#### **3.5.2 Qualitative research questions**

The following research questions will be answered using the method of semi-structured interview.

4. What perceptions do young people have of their literacy and communication skills and do these perceptions validate the findings obtained from the quantitative language assessments?
5. What experiences do young people have of using language in various settings such as school, home and the youth justice system and does this differ depending on whether they are offending or not?
6. Do the results support either the social adaptation model or social deviance model of language and behaviour?
7. Do any of the demographics of young offenders confound the association between language, literacy communication and behaviour and how might these relate to the theories of social dis-advantage, adolescence and attachment discussed?
8. What implications might these findings have for Speech and language support/services?

### **3.6 Conclusion**

This chapter has

- Highlighted and discussed the many ways in which language can be analysed.
- Recognised the important link between language and cognition; demonstrated an understanding of the complexities of this link and shown that by relying heavily on cognitive referencing methods to diagnose a SLCN may be simplifying these complexities.
- Shown how standardised language tests have their uses in assessing SLCN, but the degree of severity adopted to identify a SLCN remains ambiguous and the demographics of these referenced norms require understanding in order to justify a SLCN in comparison to a normative sample.
- Discussed how incorporating other language assessments may be useful in developing an understanding of language difficulty, particularly in an adolescent population by which there is a lack of standardised tests aimed at this demographic. This can include analysing speech extracts, self or third party reports and interviews.

# Chapter 4 Method

---

This chapter will detail the method of this research project and will describe:

- The design of the study and information regarding the participants involved (Section 4.1-4.2).
- The language assessments used in the research project and their validity and reliability (Section 4.3).
- The qualitative methodology and the method of interview (Section 4.4).
- The procedure used for participant recruitment and data collection in both groups (Section 4.5).
- The procedures adopted in the project all of which adhered to ethical guidelines (Section 4.6).
- The prize draw participants were entitled to (Section 4.7).

## 4.1 Design

The study adopted an independent- groups design in which a group of YO's were recruited and compared with a group of non-offenders matched on educational years, nonverbal IQ and social disadvantage.

The study also incorporated a mixed method design. The quantitative data included numerical scores obtained from both standardised and non-standardised language assessments. Scores from both groups were then compared to each other as well as comparing each group's scores to the normative mean scores derived from the language assessments. The qualitative method incorporated semi-structured interviews that were analysed using the method of Framework Analysis.

## 4.2 Participants

Before recruitment began the required sample size needed to achieve adequate statistical power was calculated using G\*Power 3 software (Faul, Erdfelder, Lang & Buchner, 2007). It was expected that a strong effect size would be obtained based upon previous research that have used similar research designs as this project, (Snow and Powell, 2008). A total of 40 participants were required to achieve a moderate-strong effect size of 0.6, with an alpha value of 0.05 and incorporating 2 independent groups and 15 dependent variables that were expected to moderately correlate.

An opportunity sample of 57 participants was recruited from a Youth Justice Service in Yorkshire. This was through probation workers and offender focused workshops organised by both the YJS and the charity REMEDI, who provide offence related intervention with young offenders on court orders.

#### 4.1-4.2 Design and participants

All participants were aged between 12-18 years (mean= 16:6) and were receiving court orders and therefore still residing in the community. The number of months this group had to serve as part of their order ranged from 4-18 months (Mean=10 and mode 12 months). None of the offender group had been in custody or were on intensive supervision surveillance programmes.

The offender group included 50 males and 7 females who were predominately white (N=38) and 11 of the group were of mixed ethnicity. The remaining 8 of the group were from a minority ethnic background, which consisted mainly of Black Caribbean and Asian Pakistani race (see table 4.2).

**Table 4.1: The crimes committed by the offender group**

Type Of Crime Committed.	Number of young offenders within the sample that committed the crime.
Theft	23
Assault	14
Drug Possession	7
Vehicle Theft	4
Criminal Damage	2
Public Order Offence	2

The inclusion criteria for the offender group included English as participants' first spoken language and that participants were not receiving current speech language intervention. Controlling for these two factors enabled results to be analysed without the effect of potential confounds to language performance. In addition, only YOs on court orders were recruited due to the reasons explained previously in the introductory chapters.

For the comparison group, twenty-five participants were recruited from two local secondary schools in Yorkshire, which were purposely selected from a list of schools of which participants in the offender group had attended and were located within areas of social disadvantage (see below). Eleven participants of the comparison group were females and nine of the twenty five were white Caucasian. The majority of the group (14) were of ethnic minority backgrounds which included Indian or Pakistani heritage and Black African or Caribbean and the remaining two were of mixed ethnicity (see table 4.2).

#### **4.1-4.2 Design and participants**

The same exclusion criteria used for the offender group was applied to this group for the same reasons stated above. The only additional control was that none of the comparison group had a criminal record or had ever received a warning from the police. This allowed for language performance of both 'behaviour' groups to be compared, in order to adequately answer the research questions posed.

Finally, only Year 9 students were recruited in order to match the comparison group on overall school attendance (see Education). The age of participants in the comparison group ranged from 13(01)-14(09) years (months).

A lenient inclusion criterion for both groups was applied in order to truly represent the demographics and characteristics of young people involved in criminal activity and who lived within areas of social dis-advantage in Yorkshire.

##### **4.2.1 Social Disadvantage**

All participants were residing in areas considered to be socially deprived according to their attending or last known school address. The post-code areas for each school were compared to the *National Indices of Multiple Deprivation (2010)* which considers of average income, crime rates, employment deprivation, health deprivation, living environment and education deprivation. Those schools that resided in areas with a total index score of less than 5 were classified as being in areas of social disadvantage. Other school information was also obtained with those having higher than average free school meal percentages (FSM) and lower than average GCSE exam passes were also considered as being schools in areas of social disadvantage. Based on comparing the post-code areas of the schools attended to the *National Indices of Multiple Deprivation (2010)* as well as incorporating the above school data, the majority (77%) of the offender group met the criteria for residing in areas of social deprivation.

All participants in the comparison group were considered as living in areas of social deprivation based on the above school data. The two local schools were specifically selected from those that some of the offender group had attended as well as meeting the above criteria for social disadvantage.

##### **4.2.2 Education data**

Educational data was obtained from 51 participants and only 3 participants in the offender group had no history of school exclusion. For the remaining 48 participants this ranged from 1 day to 69 days throughout their school experience, resulting in a mean of 20 days exclusion for the offender group.

#### 4.1-4.2 Design and participants

Educational attendance was obtained for 51 participants in the youth offending group from the school records held by the Youth Justice Service. This included the total amount of days each young person had attended school throughout their whole educational period from Yr1 to YR 11, or up until their current school year if they were younger than 16 years. Where data was missing for some school years, these attendance figures were estimated by using the participants' overall mean percentage of days attended using the data that was available. Therefore for each participant, a total amount of days attended was then calculated comparing this to the amount expected in UK education (187 days per year, 2057 total educated days, DFES 2012). This enabled a calculation of the number of days each participant had missed from school. The group had attended a mean number of 1537 days, which resulted in missing a mean of 2.8 years of education in total. However, there was a large amount of variance and skew in these numbers, with the median and mode showing higher attended days of around 1585 days. This resulted in the group missing an average 2.6 years of education based on the groups' median and modal figures.

Educational attendance data was obtained from the comparison group in relation to their current secondary school. Therefore this only included up to three years (Years 7-9). The average percentage of attendance obtained for the group was 96% (range: 89-99%), with the median and modal scores showing a slightly higher percentage of 97% and 98% respectively. Thus, despite some outliers negatively skewing the mean, the central tendency scores reflect a high percentage of attendance of the three years of secondary school attendance for the comparison group. None of the comparison group had any history of school exclusion. It can be assumed that based on the high percentage rates of secondary school attendance, the participants would have had similar high levels of attendance during their primary school years. With this assumption, the comparison group were matched to the offender group on the mean number of years of education experienced (Mean: 8:4, Range: 8:0-8:10 years).

For participants whose data about special educational needs was available (52), only 5 participants had not received any statement of special needs. The most common statement was that of emotional-behavioural difficulties and ADHD and 8 of the group also had statements for dyslexia. Only one participant of the offender group had received some previous form of speech-language therapy when much younger with regards to stammering.

Only one participant from the comparison group had received a statement of special needs which was for a learning disability. None of the group was receiving any speech language therapy.



### 4.3 Language Assessments

#### 4.2.3 The looked after status of participants

For the offender group, 28% (16/57) had been in care or were still in care of the local authority.

None of the comparison group was in care or had any experience being under local authority care.

### 4.3 Language Assessments

#### 4.3.1 Expressive language

Expressive language was measured by recording an extract of expository discourse (Nippold, 2005), which required participants to verbally describe a sport, game or TV show they had a good understanding of. To aid participants on what to comment on, a planning sheet detailing relevant pointers was obtained from the *Systematic Analysis of Language Transcripts* (SALT, Miller and Chapman 1985) website and provided to participants. This planning sheet included pointers on game objective, preparations and equipment, start of play, course of play, rules, duration, strategy and scoring. All responses were audio recorded.

The expository discourse test required the researcher to listen to the participant with the aim of talking as little as possible throughout the process. The use of any leading questions to prompt participants was also avoided. The researcher was allowed to provide some open ended questions concerning the different sections given on the sheet to help participants. All protocols acted upon were in line with the testing guidelines of the SALT manual.

A total expository score was calculated based on how well participants were able to describe each section of the game/sport given. These sections included Preparations, Object of contest, Start of play, Course of play, Scoring, Rules, Strategy, Duration, Terminology and Cohesion and scores for each section were given out of a possible 5 in line with the SALT scoring criteria.

This speech extract was transcribed and scored in line with the SALT guidelines. All utterances were segmented into Communicative Units (C Units), enabling the syntactical complexity of participants' discourse to also be analysed using Subordination Index (SI). C units are defined as utterances that incorporate a main clause and any of its attaching subordinate clauses (Nippold, 2005). Therefore, C units do not include isolated subordinate clauses, as such utterances are not considered complete grammatically (Nippold, 2005). The advantage a C unit has over the T unit (described in chapter 2) is that it allows for the coding of utterances that do not contain a verb but answer a question, thus still possessing a communicative function (Crookes, 1990). Subordination Index was calculated by using the ratio of C units to the number of clauses (both main and subordinate) within each participant extract. The mean length of participants' utterance was also recorded, along with the ratio of number of words spoken to the number of different words spoken in each extract.

### 4.3 Language Assessments

Both scores and language aspects coded for (SI, MLU, and total number of words and different words) could be compared to a comparative database of age-norms obtained from the SALT software. This language database included a sample of 87 typically developing students aged from 12.7-15.9 years recruited from the Milwaukee and Madison areas of the US. The sample was of a mixed academic ability and 18% of students in the database were eligible for free school meals. The majority of the group were white and an equal number of both males and females were recruited. As the language sample was not standardised there is no statistical measures to confirm reliability or validity. However, the language sample is often used to aid in clinical diagnosis of expressive language difficulty or impairment (Heilmann, Miller and Nockerts, 2010).

#### 4.3.2 Literacy

The *Wechsler Individual Achievement Test* (WIAT, 2002) was used to measure word reading, spelling, writing and reading comprehension. The WIAT is a standardised test that demonstrates good reliability and validity in measuring language. Split half correlations using the Spearman-Brown formula showed strong correlations at and above 0.9 tested across the whole age range showing very strong reliability. Test re-test correlations were also performed on a sample of 74 examinees aged 13-19, producing strong correlations over 0.9 for all the relevant sub-tests included in this project. With reference to the validity of the sub-tests within the WIAT, a rigorous method of content validity was performed, in which expert reviewers checked each item within each subtest to see that they matched the test objectives. Any items that proved problematic from this process were revised or deleted. The similar literacy subtests also correlated very highly with each other and strong correlations were found when the relevant sub-tests were correlated against total scores obtained from the *Peabody Picture Vocabulary Test* (PPVT; Dunn and Dunn, 1997), the relevant composites of the *Differential Ability Scale* (DAS; Elliott, 1990) and *Wide Range Achievement Test* (WRAT3, Wilkinson, 1993) demonstrating strong content validity. The WIAT sub-sets were also correlated with teacher grade ratings for English for 313 children aged between 6-18 years also finding moderate to strong correlations. Finally, significant differences ( $p < 0.01$ ) in scores from children who completed the sub-tests and to children consisting of 'special groups' diagnosed as having ADHD, learning disabilities, hearing impairments speech language impairments and emotional difficulties were found. This also demonstrates that the WIAT is capable of separating out distinct groups of children based on their language abilities.

#### 4.3.3 WIAT Tasks

**4.3.3.1 Writing:** This involved participants writing a letter to a school head teacher arguing either for or against a school-uniform enforced rule. This was scored mechanically using the WIAT scoring rubric measuring spelling and punctuation errors, overall organization, theme development and

### 4.3 Language Assessments

vocabulary. These individual scoring categories were then totalled up to provide each participant with a total writing score.

**4.3.3.2 Reading Comprehension:** This involved the young person reading five short stories and four short paragraphs and then answering questions based on what was read. Some questions also requiring a level of inference making. Some answers allowed 1 point for partially correct responses and two for fully correct based on the WIAT scoring criteria. Scores were totalled up to form a reading comprehension score. The WIAT then provides a weighted equivalent score taking into consideration of chronological age and reading level age, as some participants were unable to read the reading level that matched their Chronological Age (CA). The weighted scores could then be converted into standard scores in order to compare them to the WIAT normative database.

The short paragraphs were read aloud and the number of correctly read target words was also recorded and each participant was given a target word score.

**4.3.3.3 Word Reading:** This involved participants reading a list of words varying in difficulty from a sheet provided by the WIAT. A total score was then provided based on the number of correctly read words.

**4.3.3.4 Spelling:** For this task participants were asked to spell a word the researcher read aloud both in isolation and then again in an accompanying sentence. The list of words was provided by the WIAT.

All total scores were compared to the WIAT normative standardised database, which were separated on age groups. The standardised database has been obtained from a large sample of around 3000 children ranging in age from 4 years to 19.11 years and was stratified on the U.S. 1998 consensus data. This was based on other variables including sex, race, geographic location and parental education.

#### 4.3.4 Additional language measures

**4.3.4.1 Receptive Language:** To measure receptive understanding, the Understanding Paragraphs (UP) test from the *Clinical Evaluation of Language Fundamentals* (Semel, Wiig and Secord, 2003) was administered. This required participants to answer questions after listening to a 3 short paragraphs of information. Some of these questions directly referred to what had been read, whereas others required inference making. Points were rewarded based on either fully correct or partially correct answers and these were then totalled up for each participant (Semel, Wiig and Secord, 2003).

### 4.3 Language Assessments

**4.3.4.2 Verbal Memory and Syntax:** The Recalling Sentences (RS) test from the CELF was also administered as a measure of verbal working memory and syntactic awareness. This required participants to verbally repeat a sentence that was read out to them by the researcher and the number of errors were noted, providing a score based on how well the participants could repeat the sentence word for word. The type and number of errors were recorded and this determined the score for each sentence. Total scores were then computed for each participant.

**4.3.4.3 Social Communication Skills:** The pragmatics sub-set from the CELF was also used to assess the social communication skills of participants and this was given to the participant's caseworker to complete. This involved items that aimed to measure conversational skills, Non-verbal communication skills and the ability to ask, give and respond to information. Each item was assessed using a Likert format of 1 being never to 4 being always and the three sub-factors were given a total score. These three total scores were also added together to form a pragmatic score for each participant. The total score obtained was then compared to a set criterion matched for chronological age based on the CELF normative database. Assessors were given the chance to rate some items as not appropriate or not observed where applicable.

The standardisation sample used in the CELF 4 included 50 children for each age group situated in the U.S. ranging from 5-21 years, with 15% of the sample living in homes of which additional languages were spoken. A small percentage of students had special services relating to their development (9.5%) and for the age group of 16 year olds around 5% of the sample had parents of the lowest educational level, which was attending up to 11<sup>th</sup> grade.

The CELF 4 demonstrates good reliability in the test-re-test, with correlations being 0.9 for the RS and in the 0.8s for the UP task across the relevant age span. Internal consistency was also high for both sub-tests on the CELF, as shown by large Chronbach Alpha figures and high split-half correlations. This strong reliability figures were also replicated using various clinical groups involving those with language disorders, learning difficulties, autism and hearing impairment. With regards to validity, strong correlations were found between the sub-tests that indicated a higher core language factor but yet separate language factors were identified, such as expressive and receptive domains as well as working memory. This language hierarchy was supported by use of confirmatory factor analysis based on the exploratory FA conducted in earlier CELF versions. High-moderate correlations were also found between the CELF 3 and 4 versions for both a typically developing and clinical group, supporting the validity of these language constructs. Finally the validation of the CELF 4 was also tested on a sample of 225 children aged 6-17 who were diagnosed with a language disorder. This group's language scores were compared to a matched comparison group in which significant

### 4.3 Language Assessments

differences were found. Using the same samples, the tests sensitivity and specificity in correctly classifying those with a language disorder was also shown to be excellent.

**4.3.4.4 Non-Verbal Ability:** The matrix reasoning task from the *Wechsler Abbreviated Scale of Intelligence* (WASI, 1999) was administered. This task required participants to detect the commonality between two shapes or patterns in order to choose the correct missing figure that matched this pattern or relationship. This produced a score that could be compared to a standardised normative database provided by the WASI. This normative sample was based on a large sample of 2,245 children and adults ranging in age of 6-89 years and consisted of equal gender. Various geographical locations and education levels were also included and stratified based on the data obtained in the US 1997 census.

The WASI also demonstrates good reliability with strong correlation coefficients of 0.9 and above found between each subtest and the overall IQ scores. Strong split half correlation coefficients for each sub-test were also produced across the various age groups. Test-re-test stability was also demonstrated with strong correlation coefficients produced from a total of 222 children and adults tested twice over a delay of 2-12 weeks. The correlation coefficients ranged from 0.77-0.92 for both sub-tests and overall IQ scales. High inter-scorer agreement was also found for the Matrix reasoning task with strong correlation coefficients of 0.9.

In order to establish high validity, the WASI correlated statistically significantly high with the *Wechsler Intelligence Scale for Children* (WISC, Wechsler, 1974) and also for the *Wechsler Adult Intelligence Scale* (Wechsler, 1997). A Multivariate Analysis of Variance (MANOVA) also revealed no statistically significant differences between scores on the WASI with the WIAT, demonstrating good content validity. Exploratory and confirmatory factor analysis also revealed good construct validity based on a significant two factor model proposing two verbal and performance sub-tests. Finally the test was proven to identify trends and differences between groups of participants depending on their cognitive level.

#### 4.3.4.5 Criminal Youth Justice Vocabulary

The Criminal Vocabulary (CV) questionnaire measured vocabulary knowledge of words used within the criminal youth justice system. Participants were first given 10 written words selected randomly from a list of 39 and they were asked to verbally define each word. Participants scored 2 points for a fully correct answer (Police Statement – a record account of what has happened) and 1 for a partially correct answer, in which an example may have been given but the participant was unable to specifically define the word meaning (what police ask you to do in the station after a crime

### 4.3 Language Assessments

occurred). In addition to this the police statement that is spoken to young people at the time of arrest was read out to participants and then they were asked to verbally define the meaning of this paragraph. This was scored in the same way as above, with 2 for fully correct answer and 1 for a partially correct one.

Participants were then given a written definition, which was read out by the researcher and a selection of 4 words were presented. The participant selected the correct word that matched the written definition. Three other written words from the list that had not yet been used in the first task (verbal definition) were randomly selected as decoys.

#### 4.3.4.6 Validation of the Criminal Vocabulary Questionnaire.

The researcher developed an original informal measure of criminal vocabulary assessing both receptive understanding and expressive understanding of words commonly used within the youth justice service. A total of 27 words were first included in the questionnaire and these were obtained from the SLT resource *Sentence Trouble* (Communications Trust, 2012). *Sentence Trouble* was a resource developed by the Communications Trust (2012) with the aim of promoting the awareness of speech language needs and difficulties faced by YOs. Within this booklet a section details a list of words used in the Youth Justice Service (YJS) that are perceived as complex and linguistically highly demanding for YOs to comprehend.

Questionnaires containing these 27 words were provided to 50 case-workers and staff at the YJS, who rated each word based on how often they believed the YP would come across the word either through written or verbal modality. The questionnaire contained a rating scale numbered from 1 to 5 (1 Never, 2 Rarely, 3 Sometimes, 4 Often and 5 Always). Mean scores were then generated for each word and any that fell below 2 was discarded from the questionnaire as these words were not perceived as being used often enough in the YJS.

A second version of the questionnaire was then produced, containing the same words from the original questionnaire that had ratings above 3 as well as other new words that had been provided by the YJS staff in the first phase above. This second questionnaire involved 46 words and this was validated again by a further 10 case workers at the YJS, as well as 20 YOs attending the YJS.

As above, mean ratings were calculated for the new words and any that fell below a rating of 3 were eliminated from the questionnaire. This resulted in a total of 39 words. Each word was given a number and the corresponding definition was given the same number on the back.

## **4.4 Qualitative methodology**

### **4.3.4.7 Interview schedule**

The semi-structured interviews covered topics relating to language, communication and literacy (see Appendix 1). Some of the topics such as self-perception of literacy and communication and the importance associated with this stemmed from previous research (Sanger, 2003). However, as one of the aims of the project was to gain an overall understanding of young people's experience communicating with others, topics also covered communication within the criminal justice system and at home with friends and parents. Other topics included within the schedule were the use of modern technology for communicating with others, the level of support participants perceived others had provided in relation to language, the literacy and communicative practices participants engaged in and the communicative strategies used in situations of conflict and confiding in others was a topic that was also explored.

## **4.4 Qualitative Methodology**

Qualitative research allows for an in-depth exploration of any given phenomena, which can be achieved through an inductive approach to gaining knowledge (King and Horrocks, 2010). In the case of this research project, it was the experiences participants have that was to be explored using the qualitative method of semi-structured interview.

This method allows for participants to elaborate on topics and themes to promote deeper investigation and analysis, but at the same time preventing the participant from deviating too much from the subject in question (Silverman, 2004). In this case the interviewer still holds some form of control over the direction of the interview schedule by pre-determining a list of questions. However, this schedule can be adhered too flexibly, as it may be that other questions arise or are answered before they are asked. Similarly, prompting was also used in addition to the main topic questions to allow participants to extend or elaborate on their experience (Silverman, 2004).

As previous research has identified language difficulties in YOs (Bryan, 2007), it was decided that a non-structured open interview would not benefit this research project. This was due to the likelihood of participants responding in short answers, due to both not being able to comprehend general open ended questions as well as not having the high level expressive language needs required for answering such questions. This was also the case in the first few interviews in which more closed questions and prompts had to be included to allow for better comprehension and therefore better answers from participants.

The chosen qualitative methodology was approached via the ontological position of realism. The realist approach assumes dualism in how people and phenomena exist. This reference to dualism

#### **4.4 Qualitative methodology**

refers to two worlds that exist simultaneously in how we perceive phenomena. For example, realism believes that a natural existence of causal observable laws exist in a similar fashion to that of natural science, but also that another independent reality exists. This additional reality involves the individual subjective perception of the world that exists around us. Therefore, with this realistic philosophical assumption of knowledge and the worlds existence, one assumes that what is being said and told by participants subjectively, is still taken as being 'real' and as true (King and Horrocks, 2010).

The process of analytical induction was incorporated to combine different interpretative accounts of participant's experience. This enabled a production of similar themes to account for participants' true perceived experience of language, literacy and communication, without the aim of producing a theory as such (Smith, Flowers and Larkin, 2009).

##### **4.4.1 Framework Analysis**

By adopting this analytical inductive approach in comparing the individual experiences of the phenomenon in question, it seemed plausible to incorporate the method of Framework Analysis to aid in comparing the common themes and accounts within the group.

The process of Framework Analysis followed the procedure adopted by Ritchie and Lewis (2003). This procedure required reading the interviews a number of times in order to gain a good understanding of the overall perception and experience from which common themes are then identified from each interview. Parts of the interview are then indexed to these themes in an attempt to both explain certain behaviour and describe it. Throughout this process, themes are often refined, altered and edited and super-ordinate themes are produced as umbrella themes containing several sub-themes within the matrix. Within this matrix each participant is given a row by which their data is transposed onto in order to support each theme.

By producing a matrix of all the common themes and sub-themes matched with a main super-ordinate theme, a total of 9 super-ordinate themes were produced (See table 6.1 chapter 6). Interviews not yet analysed were then incorporated into this matrix with relevant quotes from the interview to fit into each sub-theme within the above super-ordinate themes. This allows for typologies to also develop based on each super-ordinate theme in the framework based on the differences and common patterns between the participants in the group.

##### **4.4.2 Interpretative Phenomenological Analysis (IPA)**

One alternative method of qualitative interview analysis that could have been incorporated within this project was IPA (Smith, Flowers and Larkin, 2009). IPA is a strand of phenomenology that



#### 4.4 Qualitative methodology

concerns itself with individuals' conscious experience of something and how this is perceived subjectively (Finaly, 2009). The methodology originates from the philosophical works of Symbolic Interactionism, which focuses on human act and meanings that individuals attribute towards things (Flick, 2009). Some theorists go as far as to say that undertaking this approach is to gain access into other's 'life-world' and experience a phenomenon in the way someone else perceives it through their own individual experience. This argument is more in line with the later existential phenomenologist's' (King and Harrocks, 2010). IPA is also considered a double hermeneutic in that the researcher is aiming to interpret someone else's interpretation. Assuming this, the analytical process requires an element of reflection on behalf of the researcher, as their own belief and perception or interpretation may influence the research and analysis process (Smith, Flowers and Larkin, 2009).

The inductive process of analysis used in IPA and described by Smith et al (2009) provides a very detailed interpretative account of interview data of which can be very time consuming. Due to the large number of interviews being conducted for this project, it was thus considered that the inductive approach used in IPA could be followed up until a point at which no further themes could be derived. In other words using grounded theory terminology, up until a point of saturation had been reached (Strauss and Corbin, 1998). At this point the themes obtained from the IPA analysed interviews could then be incorporated into a Framework (as described above) for which future interviews not yet analysed could be incorporated into. This would then incorporate a deductive method of data analysis for the latter stages.

However, combining the methodology of IPA and Framework Analysis may not be viewed as in line with the requirements and assumptions that are held within this strand of Phenomenology. IPA assumes individuals all have their own subjective perception and experience of phenomena, which can be investigated and brought to life by an independent investigator, who also has their own take and interpretation of the phenomena under investigation (Smith et al, 2009). Comparing alternate accounts is feasible within this methodology, as long as one still acknowledges the fact that these are individual accounts. However, by incorporating these individual accounts into a predisposed framework in which other individual accounts are then 'fitted into', this immediately removes the previous assumption of individual experience. Instead, the researcher ends up forcing an individual subjective interpretation and experience onto an already designed experience. This process then prevents any insight or interpretation of individual subjective experience. This might suggest that combining these methods in this way may result in a contradiction of methodology. The researcher is no longer using IPA, but instead has developed a framework from themes in line with

## **4.5 Procedure**

interpretative phenomenology to use in a more deductive, frequency-like, almost quantitative methodology. Thus the reason for choosing and using IPA in the previous instance no longer becomes justified.

### **4.4.3 Incorporating aspects of IPA within Framework Analysis**

Based on the limitations of incorporating the above methods, it was finally decided that for logistical time reasons the method of Framework Analysis would be adopted. However, the method of extracting themes from each interview would be conducted in an inductive-interpretative way up until the process of saturation. At this point a Framework would then be applied to the data, in which subsequent interviews could be attached to and further typologies created. In addition, the process of researcher reflection was also adhered to, based on the assumption that the researcher is also an active part in this research process and that their own perception and interpretation of participants' accounts could influence the analysis somewhat.

## **4.5 Procedure**

### **4.5.1 Offender group**

Before participants were approached for the study, the researcher spent approximately three evenings a week for 6 months volunteering to support the offender focused workshops organised and produced by both REMEDI and the YJS. This was in order to become familiar with the youth justice process, staff and for the YOs to be familiar with the researcher before testing began.

Individual case workers met with the participants at different intervals and times each week and so the researcher arranged to meet them during these timetabled sessions, so as not to disrupt their routine. Participants were shown the participant information sheet and this was read to them by the researcher and discussed. Participants were then asked if they were happy to participate in the research project and if they agreed, the researcher completed the relevant sections of the consent form with them. This was signed and dated by both the researcher and the participants and a copy was made and given for participants to keep.

For any participants under the age of 16 years, verbal consent was obtained over the phone by contacting their parent at the YJS. The reason for deciding on verbal consent was due to the likelihood of parents of YOs to also display literacy difficulties and so being able to verbally explain the project made this process of consent a more valid one. The participant information sheet was read and discussed and if the parent agreed to their son/daughter participating, the relevant sections of the parental consent form were completed over the phone with the parent. A copy of the parental consent form was then made along with the information sheet and both were then sent out to their home address via the YJS.

## 4.5 Procedure

Appointments for data collection were in line with the appointments already made with participants and their caseworker. For each participant who consented to each phase, they were seen roughly 3 or 4 times by the researcher. Each time seen depended on how long participants were keen to stay for and varied from 10 minutes to 40 minutes. Thus, the number of times each participant needed to be seen to complete the tests varied according to the length of the sessions.

Participants took part in three sessions.

**Phase 1:** For the first phase of the data collection, the following exercises were conducted: spelling test, word reading test, understanding paragraphs, the expository discourse and the criminal vocabulary questionnaire.

**Phase 2:** The second phase of appointments consisted of the writing exercise, reading comprehension, the non-verbal test and the recalling sentences test.

The tasks that were perceived by the researcher as briefer and easier were completed before the more challenging literacy tasks, as based on the researchers experience, this would encourage confidence, trust and rapport to emerge between both researcher and participants. This strategy was perceived by the researcher as reducing the possibility of participants experiencing potential failure or difficulty early on in the process, which would have been unethical and unproductive with regards to data collection.

**Phase 3:** The last session included the interview which was purposely left until last as this included personal topics and required an existing level of trust and security between the researcher and participants.

Issues regarding participant attendance and time constraints faced by the researcher meant that the order of the above phases/tests varied.

### 4.5.2 Background Information

If participants consented, background information on their school attendance including exclusions as well as any exam results of Science, English and Maths were obtained from the YJS records. Any history of care participants had been in was also collected via their YJS case-file and this included the length they had been in care for. Finally, participants' case-file was also used to obtain their recent offence record and the resulting punishment.

## **4.6 Ethics**

### **4.5.3 Non-offender comparison group**

In order to match both groups according to the independent variable of social disadvantage, a list of local secondary schools were obtained based on the information detailed in the previous section (see social disadvantage). For those schools that met the criteria of being in areas of social disadvantage, the Head-teacher for each school was contacted regarding possible participation.

Two of the schools replied expressing an interest in participation and so the researcher met with the relevant staff to discuss the project and its requirements. After both schools agreed to participate, letters detailing information about the project as well as consent forms were sent out to all parents of participants who were eligible to participate. Of those consent forms that were returned and signed agreeing for their child to participate, these participants were then approached by the researcher in school. The project was again explained in detail to participants with reference to the information sheets and written consent was then requested for participation.

Due to the lack of response from parents from both schools, the researcher also attended morning registration classes to inform potential participants of the project. During these sessions written consent forms were handed out in class for students interested to obtain parental consent.

Recruitment for the project lasted for approximately 6 months over two school years (April – October) and total testing lasted for two hour long sessions for each student during school time.

The quantitative language testing was completed over the first hour and then participants were seen again to complete the interview. The order of the language assessments were completed in the same order as the offender group to avoid further bias as well as for the same reasons as developing a level of trust and rapport before the interview was administered.

The same information regarding education attendance and exam results were collected for those participants in which consent was obtained for.

## **4.6 Ethics**

The study received ethical approval from the local council and the University of Sheffield (see Appendix 3). All results obtained for both groups were treated with strict confidentiality and anonymity by providing participants with numbers and aliases for interview transcripts. All personal sensitive information that may have been provided during the interviews was omitted. All participants were reminded that participation was entirely their choice and that they could stop and withdraw from the whole process at any-time. For participants under the age of 16 years in which parental consent was gained, any signs of language difficulty or impairment based on the language assessment results were reported to both their school teacher and parent. The same action applied

#### **4.7 Prize draw**

for or any other safeguarding issues that may have been derived from the interview responses. For participants aged 16 or over, they were given the choice as to whether they were happy with the researcher contacting their teacher and parent about any potential problems that occurred from the analysis of results.

#### **4.7 Prize Draw**

Once data collection had been completed for the group, all participants that completed all stages of the research and agreed to be entered into the prize draw were entered. For those who were under 16 years old parental agreement for entering the prize draw to win a £15 Meadow-hall voucher was required and this was mentioned in the verbal consent form. All participant numbers were put into a hat and 7 numbers were drawn at random by a member of staff at the university. Those who had won were sent a letter confirming this to their home address, along with a Meadow-Hall voucher worth £15 to the address on file at the YJS/school.

#### 4.7 Prize draw

**Table 4.2: The frequency of participants in the offender group depending on gender, ethnicity, looked after status and crime committed.**

	Female	Male	White	Mixed Eth	Min Eth	LA	NLA	Theft	Assault	Drugs	Vehicle Theft	Criminal Damage	Public Order
Female	7	-	5	2	0	4	3	2	3	1	0	0	0
Male		50	30	9	8	12	38	21	11	6	4	2	2
White	5	30	35	-	-	8	27	12	9	6	4	1	2
Mixed Eth	2	9	-	11	-	6	5	6	4	0	0	0	0
*Min Eth	0	8	-	-	8	2	6	5	1	1	0	1	0
*LA	4	12	8	6	2	16	-	9	6	1	0	0	0
Non LA	3	38	27	5	6	-	41	14	8	6	4	2	2
Theft	2	21	12	6	5	9	14	23	-	-	-	-	-
Assault	3	11	9	4	1	6	8	-	14	-	-	-	-
Drugs	1	6	6	0	1	1	6	-	-	7	-	-	-
*Vehicle Theft	0	4	4	0	0	0	4	-	-	-	4	-	-
*Criminal Damage	0	2	1	0	1	0	2	-	-	-	-	2	-
Public Order	0	2	2	0	0	0	2	-	-	-	-	-	2

\*Min Eth (Minority Ethnicity, LA (Looked after) Veh Theft (Vehicle Theft), Crim Dam (Criminal Damage).

# Chapter 5 Quantitative analysis of the language scores obtained from young offenders and non-offenders.

---

This chapter will address the research question of whether language can predict offending behaviour by analysing the quantitative language assessment data.

The chapter will report the:

- Variance in age of participants and years of education attended for participants in both groups showing these differences to not affect language scores. (Section 5.0).
- Descriptive mean language scores for both offender groups comparing differences. It will also compare these mean scores of both groups to the test norms equivalent for both 14 and 16 year olds (Section 5.1).
- Binary logistic regression analyses that test how well each language assessment predicts offending status (Section 5.2).
- Principal components analysis used to reduce the number of language assessment used to predict offending status (Section 5.3).
- Formation of language composite factors using z scores to predict offender status and the findings from the regression analyses are discussed (Section 5.4).
- Aspects of the spoken language and literacy composite scores that best predict offender status using logistical regression analysis (Section 5.5).
- Extent to which the relationship between language and offending status is confounded by looked after status, gender and ethnicity. Trends in descriptive mean comparisons are discussed along with findings from logistical regression analyses whereby gender and ethnicity are included as interactive factors in a multinomial model alongside the composite language assessments (Section 5.6).
- Relationship educational attainment (measured by key stage results) and percentage of education attendance has with language and offending behaviour. Correlations are performed to assess the relationship the two former educational variables have with language and logistical regression analysis is performed to investigate how well these can predict offending status and language performance (Section 5.7)

## **5.1 Language profiles of YOs and non-offenders comparing to language norm means**

### **5.0.1 Controlling for age**

The assessment means are compared to the mean age of both offender groups. To determine if there were any differences in the language performance of individuals that were either younger or older than their group mean, a series of independent t-test were conducted. As the distribution of age was normal for both groups, the mean age was used to split both groups comparing those below or above this on each language measure.

For the offender group the mean age was 16.2years (ranging from 13.03-18yrs). When using the mean to split the group, no differences on any of the language assessments were found ( $p>0.05$ ). The non-offender group mean age was 13.6years (ranging from 13.01-14.9yrs) and no differences were again found when the non-offender group were split using the mean age on any of the language assessments ( $p>0.05$ ).

### **5.0.2 Controlling for education attendance**

Total number of schooling years missed was also obtained for the offender group based on their percentage of attendance for each school year, matching with the non-offender group. There was considerable variance in the number of years of education the offender group had missed. When the offender group were split based on the median and mean amount of 2.6 and 2.8 years of education, independent T-tests revealed no significant differences in the language performance on any of the individual language assessments between either group ( $p<0.05$ ). In addition, Pearson correlations produced no statistically significant correlations between any of the individual language measures with years of education ( $p>0.05$ ).

## **5.1 The language profiles of the offender group and non-offender groups based on normative assessment mean scores.**

The mean and standard deviation (SD) language scores from the quantitative assessments are shown in table 5.1. Table 5.2 shows the mean that is expected according to their age based on the assessment norms and the difference between this and the YOs score is represented by SD.

To establish any differences between the offender group and assessment scores from a normative population of adolescents of the same age and of younger adolescents with similar educational attendance, the group was compared to the assessment mean norms equivalent to a 16 year old and a 14 year old. The comparison group data obtained from the SALT database were matched with the age range of both groups as well as the total number of utterances (YO;  $n=23$ , non-offenders;  $n= 37$ ), provided to allow for a valid comparison of the speech assessments. For comparisons against the



## 5.1 Language profiles of YOs and non-offenders comparing to language norm means

offender group this included 82 participants ranging in age from 12.7-15.9 years and for the non-offender group comparisons this included 62 participants ranging in age from 13.1-14.9 years.

Table 5.1 shows higher mean scores for the non-offender group in comparison to the offender group on all the language assessments apart from the CV measure. The SD shows similar variance in all aspects of the different language assessments for both groups, validating the mean as a reliable statistic in comparing both groups. Larger mean differences can be observed for some of the literacy assessments such as the reading comprehension, spelling and writing tasks as well as the expressive language assessments. This is especially so for the difference in the number of words and different words present. The non-offender group was also superior with regards to the UP and RS assessments.

The mean scores observed in table 5.1 were compared to the assessments norms obtained for each assessment (see table 5.2). Some of these norms were standardised (see bold in table 5.2) and for those that were not, assessments provided a set of comparative raw scores obtained from a group of young people matched on the age of the offender and non-offender groups. Few YOs managed to meet the assessment mean for each of the language tests (see Appendix 4) such as the UP assessment (n=6), Writing (n=2), Reading Comprehension, (n=3), MLU (n=1), SI (n=5), total different words (n=3), NVIQ(n=3) and the largest number of 12 YOs met the mean for the word reading assessment. None of the YOs reached the mean score for the expository discourse assessment, total number of words in the speech extract and the pragmatics criterion. Language assessments showed that the offender group scored between 1.5SD 1.99SD below the norm (equivalent to a 16 year old) for the Non-Verbal IQ, SI, number of words and number of different words. The remaining language assessments showed mean scores that were between 1sd-1.49SD below the 16 year old equivalent and this included the RS, Word reading, Reading Comprehension and Spelling assessments.

A large number of offenders scored over 2SD below the assessment means on some language aspects (see Appendix 4), including the expository discourse (n=40), SI (n=22), MLU (n=34), total number of words (n=27), Number of different words (n=22), Pragmatics (n=31) and the UP assessment (n=21). It must be noted however that due to the fact that the SALT database comparison data was not standardised to a larger database of children from varied backgrounds, any differences in comparison to either group is often inflated.

With the offender group missing a substantial amount of education in years, it was expected that their mean scores would be much lower than assessment norms obtained from a normative population of 16 year olds. The offender mean scores were compared to the same assessment

### **5.1 Language profiles of YOs and non-offenders comparing to language norm means**

norms that would be expected for a normative population of 14 year olds (Table 5.3). As expected, the YOs scores were not as far behind the 14 year old normative scores as they were when compared to the assessment normative means expected for a 16 year old (see Appendix 5).

However, as table 5.3 shows, the group were still scoring below the assessment means by -1SD on all assessments apart from RS and number of different words. The mean scores of the group were at least 2SD below the assessment means on the Expository discourse, MLU, total number of words and writing assessments. As in table 5.2 there were still a considerable number of YOs scoring over 2.5SD below the mean on the expressive language assessments (range; 0-38), the writing (See Appendix 5; n=18), spelling (n=12), reading comprehension (n=11), and UP assessment (n=23).

The non-offender group scores were closer to the normative assessment means equivalent of a 14 year old in comparison to the YOs (see Appendix 5). The non-offenders met the mean score on the spelling, reading comprehension, word reading, RS and number of different words assessments and the remaining scores were within 1SD below. The expository discourse was the only task in which the groups mean was over 1SD (1.9SD) below the test norm mean. As mentioned this may be inflated by non-standardised norm comparisons.

#### **Summary of 5.1**

- No statistical differences were found between the language performance of the younger and older YOs and the younger and older non-offenders based on mean comparisons of both age groups.
- No statistical differences were found for the language performance of the YOs who had missed more education in years compared to those who had missed fewer years of education.
- The non-offenders were performing better on each language assessment (apart from the CV assessment) in comparison to the YOs based on the descriptive mean scores for each group.
- The majority of the YOs' scores were behind that of the assessment mean scores of a normative population of both 16 year olds and 14 year olds, based on the high number of YOs scoring 1SD-2.5SD below the assessment mean.
- The non-offender group mean scores were close to the normative mean scores of a population of 14yr olds on the language assessments. On some language assessments the non-offender group mean was equal to the assessment normative mean and for the remaining their group mean fell behind the assessment normative mean score by -1SD (apart from the expository discourse; 1.9SD).

## 5.1 Language profiles of YO and non-offenders comparing to language norm means

**Table 5.1: Mean and SD scores for the offender and non-offender group on each language test.**

Offender group	Language Assessment		Mean	Standard Deviation	Valid N
Offender	Offender	UP	7.27	2.87	45
	Nonoff	UP	11.04	2.79	25
Offender	Offender	RS	70.08	12.00	39
	Nonoff	RS	77.56	12.29	25
Offender	Offender	CVTotal	22.44	5.55	45
	Nonoff	CVTotal	21.20	5.02	25
Offender	Offender	CVverbal	14.71	3.98	45
	Nonoff	CVverbal	13.60	3.80	25
Offender	Offender	CVdefinition	7.76	2.02	45
	Nonoff	CVdefinition	7.60	2.06	25
Offender	Offender	NVerbal IQ	20.21	5.57	43
	Nonoff	NVerbal IQ	21.84	3.88	25
Offender	Offender	Wordread	110.41	13.20	49
	Nonoff	Wordread	114.76	15.92	25
Offender	Offender	Readcomprehension	127.15	30.95	34
	Nonoff	Readcomprehension	159.52	40.41	25
Offender	Offender	Spelling	32.82	8.61	49
	Nonoff	Spelling	38.00	7.79	25
Offender	Offender	Writing	12.91	6.60	32
	Nonoff	Writing	20.68	6.97	25
Offender	Offender	writewordcount	40.88	27.22	32
	Nonoff	writewordcount	98.16	71.04	25
Offender	Offender	Expository Discourse	16.43	5.24	42
	Nonoff	Expository Discourse	24.24	4.93	25
Offender	Offender	SI	1.30	.33	42
	Nonoff	SI	1.63	.20	25
Offender	Offender	MLU	7.69	1.99	42
	Nonoff	MLU	10.37	1.73	25
Offender	Offender	Wordtotal	172.86	97.22	42
	Nonoff	Wordtotal	400.72	186.23	25
Offender	Offender	Diffwords	106.86	70.14	42
	Nonoff	Diffwords	168.68	107.99	25
Offender	Offender	targetwords	19.62	3.02	34
	Nonoff	targetwords	20.76	2.17	25
Offender	Offender	Pragmatics	129.40	23.91	43
	Nonoff	Pragmatics	.	.	0

## 5.1 Language profiles of YO and non-offenders comparing to language norm means

**Table 5.2: The difference between the offender raw scores to the assessment norms expected of a 16 year old matched on number of utterances.**

Language Assessment	Assessment Mean (16yrs)	Offender SD
UP	11.8	-2SD
RS	82.5	-1SD
<b>Non Verbal IQ</b>	27	-1.5SD
<b>Word Reading</b>	120	-1.3SD
<b>Reading Comprehension</b>	167	-1.4SD
<b>Spelling</b>	41	-1.3SD
<b>Writing</b>	30	-2.3SD
Expository Discourse	34.6	-3.7SD
SI	1.64	-1.4SD
MLU	12.23	-2.6SD
Total number of words	278.1	-2.6SD
Number of different words	114.5	-0.5SD
Pragmatics <sup>1</sup>	184.5	-2.0SD

---

<sup>1</sup> The group mean pragmatic score was also compared to the raw-score comparison data obtained from the standardised sample of the CELF-4.

## 5.2 Does language predict offending status?

**Table 3.3: The difference in SD between the assessment means expected for a 14 year old and the offender and non-offender mean scores**

Language Assessment	Assessment Mean (14yrs)	Offender SD	Non Offender SD
UP <sup>2</sup>	11.7sd	-1.87SD	0.28SD
RS	79	-0.78SD	-0.13SD
NV IQ	26	-1.2SD	-0.8SD
Word Reading	116	-1.2SD	-0.2SD
Reading Comprehension	153-158	-1SD	+0.07SD
Spelling	39-40	-1SD	0SD
Writing	28	-2.1SD	-1SD
Expository Discourse <sup>3</sup>	34.6 (off) 34.7 (non-off)	-3.5SD	-1.9SD
Subordination Index (SI)	1.64 (off) 1.65 (non-off)	-1.48SD	-0.1SD
MLU	12.4 (off) 12.2 (non-off)	-2.6SD	-0.95SD
Total number of words	279 (off) 439 (non-off)	-2.6SD	-0.6SD
Number of different words	115 (off) 152 (non-off)	-0.5SD	+0.7SD

## 5.2 Does language predict offender status?

The following section<sup>3</sup> aims to answer the above question by comparing the language scores of the offender and non-offender groups on each language assessment. A series of Logistical Regression analyses is used to test whether the language scores predict offender group. This is because the dependent variable is categorical and the language scores can be interpreted as predictor scores, which are entered into a regression model. Similar to linear regression, this model identifies the relationship between changes in predictor variable with changes in the dependent variable. However, having a categorical dependent variable means failing to meet the assumption of linearity

<sup>2</sup> For the UP task, the same scenario was read by participants of both groups regardless of age so the standard mean on the test is reflective of performance of 15-16 year old.

<sup>3</sup> The Expository task and the speech measures had different assessment means for offenders and non-offenders due to matching on mean number of utterances for both groups.

## 5.2 Does language predict offending status?

but the relationship between the dependent variable and its predictors are tested by transforming the outcome variable using logarithmic transformation.

As a result, a log odds ratio can be obtained to test the probability a predictor variable (language assessment) has in predicting the categorical dependent variable (offender status).

### 5.2.1 Meeting the assumptions of a logistical regression: Testing for outliers and multi-co-linearity.

Before proceeding with an inferential test like logistical regression, assumptions of normality (particularly outliers) need checking for as well as multi-co-linearity. This can make interpretation difficult due to predictors measuring the same construct.

The distribution of raw scores for each group were checked for normal distribution and equal variance. In cases where large amounts of skew and kurtosis were present, the data was transformed by square root transformation. Negative skew was solved by reversing scores; subtracting each score from the maximum plus 1 within the corresponding group before square rooting (Field, 2009). This was required for both groups for the recalling sentences task and for the non-offender groups' spelling scores. This process was attempted for word reading, number of total words, number of different words and writing word count but the levels of skew were still too large when converted to a Z score of skew, showing the likelihood of such skew occurring by chance as  $<0.05$  (Field, 2009). For these tests, outliers were identified and transformed in order to reduce the level of discrepancy they had from the rest of the groups' scores without disrupting their original rank order. Where possible the outlier was altered using the SD of the group (offender or non-offender), beginning from 3SD away from the mean score reducing this to a level in which skew levels and kurtosis levels were no longer significantly deviating from normality ( $p>0.05$ ) (Field, 2009).

Multi-co-linearity was also tested for by entering all the language variables into a regression in which adequate VIF and tolerance levels were produced (Field, 2009). Due to having more than one language assessment in the model, the assumption of independence of error is tested with the aim of having sufficient independence across residuals for each predictor within the model which appears random. In order to test for independence within the model, the Durbin Watson (DW) figure obtained for the model is compared to the criteria adopted for this many variables and sample size (Durbin & Watson, 1971). Residuals were considered to be independent based on the Durbin Watson value of 1.74, which was considered acceptable with this amount of predictors and sample size (0.89-2.05).

## **5.2 Does language predict offending status?**

Linearity was also tested by comparing the language test score with the interaction it had with its natural transformed log score, finding none to be significant at the  $p < 0.05$  level (Field, 2009) apart from the transformed spelling scores. However the raw scores were shown to be related linearly to offending status above the 0.05 level and the significance of the transformed spelling scores was greater than alpha value once the Bonferroni correction is applied ( $p < 0.004$ ) to reduce the likelihood of this occurring by chance.

### **5.2.2 Regression analyses**

In order to test how much each language score contributed to offender status (offender v non-offender), a series of binary logistical regression tests were conducted for each of the language tests, with offender group as the dependent variable. Due to a high number of regression tests being used, a Bonferoni correction was applied to control for type 1 error. This equated to a significant p value of 0.003. Model classification is also reported, which shows how well the model separates each language assessment to its appropriate offender group and the effect size of the group also reveals how large the significant finding is. Finally, the odds ratio is reported which specifies the probability associated with change in offender status and change in language score. In other words, it states what the probability of being an offender is based on an increase in performance on each language assessment.

## 5.2 Does language predict offending status?

**Table 5.4: Reporting of binary logistical regression analyses for each language assessment on offender status.**

Language Assessment	Logistic regression reporting	Model correct classification	Effect size	Odds ratio (Confidence Intervals)
UP	b=0.42, Wald $X^2(1)=16.2$ , p=0.000.	76% (84% YO's 60% non-off).	0.28	1.5 (95% CI,1.2-1.8).
RS	b= 0.057, $X^2(1) = 5$ , P=0.025.	64% (80% YO's, 40% non-off).	0.09	1.06 (95% CI, 1-1.1).
CV Verbal	b=0.07, $X^2(1) =0.93$ , p=0.23	NA	0.02	0.96 (95%CI,0.76-1.2)
CV Definition	b=0.04, $X^2(1) =0.96$ , p=0.76	NA	0.001	0.96 (95%CI,0.76-1.2).
CVTotal	b=0.44, $X^2(1) =0.87$ , p=0.35	NA	0.01	0.96 (95%CI,0.87-1.05)
NV IQ	b=0.06, $X^2(1) =1.6$ , p=0.2.	NA	0.03	1.1 (95%CI 1-1.2).
Word Reading	b= 1.24, $X^2(1)=20$ , p=0.000	85% (92% YO's, 72% non off).	0.48	3.48 (95%CI; 2.01-6.01)
Spelling	b= 0.61, $X^2(1)=5.55$ , p=0.000	88% (90% YO's, 84% non-off).	0.49	1.86, (1.32-2.63)
Read Comprehension	b=0.025, $X^2(1)=8.87$ , p=0.003	66% (85% YO's, 40% non-off).	0.16	1.03 (95%CI; 1-1.04)
Writing	b =0.17, $X^2(1) = 10.75$ , p=0.001	74% (88% YO's, 56% non-off).	0.24	1.19 (95% CI; 1.07-1.32)
Expository Discourse	b=0.27, $X^2(1)=16.9$ , p=0.000	81% (88% YO's, 68% non-off).	0.34	1.31 (95% CI; 1.15-1.5).
SI	b=0.49, $X^2(1)=12.38$ , p=0.000,	70% (81% YO's, 52% non-off)	0.26	129.2 (95%CI; 8.62-1938)
MLU	b= 0.81, $X^2(1)=15.04$ , p=0.000	73% (83% YO's, 60% non-off).	0.33	2.25 (95%CI; 1.5-3.4).
Total Words	b=0.45, $X^2(1) =17.2$ , p=0.000	79% (86% YO's, 68% non-off).	0.4	1.57 (95%CI; 1.27-1.94)
Different Words	b=0.53, $X^2(1)=12.9$ , p=0.000	75% (83% YO's, 60% non-off).	0.24	1.7 (95% CI; 1.27-2.27)
Target Words	b=0.22, $X^2(1) =2.27$ , p=0.132	NA	0.05	1.24 (95% CI; 0.94-1.65)
Writing Word Count	b= 0.47, $X^2(1)=11.15$ , p=0.001	75% (81% YO's, 68% non-off).	0.3	1.6(95% CI; 1.21-2.12)



### 5.3 Forming composite predictor variables

#### Summary of section 5.2

- All of the language assessments significantly predicted offender status apart from the CV assessments, NV IQ and Target words.
- The logistical regression revealed that as language scores increased the likelihood of becoming an offender decreased as shown by the odds ratios.
- Moderate-large effect sizes were found for the Word Reading, Spelling and Total words assessments which had higher odds ratios, showing them to be the strongest predictors of offender status.
- Moderate effect sizes were also found for the Expository Discourse, MLU and writing word count, SI and UP assessments.

#### **5.3 Composite predictor variables using Principal Component Analysis (PCA) to reduce type error and investigate shared variance between language predictors.**

Despite most of the language assessments statistically predicting offender status, the fact that a large number of regression tests were computed enhances the likelihood of obtaining significant results. Furthermore, there is a large chance that some of the language tests correlate highly with one another and this shared variance is important to investigate, in order to identify which of these variables may be contributing more to the offender groupings. This may also help identify which aspects of language such as expressive, receptive or literacy are more important in differentiating offender groups. To achieve this and reduce the number of variables (thus number of statistical tests), a principal components analysis was carried out on all the data as one group.

A set of Pearson's correlations were computed for all the variables. Despite high correlations across a number of variables, there were no significant correlations found for the NV test with other language variables and so this was not included in the PCA. In addition, the sub tasks for the CV assessment strongly correlated with each other and also correlated well with the same variables. Thus, the sum of both the verbal and receptive element of the criminal vocabulary assessment (CVTOTAL) variable was included in further analyses. The pragmatic score was not included in further analysis, as this was only completed for the offender group and would have dramatically reduced the sample size and power, leading to an unreliable PCA. This led to a PCA including 14 variables. The KMO statistic obtained was 0.853, suggesting this sample size was adequate enough in relation to the number of variables included. The determinant value was  $0.5187^{-6}$  which also shows an adequate level of multi-co-linearity between all the language variables (Field, 2009)

### 5.3 Forming composite predictor variables

A 2 factor model was obtained based on eigenvalues being over 1, which explained 71% total variance. To aid in interpretation, factors were also rotated using the oblique method of direct oblimin, due to accepting the high correlations between variables obtained previously (Field, 2009; Dancey & Reidy 2004). This 2 factor model identified strong correlations with most of the variables which represented one factor and then target words, CVtotal, Read comp were identified as the second factor. These factors were still ambiguous and so it was decided to extract 3 factors to aid clarity. A scree plot identified a third factor as contributing a unique amount of variance to the model and a further amount of 6.4% of unique variance made the model account for a total of 76.4% variance. Table 5.5 shows the language assessments and their corresponding factor loadings for each factor using the same method of factor rotation. Based upon the specific types of language assessments that were grouped into each factor, Factor 1 was labelled Spoken Language, Factor 2 Criminal Vocabulary and Factor 3, Literacy.

**Table 5.5: Results from a PCA extracting 3 factors based on results from eigenvalues and a scree plot.**

Factor 1 (Loading) = Spoken Language	Factor 2 (Loading) = CV	Factor 3 (Loading) = Literacy
Expository Discourse (0.79)	CVTOT (0.91)	Reading Comp (0.47)
SI (0.89)		Writing (0.73)
MLU (0.87)		Target Words (0.7)
Total words (0.79)		RS (0.81)
Different Words (0.9)		Word Reading (0.82)
UP (0.38)		Writing Word Count (0.43)
Writing Word Count (0.44)		Spelling (0.88)

The structured matrix output showed writing word count as loading higher onto factor 1 and 3, suggesting it shared more variance with the other language assessments. Due to the small loading produced by the Understanding Paragraphs assessment, this will be added independently in subsequent analyses. Due to the Recalling Sentences task loading high on literacy, this will be included in the factor but will also be added as a unique language measure, due to the high correlations it had with spoken language measures within factor 1. Writing Word count was viewed to fit more in the literacy factor for theoretical reasons, despite sharing common variance with the spoken language factor.

## 5.4 Combining language scores using z scores

### Summary of 5.3

- Examination of eigenvalues and scree plots revealed a 3 factor PCA that was conducted to see which language assessments correlated strongly with one another, in order to reduce the high number of individual logistical regressions conducted earlier on in section 2.
- Using the factor loadings factor 1 will be named Spoken Language, Factor 2 Criminal Vocabulary and Factor 3 Literacy.
- These factors also validate the theoretical grounds of the assessments based on those that specifically measure literacy and spoken language.
- The CV scores were high almost approaching ceiling effects in some cases, which may partially explain why this failed to load as high as others on the other two factors generated.
- The language assessments that form each of these factors can now be totalled to form composite scores for each factor, which can then be included in a logistic regression model to see if any of the composite factors can predict offender status.

### 5.4 Combining the individual language scores to form language composites for each factor using z scores.

Both factor 1 and 3 correlated moderately-strongly at  $-0.597$ , which confirms the point that the language variables measuring both literacy and spoken language do tap into similar constructs. However, the literacy elements within factor 3 all contained factor loadings that correlate negatively with the other two language factors, making interpretation of this ambiguous factor difficult. For this reason the factor scores were not used in further regression analysis, but because the factors made theoretical sense, the language raw scores for each factor were converted into z scores. These were then totalled to form these three composite language factors described above.

The reason for transforming the language assessment scores for the whole cohort into z scores was to standardise them. This allows for a valid comparison of language performance across the different assessments used when these are totalled to form composite language scores. If raw scores from the language assessments for each factor composite were totalled, then this would make for unfair comparison with some language assessments containing a much larger range of scores, which for some are considerably higher (e.g. Read Comp versus SI scores).

#### 5.4.1 Testing the assumptions of the composite language z scores in order to include these in a logistic regression model.

Adequate levels of multi-co-linearity for the z composite scores were found based upon the VIF and tolerance levels. The Durbin Watson (DW) figure obtained for the model was compared to the

## 5.4 Combining language scores using z scores

criteria adopted for this many variables and sample size. A model that included the z composite scores alongside the UP, RS and NV z scores produced a DW figure of 1.6, which reveals an adequate level of independence with regards to the models' residuals comparing it to the DW criterion figure (1.16-1.580), (Durbin and Watson, 1971). The composite scores were found to linearly relate to the outcome variable by failing to correlate significantly with their own interactive log (Field, 2009).

### 5.4.2 Do composite language scores predict offender status using logistical regression?

A series of binary logistical regression analyses were computed and first the extent to which each z composite score uniquely predicted offender status was investigated.

The spoken language composite significantly predicted offender group;  $b=2.48$ ,  $X^2(1)=17.8$ ,  $p=0.000$ . A large odds ratio of 11.9 (95%CI: 3.8-37.6) was obtained, as well as a moderately large effect size of 0.4 and model classification was good with 81% of scores being correctly classified; 72% for non-offender scores and 86% for offender scores.

The literacy composite including RS also significantly predicted offender status  $b=2.58$ ,  $X^2(1)=12$ ,  $p=0.001$ . A large odds ratio of 13.1 (95%CI: 3.1-56.3) was obtained with a small-moderate effect size of 0.26 and the model correctly classified 78% of scores; 80% for the non-offenders and 76% for the offenders.

When the above two composite language scores along with the separate CVTOT, UP and RS scores were added to the model then the two composite language factors and the CVTOT significantly predicted offender status, whereas UP and RS did not significantly add to the model. Spoken Lang only just reached statistical significance  $b=2.675$ ,  $X^2(1)=3.68$ ,  $p=0.05$  which had a odds ratio of 14.5 (95%CI:0.94-223.3). Similarly, the literacy factor also just reached significance  $b=3.23$ ,  $X^2(1)=3.89$ ,  $p=0.049$  with an odds ratio of 25.3 (95%CI: 1-626) and the CVTOT was statistically significant demonstrating a negative regression coefficient  $b=-2.5$ ,  $X^2(1)=7.28$ ,  $p=0.007$  with a small odds ratio of 0.08 (95%CI: 0.01-0.5). This suggests that as scores in the Criminal Vocabulary increased, the odds of being an offender were 0.08 times more likely. The effect size of the model was strong at 0.6 and it correctly classified 90% of scores with 88% of offender scores correctly classified and 92% of non-offenders.

### 5.4.3 Which of the composite language assessments in the model contribute the most to offender status?

In order to assess which of the composite language factors contribute the most to offender status, forward likelihood ratio step-wise logistic regression analysis is conducted. This test reveals which of

### **5.5 Which elements of language predict offender status the most?**

the language assessments explains the most variance associated with offender status that is statistically significant, at the same time as removing the tests that do not add any significant variance in the model in predicting offender status.

A forward likelihood ratio logistic regression stepwise method incorporating only the two composite language scores and the CVTOT, revealed that the spoken language composite significantly contributed the most to offender status. It continued to do so significantly once CVTOT was added to the model, followed by the literacy factor at step 3. As would be expected, once the RS scores are added into the literacy composite then the literacy factor no longer significantly adds to the model when the remaining language assessments are included.

There were no significant interactions present between any of these variables when they were entered into the model once variance of main effects had been incorporated.

#### **Summary of findings from 5.4**

- By converting the language raw scores into z scores, then the two language composite scores named spoken language and literacy that were obtained from the PCA can be added to a logistic regression model.
- The logistical regression model revealed both the composite factors as significantly predicting offender status, with moderate effect sizes and odds ratio showing the likelihood of being an offender to decrease as language scores increase.
- When these two factors were included together in one model along with the remaining language assessments, the two composites and CVTOT significantly predicted offender status.
- A backward logistic regression revealed the spoken language composite as contributing the most to offender status.

### **5.5 Which elements of spoken language and literacy contribute most to offender status?**

To identify which of the language variables within each language composite contributed the most to offender status, the raw scores for each variable were added into the model using entry method. This involves including all of the relevant language assessments together in one model.

## 5.5 Which elements of language predict offender status the most?

### 5.5.1 Spoken language composite

For the spoken language composite when the five variables were entered, wordtotal was the only significant predictor of offender group  $b=0.48$ ,  $X^2(1)=8.27$ ,  $p=0.004$ . The odds ratio was 1.6 (95%CI: 1.2-2.2) with a strong effect size of 0.48. The model correctly classified 85% of scores with 76% of the non-offenders correctly classified ( $n=25$ ) and 91% of the offenders were correctly classified ( $n=42$ ).

MLU was shown to contribute the next largest amount of variance into the model, although this was not statistically significant. A backward likelihood stepwise method confirmed MLU and Wordtotal as contributing the most to the model and in addition to this, removing the other spoken language measures would not have significantly altered the model. The backward step-wise method uses similar processes to the forward method but begins with all of the predictor variables in the model, removing those that do not significantly add to the model in predicting offender status (Field, 2009).

### 5.5.2 Literacy composite

For the literacy composite when variables including the RS were entered using entry method, none of them significantly predicted the offender status. A backward logistical regression stepwise model showed writewordcount as contributing the least to the model, followed then by RS and then by writing. When the writewordcount were removed the model still did not significantly predict offender status and this was the same even when RS was also removed. When writing scores were also removed from the model, then spelling significantly predicted offender status,  $b=0.78$ ,  $X^2(1)=4.37$ ,  $p=0.04$  with an odds ratio of 2.2 (95% CI: 1.1-4.5) target words with  $b= -1.57$ ,  $X^2(1)=4.1$ ,  $p=0.04$  with an odds ratio of 0.21 (95%CI: 0.5-1) and word reading significantly predicted offender group  $b=6.37$ ,  $X^2(1)=3.63$ ,  $p=0.05$  with an odds ratio of 585.3 (95%CI: 0.83-413164). A large effect size was obtained 0.69 and the model correctly classified 95% of scores with correctly classifying 92% of non-offenders ( $n=25$ ) and 97% of offenders ( $n=32$ ).

No significant interactions between these variables were found after their main effects were entered into the model. To see if any of the significant contributors from the spoken language factor and the literacy factor significantly interacted with one another, their interactions were added into the model alongside their main affects for the variables Wordtotal, MLU, Spelling, Target words and word reading. No significant interactions between these variables were found.

### Summary of findings from 5.5

- Word Total contributed a statistically significant amount of variance in predicting offender status in the spoken language composite followed by MLU, which did not predict offender status significantly.

## 5.6 Controlling for gender, ethnicity and looked after status

- None of the literacy measures statistically contributed significantly to offender status and only spelling, target words and word reading did once writingwordcount, writing and recalling sentences were removed from the model.
- None of the spoken language measures significantly interacted with the literacy measures in predicting offender status.

## 5.6 Controlling for gender, ethnicity and looked after differences between the offender and non-offender groups.

### 5.6.1 Controlling for gender

There were unequal numbers of males and females in both groups with the offender group containing a higher number of males. To be sure that differences examined are not due to these gender differences, the descriptive language mean scores were analysed for males and female offenders and non-offenders separately. The distributions of language scores for both genders were examined for normality. Violations of normality were found for the male distributions for the recalling sentences task, word reading, word total, diff words and write word count. There was also a significant violation of homogeneity of variance for the CV total test scores. Negative square root transformation was applied to the above test scores, which reduced the skew to an acceptable level in the word reading and total words task and also reduces the unequal variance to an acceptable level for the CV task. For the remaining tests, the outlier was replaced by a score that reflected a z score of 3, which represents an outlier in a standardised distribution. This was done altering the formulae used to calculate z scores ;  $X = (z \times s) + \text{Mean}$  (Field, 2009).

As per table 5.6, there is little difference between language scores based on the mean of both genders in the offender group. However, where differences are apparent these are in favour of the females performing better. Larger differences are seen in the reading comprehension and pragmatic scores. Similar findings are displayed in table 5.7 for the non-offender group, however the gender difference is not as apparent. The female non offenders seem to be performing ever so slightly better in the literacy tests but the opposite trend is found for the spoken tests. However, these differences are also very small. Tables 5.6 and 5.7 also show both female and male non-offenders to be performing better on the language assessments apart from the CVTOT in comparison to their offender counterparts. A multinomial logistic regression using gender as a factor and offender status as the outcome variable for the language composites also revealed no significant interactions based on the models after the main effects were controlled for ( $p > 0.05$ ). The new transformed variables included in this model had adequate VIF and tolerance levels showing no multi-collinearity. The DW

## 5.6 Controlling for gender, ethnicity and looked after status

figure obtained from the model was 1.49, showing the possibility of some slight positive autocorrelation between residuals, but this is unlikely to be problematic.

**Table 5.6: Mean and SD of language scores for male and females in the offender group**

Language Assessment	Male Mean (SD)	Female Mean (SD)
Understanding Paragraphs	7 (2.9)	7 (2.6)
Recalling Sentences	85 (1.5)	85 (1.2)
CVtotal	25.4 (3.82)	21.9 (5.68)
Non-Verbal IQ	20 (5.8)	20 (4.5)
Word Reading	124 (1.4)	125 (0.9)
Reading Comprehension	124 (29.9)	145 (34.3).
Spelling	32 (8.5)	40 (5.6)
Writing	11.9 (6.3)	18 (4)
Expository Discourse	16 (4.9)	19 (7.4)
SI	1.27 (0.3)	1.5 (0.13)
MLU	7.5 (2)	8.8 (1.5)
Word Total	12.3 (3)	14.5 (4.2)
Different number of words	9.7 (2)	10.4 (2.4)
Target Words	19.4 (3.2)	21 (0.9)
Writing Word Count	5.8 (2)	7.4 (1.3)
Pragmatics	126 (23)	153 (16)



## 5.6 Controlling for gender, ethnicity and looked after status

**Table 5.7: Mean and SD of language scores for male and female non offenders**

Language Assessment	Male mean (SD)	Female Mean (SD)
Understanding Paragraphs	11 (2.9)	11 (2.8)
Recalling Sentences	90 (1.8)	91 (0.9)
CVtotal	20 (4.9)	22 (5.1)
Non-Verbal IQ	21 (3.5)	23 (4)
Word Reading	127 (2.1)	127 (1.3)
Reading Comprehension	153 (43.8)	168 (35.7)
Spelling	44 (1.4)	45(0.7)
Writing	20 (7.2)	22 (6.9)
Expository Discourse	25 (5)	24 (5)
SI	1.67 (0.22)	1.59 (0.17)
MLU	10.8 (1.8)	9.78 (1.5)
Word Total	21 (4.1)	17.7 (4.57)
Different number of words	13.3 (2.3)	11.1 (2.1)
Target Words	20 (2.6)	22 (0.8)
Writing Word Count	9.5 (2.7)	9 (4.3)

### 5.6.2 Controlling for Looked after (LA) status

A small number of the offender group were LA in comparison to none of the non-offender group. To test whether LA status had an effect on the contribution language had in predicting offender status, differences between the language mean scores were analysed for those who LA and those who were not LA. Due to smaller sample sizes for the LA group, the distribution of scores for each language test were tested for normality. Only the writing for the LA and total words produced in the expository discourse for the NLA showed high positive skew that deviated from normality (>1.96, Field, 2009) and this was due to outliers. The outliers for both these tests were transformed by reducing the scores making them 2SD above the mean, so as not to alter the rank of scores (Field, 2009). There is little difference between both the LA sub-groups on any of the language assessment scores (Table 5.8). The LA group seem to be performing slightly better in most apart from the CVTOT, NVIQ and reading comprehension assessments but these differences are minimal. A Mann Whitney

## 5.6 Controlling for gender, ethnicity and looked after status

test revealed no significant differences between looked after status on language performance, when the Bonferroni correction was applied ( $p > 0.004$ ).

### 5.6.3 Controlling for ethnicity

As offenders and non-offenders differed in their ethnicity, the mean language scores for both offenders and non-offenders will be compared to see if ethnicity grouping confounds the relationship between language and offender status. Participants were split based on their ethnicity into three groups which were labelled as white Caucasian, mixed ethnicity and ethnic minority. Mixed ethnicity was defined as the participant having one parent of English heritage.

The distribution of each language test for the ethnicity groups were examined to show all represented a normal distribution. Table 5.9 shows very little difference in mean scores between the ethnic groups in the offender group and slightly larger differences are found for reading comprehension and pragmatics, which is likely to be due to the larger scale of scores present in these assessments. There are no obvious trends in the differences either present between groups.

Table 5.10 shows very little difference across scores in the non-offender group based on their ethnic grouping. Where small trends are apparent from the mean scores, the ethnic minority seem to be performing the best out of the three. In order to see if ethnicity interacted with language in predicting offender status, a multinomial logistical regression was computed for ethnicity as the factor variable and the language composites were added into the model independently. This is because including all the predictor variables would have dramatically reduced the sample size. Findings revealed no significant interactions above the main effects found for the language variables on offender status ( $p > 0.05$ ).

## 5.6 Controlling for gender, ethnicity and looked after status

**Table 5.8: Mean and SD scores for the looked after and non-looked after young offenders on each language test.**

Language Assessment	Mean for looked after group (SD)	Mean for non-looked after group (SD)
Understanding Paragraphs	7 (2.6)	7 (3.1)
Recalling Sentences	85 (1.04)	85 (1.53)
CVTotal	22 (5.7)	23 (5.5)
Non-Verbal IQ	16.7 (6.7)	21.4 (4.64)
Word Reading	124 (0.91)	124 (1.66)
Reading Comprehension	127.1 (25.1)	130 (35.7)
Spelling	34 (8.3)	32.4 (9.5)
Write	17.8 (4.4)	10.7 (6.7)
Expository Discourse	17.1 (4.6)	15.9 (5.8)
SI	1.28 (0.36)	1.3 (0.33)
MLU	7.7 (2.3)	7.6 (1.9)
Total number of words	12.8 (3.2)	12.4 (3.6)
Number of different words.	10 (2.09)	9.56 (2.12)
Pragmatics	134.1 (25.4)	124 (22)
Write word count	6.78 (1.7)	5.78 (2.1)
Target words	19.8 (2.6)	19.5 (3.5)

## 5.6 Controlling for gender, ethnicity and looked after status

**Table 5.9: Offenders Mean and SD language scores based on ethnicity grouping**

Language Assessment	White Caucasian Mean score (SD)	Mixed Ethnicity mean score (SD)	Ethnic Minority Mean score (SD)
Understanding Paragraphs	6.9 (2.7)	7.9 (2.8)	8.2 (3.9)
Recalling Sentences	84.9 (1.6)	85 (1.2)	84.9 (1.5)
CV total	22.5 (5.9)	23 (3.3)	21.5 (6.8)
Non Verbal IQ	20.1 (5)	17.9 (6.8)	23.5 (4.8)
Word Reading	124.1 (1.4)	123.8 (1.7)	124.3 (1.1)
Reading Comprehension	132.2 (35.8)	119.6 (27.5)	120.2 (12.5)
Spelling	32.7 (9.3)	32.9 (8.7)	33 (6.1)
Writing	13.1 (7.4)	12 (6.4)	13.5 (4.9)
Expository Discourse	16.4 (6.1)	16.7 (3.1)	16 (3.7)
SI	1.3 (0.3)	1.4 (0.3)	1.3 (0.3)
MLU	7.4 (2.1)	8.1 (1.3)	8.2 (2.5)
Pragmatics	123.9 (21.8)	140.4 (23.3)	134 (29.3)
Word Total	12.6 (3.8)	12.7 (1.5)	12.5 (2.1)
Different number of words	10.2 (2.3)	9 (1.1)	9 (0.9)
Writeword count	6.1 (2.2)	6.2 (2)	5.8 (1.2)
Target Words	20.2 (2.1)	18.4 (5.3)	19.5 (1)

## 5.6 Controlling for gender, ethnicity and looked after status

**Table 5.10: Non offenders mean and SD language scores based on ethnicity grouping**

Language Assessment	White Caucasian Mean score (SD)	Mixed Ethnicity mean score (SD)	Ethnic Minority Mean score (SD)
Understanding Paragraphs	10.6 (3.1)	12 (2.8)	11.2 (2.7)
Recalling Sentences	90.2 (1.9)	90.4 (0.4)	90.2 (1.4)
CV total	19.2 (5.3)	20.5 (4.9)	22.6 (4.8)
Non Verbal IQ	21 (3.4)	20.5 (3.5)	22.6 (4.3)
Word Reading	126.6 (2.2)	127.6 (0.6)	127.8 (1.6)
Reading Comprehension	157.7 (50.8)	157.5 (65.8)	161 (33)
Spelling	43.7 (1.4)	44.6 (0.0)	44.6 (1.1)
Writing	19.3 (7.9)	18.5 (2.1)	21.9 (6.9)
Expository Discourse	24.3 (5.3)	21.5 (7.8)	24.6 (4.6)
SI	1.7 (0.2)	1.7 (0.3)	1.6 (0.2)
MLU	10.8 (2)	10 (2.6)	10.2 (1.6)
Word Total	20.3 (4.8)	15 (3.1)	19.7 (4.4)
Different words	13.2 (3)	10.5 (2.6)	12.1 (2)
Writing word count	8.4 (2.5)	8.5 (0.1)	10 (4.1)
Target Words	20.2 (2.8)	22.5 (0.7)	20.9 (1.8)

## 5.7 Testing education attainment and attendance confound the relationship between language and behaviour

### Summary of findings from 5.6

- Gender failed to significantly predict offender status when included in the regression model with language as an additional factor.
- Small mean differences were apparent favouring female offenders over males and this was also the case for the literacy tasks for the non-offender group. The non-offender males performed slightly better on the spoken language measures.
- Looked after status did not confound the relationship between language and offending behaviour as no significant differences were found between the language performance of those looked after and those not looked after.
- Ethnicity failed to significantly predict offender status when included in the regression model with language as an additional factor. No obvious trends were apparent in relation to mean comparisons between ethnicity groups.

## 5.7 Investigating if education attainment and attendance predicts offender status and confounds the relationship between offender status and language.

### 5.7.1 Does education attainment predict offender status?

Key stage data for English, Maths and Science subjects were obtained for both offender and non-offenders. The group mean scores along with their SD can be viewed in table 5.11. The result show the offenders as a group were performing lower in comparison to the non-offenders on both Key stage (KS) 2 and 3 across all three subjects. The offender group also perform below the UK curriculum expectations for both key stage levels and this is more so for KS3 and for English. The non-offender group also fall slightly behind UK curriculum expectations at KS3. The distributions for each KS test were examined to find each one showing a normal distribution of data.

**Table 5.114: Key stage 2 and 3 results for English, Maths and Science of offenders and non-offenders.**

	KS2 English	KS2 Maths	KS2 Science	KS3 English	KS3 Maths	KS3 Science
Offender	3.4 (0.6)	3.4 (0.7)	3.6 (0.6)	3.9 (1)	4 (0.8)	4.1 (1.1)
Non-Offender	4.3 (0.7)	4 (0.8)	4 (0.8)	5.6 (1.1)	5.6 (0.7)	5.6 (1.1)

### **5.7 Testing education attainment and attendance confound the relationship between language and behaviour**

In order to test whether education attainment using the KS2 and KS3 scores predicted offender status, they were entered into a logistical regression as ordinal data predictors and offender status as the outcome variable. This was conducted to see whether KS2/3 English results would validate the finding that language assessments included in this project predicted offender status, as well as investigating whether performance in other subjects would also contribute to predicting offender status. The model was tested for its assumptions and for KS2 data there was no violation of multi-co-linearity based on the VIF and Tolerance levels. There were no statistically significant interactions for each variable with itself and its log, suggesting each one was linearly related to the dependent variable of offender status. Lastly, the DW figure of 0.5 which was lower than the critical upper and lower boundaries (1.28-1.5) suggesting that the residuals are positively correlated with one another (Durbin & Watson, 1971). This can lead to a higher chance of significant results (type 1 error) and so the below results must be interpreted with some caution (Field, 2009). For the KS3 tests there was no violation of multi-co-linearity, as shown by VIF and Tolerance levels and each variable was shown to linearly relate to offending behaviour, as shown by non-significant interaction with their own log transformation. The DW figure obtained from this model was 1, which is also slightly smaller than the critical DW figure 1.1.

For KS2 results only English significantly predicted offender status  $b=2.9$ ,  $X^2(1)=5.2$ ,  $p=0.02$ . The odds ratio was 18.2 (95% CI: 1.5-221.6) and the model was a good fit with a small effect size of 0.2 and it correctly classified 88% of the data, with 98% of offenders ( $n=43$ ) and 38% of non-offenders ( $n=8$ ). For the KS3 results, none of the results significantly predicted offender status. The statistically significant odds ratio from the above regression test demonstrates a relationship that shows as English KS2 results decrease, the likelihood of being an offender increases. This supports the finding that English language assessments used in this study also predicted offender status and significant positive bivariate correlations were found between the English results from both key stages and all of the language assessments used in this study, apart from the pragmatics assessment ( $p<0.004$ ). When the English components were broken down into reading, writing and spelling these also correlated significantly with all of the language assessments apart from pragmatics for KS2 and all of the language assessments apart from pragmatics and UP correlated with these English sub-component at KS3 ( $p<0.004$ ).

When the KS2 and 3 results were added to the model together, the model was non-significant with neither predicting offender status ( $p>0.05$ ). This model produced a higher DW figure of 1.5 producing slight negative autocorrelation with it being over the upper boundary according to the critical values.

## **5.7 Testing education attainment and attendance confound the relationship between language and behaviour**

### **5.7.2 Which Key stage English sub-components predict offender status?**

Table 5.12 also shows the mean scores for the English KS2 and 3 sub-components split between offender status. Offenders are also scoring below the non-offenders on all aspects of the KS English sub-components and they are also performing below the UK curriculum for each of these. The non-offenders performed above UK curriculum for KS2 English sub-components and are almost meeting the expectation for their KS3 results.

In order to test whether KS2 and KS3 English sub-component scores predicted offender status, a series of binary logistical regression analyses were conducted using offender status as the dependent variable and KS results as the predictor. The small sample sizes present for both groups, particularly the non-offender group, prevented analysing the same KS results together or all the sub-components in one model.

For the KY2 model, there was adequate independence of residuals with the DW figure of 1.5 just matching the upper boundary of the critical values (Durbin & Watson, 1971). The model also showed no violation of multi-co-linearity as shown by the VIF and tolerance levels and the variables were all linearly related to offending group, as per their non-significant interactions with their own log variable (Field, 2009). For the KS3 model, there was violation of residual independence with the DW figure obtained of 1.88 lying outside the upper value of the cortical value (1.4) meaning high negative auto-correlation (Durbin & Watson, 1971). In addition, the high VIF levels displayed high instances of multi-co-linearity between these variables, as would be expected seeing as they all measure different aspects of English (Field, 2009).

Table 5.12 shows each KS sub-component (apart from KS2 Speaking & Listening which couldn't be computed due to small sample size) to statistically predict offender status, with the regression log odds ratios showing a relationship whereby as KS results decreases, the likelihood of being classified as an offender increases. As there was high instances of multi-co-linearity and residual auto correlation, it was decided to also compute a series of Mann Whitney tests for the KS3 tests with offending behaviour group as the dependent variable. This was done to identify whether the significant regressions findings below is due to the high amounts of variance shared with one another. The Mann Whitney tests also produced significant results for each of the three language variables (KS3 Reading;  $M=148$ ,  $Z=3.22$ ,  $P=0.00$ , Writing;  $M=156$ ,  $Z=3.6$ ,  $P=0.00$ , Speaking;  $M=161$ ,  $Z=3.86$ ,  $P=0.01$ ). This shows the English scores all independently contribute to explaining the difference in scores dependent on offender status.



## 5.7 Testing education attainment and attendance confound the relationship between language and behaviour

**Table 5.12: Key stage 2 and 3 results for English sub-components; Reading, Writing and Speaking and Listening of offenders and non-offenders.**

	KS2 Reading	KS2 Writing	KS2 Speak Listen	KS3 Reading	KS3 Writing	KS3 Speak and Listen
Offender	3.6 (0.8)	3.1 (0.7)	3.2 (1)	4 (0.9)	3.9 (0.9)	3.9 (0.8)
Non-offender	5.3 (1.2)	5.3 (1.2)	5.4 (0.5)	5.9 (1.1)	5.9 (1.1)	5.9 (0.8)

### 5.7.3 The relationship educational attendance has with offender status and language performance

The average percentage of attendance was different for both offender groups, despite matching for the overall number of educational years attended. Outliers were present in both groups causing significant amounts of negative skew. The outliers were transformed according to them being no more than -3SD away from the groups means using the groups SD score (Field, 2009). The mean percentage of attendance for the offenders was 78%, (13SD) compared to that of the non-offenders (M=96%, 2.6SD), which was significantly different ( $t=(58) 9.86, p=0.00$ ). In order to investigate whether attendance predicted offender status, a binary logistical regression analyses with attendance percentage as the predictor and offender group as the dependent variable was conducted. Percentage of attendance related linearly to offending status, as it did not significantly interact with its own log transformation (Field, 2009). The DW figure of 0.8 fell below the critical lower bound value of 1.4, suggesting high positive autocorrelation proving problematic as explained previously (Durbin & Watson, 1971). Attendance significantly predicted offender status,  $b=0.78, X^2(1)= 12.6, p=0.000$ . The odds ratio was 2.2 (1.4-3.3) and a strong effect size of 0.6 was obtained, with a good fitting model correctly classifying 93% of scores, 96% for offenders ( $n=51$ ) and 88% for non-offenders ( $n=24$ ). The odds ratio reveals that as educational attendance increases the likelihood of being a non-offender is twice as likely.

As the average percentage of school attendance (per year) was different for both offender groups and also varied for the offender group, the relationship this had to language scores was investigated. To achieve this, Pearson correlations were computed for language assessment scores and attendance percentage using the average percentage of yearly attendance for each participant. For both groups, combined Pearson correlations showed significantly strong relationships for attendance with the UP task, writing, Expository discourse, SI, MLU, word total and writeword count using Bonferoni corrections ( $p<0.004$ ). The same was also found for the composite spoken and literacy scores. However, when the correlations were performed on the offender group only, no significant correlations were produced suggesting that the relationship found between education attendance and language was stronger in the non-offender group.

## 5.7 Testing education attainment and attendance confound the relationship between language and behaviour

### 5.7.4 Education attendance confounding the relationship between language and offending status

Due to educational attendance predicting offending status and correlating with some of the language scores, the extent to which percentage of educational attendance confounded the relationship between language and offending status was investigated. Educational attendance was added into a logistical regression model alongside the language composite score to predict offender status. The assumptions of multi-co-linearity as well as independence of residuals were tested due to more than one predictor being entered into the model. When attendance was included in the model with the other language composites, then the VIF and tolerance levels showed to be adequate (Field, 2009) and the DW test figure was 1.29. In relation to the respective significance criteria of 1.12-1.63, this is in-between suggesting acceptable levels of residual independence (Durbin & Watson, 1971). When percentage of attendance was entered into a model with the language composites of spoken language and literacy, then the whole model did not significantly predict offender status. However, after performing a backward step regression method, the Literacy factor contributed to the least followed by the Expressive factor, but only when both the two composite factors were removed from the model would attendance be left alone to predict offender status significantly. This suggests that the percentage of attendance contributed slightly more to the classification of offender group than language.

This supports the above finding that percentage of education attendance also failed to significantly correlate with any of the language measures for the offender group as did total years of education missed (page 2) suggesting educational attendance is more associated with the non-offenders.

**Table 5.53: Predicting offender status by sub-components of Key Stage English key results using logistic regression analysis.**

Educational Key Stage Assessment Score	Logistic regression analyses	Model Classification	Odds ratio (Confidence intervals)	Effect size
KS 2 Reading	b=2.06, w <sup>2</sup> =8.08 p=0.004	91% overall (100%YOs, 38%non).	7.89(1.9-32.5)	0.35
KS2 Writing	b=2.39, w <sup>2</sup> =9.94, p=0.002	94% overall (96%YOs, 88%non).	10.9 (2.5-48.5)	0.38
KS3 Reading	b=1.34, w <sup>2</sup> =7.46, p=0.006.	79% overall (90%YOs, 56% non).	3.8 (1.5-9.9)	0.5
KS3 Writing	b=1.89, w <sup>2</sup> =7.01, p=0.008.	82% overall (95% YOs, 56% non).	6.6 (1.6-27)	0.45
KS3 Speaking & Listening	b=2.58, w <sup>2</sup> =6.55, p=0.01	82% overall (95% YOs, 56% non)	13.2 (1.8-95.8)	0.5

## **5.7 Testing education attainment and attendance confound the relationship between language and behaviour**

### **Summary of section 5.7**

- YOs were performing below UK curriculum levels based on their key stage 2 and 3 results and this was much lower than the non-offenders key stage scores, who were just below expectation for their KS3 results.
- Both key stage 2 & 3 English results positively correlated significantly with the language assessments of both offenders and non-offenders together and this was also true for all of the sub-components of English.
- Logistical regression revealed that the key stage 2 English results and the sub-components of KY2 and KY3 English significantly predicted offender status, with reduction in English scores increasing the likelihood of being an offender.
- The significant relationship KS English assessments had with offending status validates the strong affect language has in predicting offending behaviour based on the language assessment scores.
- Percentage of attendance predicted offender status and correlated significantly for some of the language assessments, especially the spoken aspects, but this was not for the offender group.
- Percentage of attendance failed to significantly predict offender status when included alongside language assessments, but it did reduce the effect language factors had in predicting offender status.
- Education attainment and attendance has an influence on the offending and language outcome of young people and so may be considered as confounding the relationship between language and offending.

### 5.8 Conclusion

This chapter has:

- Highlighted differences in language performance found between the offender group and non-offenders, with better language scores found in the non-offender group. This applies to mean comparisons for both groups as well as mean comparison to the standardised test norms.
- Revealed, using logistical regression analysis, that the language assessment scores (apart from criminal vocabulary) significantly predicted offender status, including both composite scores of spoken language and literacy. The wordtotal, MLU spelling, word reading and target word scores produced the most variance that explained this relationship.
- Shown that the relationship between language performance and offending status was not confounded by the difference in age, gender, ethnicity and looked after status that were present within and between both groups.
- Validated the finding that language is associated with offending behaviour by finding that the Key-Stage 2 English results significantly predicted offender status. Differences in the mean scores for all KY2 and KY3 assessments were also found favouring the non-offender group.
- Reported the average percentage of attendance to significantly differ for both offender groups, with the non-offenders attending school more and this predicted offender status in a logistical regression model.
- Revealed education attendance to contribute slightly to the relationship between language and offending behaviour, by finding significant correlations between educational attendance and language scores for the non-offender group. Additionally, when educational attendance percentage and language were included in one model, the model no longer significantly predicted offender status.
- Identified language as significantly contributing to offender status independent of confounds but that education attainment and attendance do partly influence this relationship, due to its association with both language performance and offender status.

# Chapter 6 Qualitative analysis of interviews obtained with young offenders and non-offenders.

---

A total of 31 YOs and 25 non-offenders were interviewed and their responses analysed. This consisted of 25 individual interviews for the non-offender group and 26 individual interviews for the YOs. Two additional focus groups, one containing three males and one two females were also conducted in the youth offender group.

An inductive thematic analysis similar to that described by Ritchie and Lewis (2003) was conducted for the first 15 interviews, in which theoretical saturation had been achieved and no further 'new' themes could be generated. This produced eight super-ordinate themes, all of which had relevant attaching sub-themes in line with Ritchie and Lewis's (2003) analytical hierarchy. These themes were used to develop a Framework, enabling a deductive Framework Analysis for the remaining interviews.

This chapter will report each super-ordinate theme along with their corresponding sub-themes (highlighted in bold), which can be viewed in Table 6.1.

## 6.1 Theme 1: What is communication?

**Table 6.1: Table of super-ordinate themes and their associative sub-themes, obtained from analysis of all 28 interviews of the offender group and 25 interviews from the non-offender group.**

Super ordinate theme	Sub-themes
1. What is communication?	Non-verbal communication/collaboration/functional communication/good and bad communication.
2. Perceived Levels of Language	Self-perceptions of literacy/perception of communication/satisfaction of language levels.
3. Implications of language	Essential for life/employment and education/literacy and communication required in YJS/ avoidance of punishment.
4. Differences in Language	Differences in literacy activity/technological methods of literacy/formality differences in communication with parents, friends, teachers/no differences in formality/gender differences.
5. Attention and Understanding	Lack of attention/comprehension levels with teachers, YJS, family and friends.
6. Avoidance/Confrontation	Confiding/confrontation/explanations of conflict/satisfaction of resolving conflict.
7. Confidence and Self Presentation	Positive self-presentation/conformity/lowering of self-esteem.
8. Reciprocal Respect and Power	Reciprocal respect/equality of power for YO's and non-offenders.

## 6.1 Theme 1: What is communication?

The majority of participants referred to communication as speaking or a form of greeting and fourteen YO's referred to ***non-verbal language***, providing examples of eye contact, swearing and sign language which was also mentioned by eight non-offenders.

A sub-theme of ***collaboration and team-work*** was something that nine YO's and eight non-offenders thought communication involved, with examples provided that referred to being connected to or in a relationship with someone.

#### 6.4 Theme 4: Differences in language

Only seven YOs and five non-offenders specifically mentioned attending or listening to information as examples of communication. This suggests that these participants regarded expressive language ability as perhaps more relevant and important in defining communication.

**Functional examples** of communication, such as using the phone or writing letters, were given by five YOs and six non-offenders and three YOs (two non-offenders) who referred to communication as allowing one to obtain information inquisitively.

*L: "Um like you go into a shop and like you wanna buy summit, but you ask them what's it about and what it does".*

When participants were asked what they considered **good communication** to involve, politeness and respect were examples most commonly given and for poor communication, examples of violent forms of communication such as fighting, shouting and swearing were reported.

#### 6.2 Theme 2: Perceived level of language ability

**Table 6.2: Participants' perceived language ability and satisfaction of language**

	Number dissatisfied with Literacy (how many of these perceived this as being below average)	Number dissatisfied with communication (how many of these perceived this as being below average)	Number satisfied with their Literacy	Number satisfied with their communication
YOs	17 (5 below average)	11 (2 below average)	10	17
Non-offenders	24 (7 below average)	19 (2 below average)	1	1

Dissatisfaction is defined as participants who believed they could improve on their skills or that they believed them to be below average.

A larger number of non-offenders were **dissatisfied with their literacy** skills in comparison to the YOs (see table 6.2). However, a small number of non-offenders perceived their literacy skills as being below average, as did only five offenders. Reasons explaining this dissatisfaction mainly consisted of poor spelling and writing neatness. Although three participants (one YO and two non-offenders) mentioned how they wished they could write in accordance to different genres such as creative writing. Writing was the aspect of literacy that both groups felt they could improve on the most.

#### 6.4 Theme 4: Differences in language

A similar finding was found for dissatisfaction with **communication** (see table 6.2), with a higher frequency of non-offenders feeling dissatisfied with this compared to the YOs and a small number of both groups believed these skills to be below average. When participants were asked how they could improve on this, they responded by wanting to appear less aggressive and clearer in their communication. Other examples given included a desire to reduce swearing and the need to increase confidence in order to successfully converse with other people especially in larger groups.

*L: "Sometimes I stutter and that but sometimes I don't, I like get mixed up with my words" (50).*

Out of the eleven YOs who were dissatisfied with their communication, eight of them also expressed dissatisfaction with their literacy. All of the twenty non-offenders that were dissatisfied with their literacy were also dis-satisfied with their spoken language skills.

#### 6.3 Theme 3: Implications of language

When the young offender group were asked how important they regarded communication and literacy to be, eleven YOs regarded this as being **essential for life**. The entire non-offender group believed that having good communication and literacy skills were also important, with seven admitting that communication was an essential component for life and only one admitted that you could get by without having these skills. Ten non-offenders mentioned literacy as being essential for life, with only two believing it not to be as crucial as communication.

*K: 'Obviously, you can have one work just with that one rather than having all the parts, obviously, but you know it's better to have all three total, you know, reads write an listen, you know it's better'.*

##### 6.3.1 Employment and Education

Eight YOs regarded communication as being important for employment and twelve participants regarded having good literacy as being important for jobs. Twelve non-offenders believed that communication was important for employment and the same number also believed that this was the case for literacy. Using communication to present oneself positively was also seen as important, especially in formal settings where verbal presenting was required, such as in court and for work presentations.

*J: "I think it's very important, because when you're like interviewing, when you've got an interview and you've got to talk to your bosses and you've got to come across good first impression and that" (58).*



#### 6.4 Theme 4: Differences in language

Having good literacy and communication was also considered as important for education by ten YOs, with examples referring specifically to how reading, writing, understanding and vocabulary can affect ones education. Similar reasons were given by the non-offender group, with six believing education and learning were reliant on good communication and four also believed this was the case for literacy.

##### 6.3.2 Youth Justice Service

Twenty participants perceived that having good literacy skills were not important for successful participation within the YJS. Most of this was in relation to working with the police and for court, of which required very little literacy activity.

However, seventeen participants believed having good literacy skills was needed in order to engage well within the YJS. Examples of this involved reading and signing statements as well as reading letters that were often sent to them.

For communication, twenty four YOs believed that having good communication skills were required for successful engagement within the YJS. Speaking and presenting oneself well in court was an example given by eighteen YOs and this included smiling to the judge and speaking clearly and confidently. Overall, it seemed that speaking in front of others was a frequent activity that took place throughout the YJS.

*L: "Cos he asked me, cos I did write a letter for judge and he did ask me what I put in it so if I'm a right shy person, I wouldn't stand up in front of everyone and tell em, cos I'd be too shy.*

*I: Yeah. So you had to actually tell him like.*

*L: Mmmm.*

*I: How did that make you feel?*

*L: Scared" (280).*

Listening to and understanding others in court were also frequent activities that were mentioned by eleven YOs.

There were fourteen examples provided in which YOs believed good communication was not useful or essential for successful engagement within the YJS. Most of this seemed to be in relation to their communicative experience with both the police and the YOS workers. For example, the police were often perceived as being persistently aggressive in their attitude. One YO even admitted that good communication in the form of having good manners, would produce more of a negative reaction from the police.

*A: (Laugh) "Nothing nothings getting past with them, like you could be as nice as you want with them. I've tried being nice with them before, but they just seem like, it just seems to be*

## 6.4 Theme 4: Differences in language

*with them, the nicer you'll be the worse they'll be with you". (276).*

YOs perceived YOS workers to have good knowledge and understanding in relation to the way they choose to communicate and help the young people with their language. Therefore because of this, having poor communication skills when conversing and interacting with YOS caseworkers was not perceived as being a barrier for participant progression within the YJS.

*R: "Err I just no not really just no I don't have a try my best to communicate with em, if you know what I mean" (313)?*

### 6.3.3 Avoiding punishment in the YJS

Twelve YOs believed that good communication helped them avoid punishment, with examples of this involving smiling in court and providing a positive impression to others within the YJS. In addition to this, the avoidance of negative communication such as being cheeky in court or with the police was also an example given by most.

*L: "Yeah cos if they look at that and they got a good and they think ah he's a good lad, so slap on wrist that time and let him go" (395).*

One YO expressed that by taking the chance to speak about his offence and admitting his regret in court, this would often increase the chance of a more lenient punishment. This activity requires good communication skills and is perceived as being so by this particular participant.

*K: 'Yeah yeah obviously every time I've been in court, I've got myself off with it cos I've stood up and spoke to the judge myself really and obviously been my own defence in a way'.*

## 6.4 Theme 4: Differences in language

### 6.4.1 Literacy practice

It appears that for the majority of YOs (23), literacy activities only occurred during school-time. However, there were some cases in which participants did partake in literacy activities outside of school. Examples included what may be viewed as more functional examples, like reading newspapers and magazines. These examples only referred to the reading of small news extracts to allow for an easier read.

*R: "I just read, I read like you know the STAR. Sheffield STAR. I just read in brief bits in that. You know just in brief, see what's happening" (66).*

Only two YOs expressed that they often read books and one reported that they used to read but no longer did.

## 6.4 Theme 4: Differences in language

Eleven non-offenders did not read or write in their leisure time, with reasons being down to boredom or not finding the time to. Twenty non-offenders admitted to reading and writing in their spare time and this often included books, as well as reading online using social apps like whatpad.

### 6.4.2 Technological literacy activities

The majority of both groups often used literacy in technological activities like email and texting, as well as online reading and email messaging. One of the main reasons for this preference was due to the efficiency in using this literacy method in comparison to conventional reading and writing, because of the way in which words could be shortened using abbreviations and slang.

*I: "Nowadays people understand it more, like just an r on its own, like its a.r.e and you just a u, it's all right, just easier really".*

This method was also viewed as less formal in comparison to literacy activities used in school and because of this, these methods were perceived as not complying with the more traditional conventional rules of English. The fact that most of the offenders perceive themselves as having poor literacy skills, may explain their preference for using these technological methods of literacy. The participants may feel more comfortable and confident writing in a way that does not challenge their literacy skills or reveal any potential weaknesses.

*M: "Like you've got spell check on your phone, as it like you got on a computer".*

Ten YO's believed that having good literacy skills were not required for the successful use of texting and messaging, with these being regarded as not holding any barriers to literacy participation and the same was said by fifteen non-offenders. However, just as many YO's still believed that some good literacy skills were required for the use of these technological methods, as did ten non-offenders.

Six YO's perceived that the language style present in these methods as affecting their formal written school work and this was also mentioned by ten non-offenders.

*J: "It's when I'm writing sometimes I write and I think like I'm sending a text, so I'll put number 4 instead of spelling it out so" (105).*

However seven YO's and fifteen non-offenders stated the opposite, perceiving these methods as not affecting each other. This implies that these young people were flexible enough to adapt their language style to the different formalities encountered.

### 6.4.3 Differences in Formality

Some participants acknowledged the fact that any differences found in formality were mainly due to the situations and contexts the communication took place in. For example, the school environment

#### **6.4 Theme 4: Differences in language**

offered a more formal environment in which teachers could not be as flexible in altering the formality of their speech, as opposed to parents who were seen as being able to.

*C "It's like different, when with me teachers id say you alright? I wouldn't go are you alright pa? Are you alright mate?Or you alright love? It's like are you alright" (307).*

The majority of participants revealed that they would talk more informally to their parents, viewing these communicative experiences as more relaxed. This difference was more apparent when compared to their communication with teachers.

*K: "Yeah cos I talk to my parents like as mates and family, where teachers they're just teachers" (189).*

Communication with friends was also considered as much more informal and relaxed compared to how participants spoke with other people, especially in relation to their use of slang in speech.

*A: (laugh)"If anything with friends it's like gone more the other way like slang innit" (145).*

Some negative differences were highlighted in the offender group with regards to social communication with friends, which included more swearing.

Five YOs revealed that they spoke slightly differently to different social groups of friends, as did six non-offenders. In some cases this seemed to link into the formation of different group identities using different vocabulary, or speaking to suit different personalities and different ethnicities. Communication was also more informal for closer friends.

##### **6.4.4 No differences in formality**

Thirteen YOs admitted that they did not really alter the way they would communicate with different people and two YOs mentioned that the only group of people they would speak differently to would be friends. This might suggest a form of inflexibility in the way they communicate to others. Only five non-offenders reported speaking the same to teachers, friends and parents with an additional three mentioning no difference between teachers and parents and two mentioning no difference in the way they spoke to their friends and parents.

##### **6.4.5 Gender differences**

A sub-theme of gender difference in the way parents communicate was also found for fifteen participants. Differences involved perceiving communication as being easier, informal and more comfortable with the mother. This gender difference was present for ten non-offenders.

## 6.5 Theme 5: Attention and understanding

Two YO's mentioned how they would confide more in their mother than their father and this was acknowledged by four non-offenders, with reasons given for the latter group being due to a more open and understanding relationship with regards to the impact religion had on their lifestyle. One YO described the communication with their father as involving less actual speech but the speech often contained humour and was described as being straight to the point. The addition of humour was also mentioned by two non-offenders.

*T: "You know what I mean? Like a bit more yeah, you're alright? With a bit more smiles, a bit more atmosphere, but with dad it's not like, I keep it, it's like I'll keep it straight and have a joke" (493).*

For four YO's, any gender differences present in their communication was due mainly to father absence, resulting in a reduced amount of contact time between themselves and their father. One participant states how they chose not to listen to their father because they perceived him as not being around when they needed him to be. This also suggests a lack of respect and trust in their communicative relationship. This theme was only present in one non-offender.

*T: I don't talk to them in a different way, but I don't really, I won't really listen to him as much as I listen to my mum, because he aint really been there for me so".*

## 6.5 Theme 5: Attention and Understanding

### 6.5.1 Attention

There are instances within the interview that suggest participants may be demonstrating problems in attending to information within their communicative experiences. For example, twelve offenders admit to not listening in school, at home or with staff at the YJS. Similarly, six non-offenders also admit to not attending to other people speaking and two also mentioned getting distracted when reading.

*I: "How much did you understand what teachers would say to you in class"?*

*J: "Bout 50% of the time half the time yeah".*

*I: "Right when you say half the time what was it like why..."*

*J: "I didn't concentrate much".*

For two YO's and the majority of non-offenders, the difficulty seemed to be due to attending to large chunks of information that was often provided too quickly, as well as being distracted by peers. Class disruption and noise was also mentioned by four non-offenders and one offender thought teachers talked too much, acting as a distraction.

## 6.5 Theme 5: Attention and understanding

For seven YO, there was a preference to purposely ignore those people that participants did not fully respect.

*I: "How much do you understand what police say to you"?*

*B: "How much do I understand them"?*

*I: "Yeah".*

*B: "Half the time I don't listen to em" (355).*

One other common sub-theme in exploring this reduced attention was a lack of interest or enjoyment in school. A small number of offenders (5) perceived school as being boring, due to the long hours of lesson time and the amount of information that would often get passed down in an uninteresting, un-imaginative fashion. This was supported by two non-offenders who believed lessons should be more practical and creative to promote engagement.

*K: "Yeah and listening to them talk it's just annoying" (459).*

*C: "I hated it couldn't stand it man. It dragged. Hated it" (227).*

This would then lead to a reduction in school attendance and participation for most.

*I: "Ok why would you mess about do you think in class"?*

*T: "Cos I'm bored".*

### 6.5.2 Comprehension difficulties

#### 6.5.2.1 Teachers

There were instances in which participants reported being unable to understand what others would say to them. For example, seventeen YOs reported difficulty understanding teachers in schools, mainly because of the rich vocabulary teachers would often use in class.

*I: "Were there some bits you didn't understand or sometimes you were unsure"?*

*Z: "Yeah".*

*I: "Yeah ok. Um do you know why that was or like why that might be"?*

*Z: "Um I wouldn't have heard of the word or summit before" (201).*

Thirteen non-offenders reported not being able to understand teachers in class, due to them speaking too fast, changing topic quickly and using rich vocabulary.

In response to this, teachers would at times show frustration. This frustration was also in response to the way participants would behave and avoid work in class, because they were unable to meet

## 6.5 Theme 5: Attention and understanding

the language demands required of them. One non-offender mentioned how teachers would get annoyed when questions were asked in class.

*L: "Most my teachers didn't really like, like maths teachers and that, not my English teacher. They used to like get right frustrated with me, cos I don't understand maths whatsoever, because everyone else did and I were always tagging behind" (148).*

Five YO's label the teachers as being ignorant based on their experience of not being helped when help was requested, fuelling further frustration. This was expressed by three non-offenders.

However, fourteen YO's reported being able to understand teachers and seventeen non-offenders reported the same. This was mainly because of the additional help and support teachers provided in trying to resolve any comprehension difficulties through chunking and repeating information.

*J: "Cos they broke it down, so if they, if you don't, if you didn't understand it, they'd say; if you don't understand it, highlight it and then I'll break it down into bits" (238).*

Five YO's state a preference for having small group or close one to one support in education, with one believing it to be essential for their literacy development. This sub-theme was shared with only one non-offender.

*J: "Like I were on 1 to 1. So when I were when I were in a class of 30, I weren't listening and get distracted, so I'd get one to one, just so that the be me and her ,one teacher communicating and that's it make it easier" (174).*

The use of other visual methods of teaching in schools and the use of lap-tops in class was also viewed positively by three YO's who found this helpful; especially as their literacy levels were low.

*B: "Yeah like my teachers never used to do, you know, on board some teachers used to like just show it ya ,write it on the board and you used to copy it. Nno not our teachers, they give you a book ,so you d have to do this thing off this book and that was it" (202).*

Four non-offenders also mentioned how using templates for literacy helped, as did those teachers who provided interactive lessons.

### 6.5.2.2 Youth Justice System

With regards to the YJS, the rich vocabulary used in courts and in police statements also seemed to be a common theme affecting the understanding of thirteen participants.

*R: "They come out with some big words (laugh)" (356).*

## 6.5 Theme 5: Attention and understanding

Four YOs also perceived their friends as not fully understanding the consequences of their behaviour and the implications this would have for their court orders.

*I: "I mean you've got good understanding anyway yourself, but do you think young people need to have sort of good listening and understanding skills..."*

*K: Yeah cos some people take it as a joke" (355).*

The use of sarcasm in conversation also created problems in understanding, as one participant reported an example of their caseworker using sarcasm which was wrongly interpreted, provoking an aggressive reaction. In cases like this, an aggressive reaction may be due to a misunderstanding of true intention.

There were examples (25) provided by participants, which showed them to have a good level of understanding within the YJS, but this was mainly concerning the police and the YOS. This was partly due to the help and support provided by YJS staff, but one other reason for this seemed to be down to the knowledge gained through experience of the YJS, as was described by four participants. One participant recalled knowing how the police 'roll', suggesting they had developed a knowledge of how police communicate and behave pragmatically over time. Ten YOs believed that the YJS staff had helped them clarify miss-understandings to improve comprehension.

*D: "I don't know, I just, I just understand them and understand where their coming from and obviously I'm gonna ask them questions and they answer every question in full" (299).*

There were also eight examples in which YOs felt that the way the court communicated with them was helpful, describing their communicative approach as child friendly. Another participant supports this when describing how the court would often speak clearly, in order to aid their comprehension skills.

*I: "People in court when you were in court how did you find that"?*

*Z: "Um they were speaking clearly I knew what they were saying" (303).*

### 6.5.2.3 Friends and Family

Twenty-two YOs revealed no difficulty in their ability to understand their family and this was also due to the level of explanation they would provide.

*L: "if I'm in a room with like my friends my family I don't know even my teachers and they say it and pick the main points out for me to make my brain click and know what to do then I'll know" (217).*



## 6.6 Theme 6: Avoidance and confrontation

Furthermore, participants reported parents as talking to them in a way they could comprehend by avoiding the use of rich vocabulary.

*K: "Yeah cos like teachers at my school just like took everyone as if they were an A\* student and whereas, like your parents know what you're like, know what you can do, know what you're capable of, so they talk to you like how you are" (164).*

Similar findings were found for non-offenders, with all of the group reporting being able to understand friends and family. This was often better in comparison to teachers, mainly because of the informal use of language experienced at home and the way parents were able to explain things clearly in a way they felt they could understand. Only one non-offender mentioned not being able to understand reasons family gave for justifying restrictions set upon her behaviour that were related to religion and culture.

## 6.6 Theme 6: Avoidance and Confrontation

### 6.6.1 Confiding

Fourteen YOs stated that they would not confide in people regarding personal matters, but there was some flexibility in responses, especially as it would often depend on the type of problem. Some stated that they would avoid confiding in their family but would confide with friends and one participant said the opposite. Two specifically stated that they would not confide in their father. There were three examples in which participants describe their understanding with friends as mutual, which often explained why they would end up confiding in one another.

*Z: "Cos he understands me, he's like a brother to me" (329).*

One reason why some of the group would choose not to confide in others was through embarrassment. One YO in particular refers to talking around the personal problem without actually specifically mentioning it.

*A: "Is if I don't really talk to people about, but I talk to someone like, just say, like me mate will be like not talk about it, but talk around it, if you know what I mean? And that's just good enough for me anyway, just talking around it, if you know what I mean?" (426).*

The level of trust present between participants and others also explains the amount of confiding experienced and this was present mostly with parents, friends and YOS caseworkers, of whom a long trusting relationship has been developed. This was mainly because of the themes commented on with regards to their level of perceived understanding.

## 6.6 Theme 6: Avoidance and confrontation

Sixteen non-offenders reported confiding in others, mainly consisting of their friends or family for the above reasons. Six of the group chose not to confide in others with reasons also being down to not trusting others or being taught to deal with situations themselves. One participant also believed that any problems expressed would not be taken seriously.

The decision not to confide may also be as a result of avoiding punishment, as this was mentioned by two YOs, especially in regards to the police. For example, YOs expressed not communicating with them in order to avoid possible further trouble and punishment, especially in confronting situations.

*T: "Its one of them ones where like I don't wanna show them that I don't wana talk to them, but I try to talk to them as less as I can" (383).*

Some of this avoidance with the police is also a way in which participants decide not to help the police, because of the dis-satisfaction they have with the way they would communicate with them.

*C: "Well they probably wouldn't like it, id, id prefer to have bad communication skills when it comes to the police, I don't tell them jack. Nothing to do with them and I don't hear or see nothing. If they wanna find something out, they can do it the sens, cos to be honest, I don't like the police"(328).*

### 6.6.2 Confrontation

Physical and verbal confrontation was encountered frequently by most participants. For example, 15 YOs mention arguing with the police, 16 mentioned arguing with teachers and 17 also mention arguing with their parents often.

*D: "Cos some of them that know me for who I am, they understand, but if it's like, if its someone that don't understand, then obviously they get right mad and then start kicking off and then I start kicking off and everything gets blows up so" (161).*

All of the non-offenders were involved in some levels of conflict and this mainly involved their parent, siblings and friends. However, only ten reported arguing often at least once a week. Fifteen non-offenders reported having argued with teachers at school but as mentioned this was rare and were more likely to have occurred during primary school or early secondary.

Reasons for why the non-offender group avoided conflict in the first instance was to avoid punishment from teachers and their parents, especially their fathers, which they were often frightened of. There was examples of a learnt acceptance from four non-offenders who had realised they were powerless to argue with their parents and teachers and had learnt to accept this.

*K: 'I speak to my dad with more respect kind of cos he's like I wouldn't say scary but scarier than my mother.*

## 6.6 Theme 6: Avoidance and confrontation

*K: He's one of those parents where like you give an opinion and he's right it's not an opinion there's one way and it's his way.*

There were also examples of more frequent and violent arguments with teachers in comparison to parents by most YOs.

*K: "Ah yeah I used to argue with a teacher like everyday".*

One YO reports having to be restrained during conflict with teachers.

*K: "Err well I've had quite a few like like bad arguments with teachers and stuff like that".*

*I: "And is that sorted out the same way like with the police"?*

*K: "No. It's just, it's been like I've had to like be restrained and that, cos I just don't like it".*

### 6.6.3 Explanations for conflict

Nine YOs believed that for the occurrence of this conflict was attributed to their current mood, suggesting a lack of control over this.

*B: "It depends what mood I'm in. If I'm in a good mood I walk off but if I'm in a bad mood then they best get running" (476).*

In addition, one other reason was because of the flexibility they felt they had in parental conflict with regards to what they could say to their parents.

*I: "How is the arguments you have with teachers different to those you have with your family"?*

*J: "Don't know. (2) Cos in family or owt I wouldn't care, I wouldn't care what I did to them or said to them".*

*I: "Yeah ok".*

*J: So owt could come out really".*

For the non-offender group reasons for conflict with parents were because of problems at school or due to small disputes about tidying room or wanting something they weren't allowed to have. Being teased by siblings was also another reason raised by six participants.

Conflict with parents was often described as resulting from power struggles between both parties living together and one YO felt this was common in the adolescent and parent relationship, whereby both parties sought to achieve their desired level of control. Similarly, three non-offenders also mentioned how parents preventing their independence was one reason for conflict.

*K: " Obviously youth these days, young-uns these days grow up a lot quicker than what you'd expect dya get me? Their 16 and they've got a mind of a 21 22 year old, so obviously, they're*

## 6.6 Theme 6: Avoidance and confrontation

*gonna wanna be an authority figure in their own home and obviously, it's just battles. It battles against your parents, because there wanna show that they are the authority figure''.*

Only three YO's mentioned arguing with friends and four commented on street fights that were often instigated with other strangers because they were perceived as being aggressive, arrogant or ignorant.

*K: "Yeah Just them people that wana stare at you and just the people that wana act like try and prove to people that they're a big man, walking down the main road or something, tryna prove to everyone they're a big man''.*

Sixteen non-offenders reported arguing with friends and reasons for this were because of friendship circles, misunderstanding texts and being teased. The majority perceived arguments with friends as being less serious (12YO's, 14non).

*A; "I think I think that's what you do with mate's innit and that's what makes you strong as People, dya know what I mean''? (581).*

### 6.6.4 Conflict Satisfaction

Satisfaction with the way in which conflict was resolved was expressed by nineteen YO's. This was expressed in relation to both the avoidance of communication expressed by half of the group and the proactive approach taken by parents in resolving conflict through communication. Sixteen non-offenders expressed satisfaction in how conflict was solved for them and this was mainly in relation to the use of positive communication in solving conflict, which was expressed by thirteen participants. Only five non-offenders were satisfied with not doing the latter.

Dissatisfaction with the way parental conflict was solved was expressed by fewer participants. This involved situations in which parents were viewed as being too stubborn and un-proactive in solving the conflict.

*M: "But sometimes things don't get dealt, with dya know what I mean? Some arguments like, they'll just build up for the next argument you have and it's just worse'' (540).*

Nine YO's expressed a desire to talk about the problem as opposed to avoiding it, which was often the case as mentioned.

*K: "I tell them to shut up and just walk off, or I'll stay In my room and not listen to them at all''.*

*I: "Do you think that's a good way of solving arguments''?*

*K: "No sometimes you should speak about it and make sure like, make sure if you're not happy with it, let them know you're not happy about it''.*

## 6.7 Theme 7: Confidence and self-presentation

Similarly, two YO's were unhappy with the way teachers would send them out of class as a way of solving conflict, instead of choosing to talk about the problem and listening to their point of view.

*B: "Not expelled but like sent out or something.*

*I: Oh ok. How would you want them to react do you think?*

*B: Just sit us down and talk to us instead of being dickheads".*

## 6.7 Theme 7: Confidence and Self-Presentation

### 6.7.1 Positive self-presentation and self-comparison

Participants believed that having good communication skills enhanced a positive self-impression on others and was a tool in enhancing their confidence. One non-offender believed that having good communication skills could also counter bullying which would also enhance his self-confidence.

*"If you come across as like a shy person then people that try and wind you up for the fun of it you can't really do anything about that if your shy because you won't know what to say but if you're more confident you'll be able to like you can't talk you're just an idiot you lack brain cells".*

Twenty non-offenders believed that friends had helped them develop their communication skills and developing their confidence talking socially was the main reason for this. Friends were viewed as social models by eighteen YO's, in which they provided models of respectable communication as well as aiding in the learning of street talk and other varied communicative styles.

*C: "Yeah you just learn as you go. You just learn as you go".*

*I: "Ok so do you think it's more about your communication rather than reading and writing"?*

*C: "It's like learning to roll though innit? (Laugh) Or learning to ride a bike. I mean it took me time to learn to roll. I had to watch other people before I fucking did it" (191).*

Technological methods were also believed by four YO's to have supported their communicative ability indirectly by enhancing their confidence. In other words, mobile phone messages promoted participants confidence in participating in social interaction.

*C: "But it has yeah cos its like I don't know it improves your communication skills, cos your, if you're like, just say its someone you don't know, you text them and then you could get to know em and then you, you communicate with em and then ,you might get a bit more confident or whatever. Do you know what I mean?" (92).*

The sub-theme of confidence was apparent more with regards to face to face communication with friends for the non-offender group.

## 6.7 Theme 7: Confidence and self-presentation

Presenting oneself positively to other peers was often present within the narrative and discourse YO's would use in group interviews, especially when emphasising violence.

*C: '...and gone buff just slapped him and I knocked him unconscious I didn't mean to yeah, I just hit him too hard and he went unconscious'(113).*

Some participants expressed a concern in how they presented themselves to their peers through their language, with the aim of avoiding a negative self-presentation. Three YO's and one non-offender reported how they would feel embarrassed reading aloud in front of their peers, because they perceived themselves as not being good at reading. Five non-offenders also commented on preferring not to speak in front of large audiences such as in class.

*M: "It's not, not like not so good, like say that when your reading, your nervous aren't ya, so I tend to stutter. Do you know what I mean"?*

Five YO's also describe how they would not ask for help either in schools or in the YJS, and would choose not to speak in class due to the fear of embarrassment of getting things wrong and looking stupid. Not asking teachers for help was something four non-offenders admitted doing to avoid looking stupid and seeking help from friends was often the preferred choice.

*M: "I don't know. I've always learnt myself like I've learnt myself how to tell the time and like I don't like asking anyone for help or owt" (172).*

One YO mentions how he would prefer to gain help in one-to-one situations, or at least with groups of other able peers, again suggesting that this person may feel embarrassed working alongside others who are more able than himself.

*L: "Err just go in a room on me own or summit and someone teach me to read and write".*

*I: "Right that sounds like one person with you on your own doing stuff with you".*

*L: "Or in a little group or summit".*

*I: "Yeah yeah yeah ok. So it's just in a big class and that it's not like you feel a bit like".*

*L: "Yeah all the people not clever, just with me, like all people same as me" (273).*

One non-offender mentioned how mixing in groups with louder confident students would often reduce her confidence.

### 6.7.2 Conformity

The sub-theme of conformity was highlighted by four YO's, who explain how they would aim to fit in with their peer group by conforming to certain behaviours and communication practices. Examples of these practices included gaining attention in class by acting out and playing the class clown. This

## 6.7 Theme 7: Confidence and self-presentation

further supports participant's need for peer attention, respect and acceptance which in turn enhances their self-confidence and esteem. Ten YOs believed friends as having a negative impact on their overall language development, especially during secondary school and specific examples were given in which friends were seen as being a distraction from school work. This was expressed more for the YOs in comparison to the non-offender group, with only one mentioning being distracted by their peers in class.

*I: "Would they have made it worse in any way"?*

*L: "Probably".*

*I: "Do you reckon"?*

*L: "They probably would have distracted me" (188).*

*R: "Err (2) Yeah because they're they're nice kids and that (2) and like I said when ya hanging about with people, you st, you start being like them a bit, if you know what I mean?" (235).*

*J: "I can't blame them, but it like when we used to be in class, we used to be messing about, so that if they started messing about, id mess about to join in, so I'd get kicked out of class cos I take it steps further" (225).*

### 6.7.3 Lowering of self esteem

There are examples of which participant's sense of self-confidence is affected by the way others communicate to them. Twelve YOs refer to the negative way in which teachers have spoken to them using terms like being talked down to or spoken aggressively to.

*C: "They just make you look look like twats in primary school. Teachers they make you feel wee big don't they" (106)?*

Four non-offenders report teachers affecting their confidence by picking on them in front of the class or putting pressure on them when trying to make them understand. One non-offender specifically mentioned being put down by teachers.

Three YOs referred to parents negatively affecting their self-confidence, by not praising them, mocking them or by talking down to them which were mentioned by four non-offenders.

## 6.8 Theme 8: Reciprocal respect and power

Fifteen YO's also refer to the police having the same negative effect through being mocked and their perceived arrogance.

*R: "Because I try telling him what to do and he says look at that ladder, he says your at bottom at that ladder and I'm at top" (506).*

It seemed that within the YJS, this sub-theme was only perceived as occurring in communicative interactions with the police, with YO's often describing their communication as immature, rude, in-polite, aggressive, unprofessional and confrontational.

*R: "Um, no not really they just need to a think some coppers need to grow up a bit so you how they go off and that they just need to (1) they just need to grow up" (439).*

## 6.8 Theme 8: Reciprocal Respect and Power

### 6.8.1 Reciprocal respect

One of the main themes that linked to high levels of perceived satisfaction with regards to communicative experience by participants, was their perceived level of respect. In examples where participants used the term 'respect' and 'safe' they were in relation to communication that could be described as being polite, respectful, friendly, honest, trustworthy and treating one equally.

A trusting and respectful relationship was viewed as important for positive communicative interactions for sixteen YO's and this mainly involved parents, YOS workers, friends and some court judges. Examples of dishonesty were mainly present with some teachers and police, with these described as trapping and manipulating them in order to gain what they want, or to provoke reaction.

*J: "The other day I'm still excluded yeah, I got excluded the other day and and he's saying that I'm prepared, I'm prepared to be rude, erm and I'm happy to be rude to people. And he put the words in my mouth, so and I thought that was rude" (148)".*

*L: "the girl whol did it with, they like 'oh she's grassed me up, get yourself out of bed' and obviously I knew she ant, but they were just, them tryna make you believe that, so I'd come out with something that I don't know" (429).*

Despite this, thirteen participants were happy with their communicative interactions with teachers and eleven were with the police. Some also admit to choosing to not respect the police, only later to realise that this reaction was also unjustified.



## 6.8 Theme 8: Reciprocal respect and power

*K: "No I just didn't believe them, thought they were talking rubbish, but now you look back and they were just telling it like it is".*

Fifteen non-offenders also mentioned having a respectful communicative relationship with their parents and ten believed this to be the same for their interactions with teachers. In situations where less respect was given was for friends, as stated by eight non-offenders whereby their relationship meant this level of dis-respect was part of their informality which was accepted.

The equality with regards to the respect shown and therefore gained by those the participants communicated with was considered important for the majority. Because of this, participants would often speak differently to individuals depending on whether they were seen to show respect. In examples where this wasn't gained, YOs were more likely to show dis-respect in return. One non-offender admitted that he would accept the fact that teachers would show dis-respect to him, refusing to challenge this.

*I: "Is how you talk to teachers different to how you would talk to other people do you think"?*

*T: "It depends on who it is, but I talk to em with respect, cos obviously they're gonna have to gain respect off the kids as well".*

One participant provides an example of this by acknowledged that by showing respect to police you would gain this back from them.

*T: "Yeah, police is with the police. If you know how to talk to them, you'll you won't get along with them, but you'll get somewhere. But obviously it's the same thing, police trying to do their job. They don't wana be disrespected as well" (298).*

### 6.8.2 Equality of power

In relation to power, participants perceived an equal balance of power, status and authority as enabling and promoting an emergence of a trustful, respectful relationship between both communicative parties. However, an equal balance of power was not experienced by many, leading to a general dissatisfaction of communicative experience. The main reason for this dissatisfaction was due to participants' perceived unjustified abuse of this power.

### 6.8.3 YOs

Most of these interactions involved the police, with fourteen YOs expressing dissatisfaction with the unequal balance of power and authority they possessed. This is mentioned in the confidence theme with regards to how they are spoken to and treated and this occurs especially in cases that involve being stopped and searched.

## 6.8 Theme 8: Reciprocal respect and power

*J: 'I was just walking and then they stopped me, well one of them went can you stop, can I speak to ya? And I went no and I carried on walking and they got out the car and I didn't know they got out the car and they just got hold of me and then an argument started escalating, just from saying get off me. Oh we wanna check ya. It's like, I didn't have owt on me anyway' (577).*

Two participants also mention how they believed the wearing of uniform enhanced their feeling of authority and power.

*J: "They just wanna do whatever they want. They think they can do whatever they want, just cos they're wearing the uniform, they're in control but they're not really" (202).*

There are examples in which participants believe that they try to gain respect off some of these people without gaining this back, resulting in what is seen as unfair treatment within the social interaction.

*D: "Alright. But like I give them respect and that like obviously but as soon as they start mouthing at me, they just lose everything, they just loose all, I just loose all respect for them and start kicking off back" (168).*

*A: (Laugh) "Nothing nothings getting past with them. Llike you could be as nice as you want with them. I've tried being nice with them before, but they just seem like, it just seems to be with them ,the nicer you'll be the worser they'll be with you sort of thing you know what I mean" (276)?*

One participant mentions how he smiles in court as a way of showing what he perceives to be good communication. This leads to an aggressive reaction from the court judge, of which he doesn't understand and so views it as an unfair response.

*L: "I started smiling and she had a right go at me" (448).*

In addition, one participant revealed dis-satisfaction with their care-workers because of how they assumed she was lying and wouldn't believe her.

*L: "I don't know why but people always presume that kids are always lying" (252).*

This awareness of inequality of power also includes teachers, with ten YO accounts describing this in the sub-theme of confidence and one YO believed that their previous poor behaviour was an explanation for why their request for help was ignored by teachers.

*K: "Not a lot cos (1) like at school I used to mess about a bit, but like I messed around loads in the first year and after that (2) they've never helped me" (106).*

## 6.8 Theme 8: Reciprocal respect and power

One group of YO's felt that power and respect was more equal and reciprocal in relation to secondary school teachers who tried to treat them as adults, as opposed to primary school teachers.

*C: "Where the more academic and older children, they're formal they're treated more like, like a adult. So it's like, it develops really as you go down through your year's, dya know what I mean?" (256).*

This theme of unjust abuse of power was less common with parents. One example of the latter stems from an experience one participant had working with his father, which results in an in-balance of power, causing frustration and dissatisfaction for both parties.

*R: "But that's different. He says to me when I'm at, when you're at work, I'm not your dad, I'm your boss. That's what he says. He says I'm not your dad now, I'm your boss".*

### 6.8.4 Non-offenders

Thirteen non-offenders gave examples where they perceived teachers behaviour as being unjust and unequal. Most examples were related to being blamed for behaviour of which they were not at fault, or believing teachers failed to allow students to explain or express their own account of a situation.

*A: "They should let people explain more because I asked a teacher why are they getting a negative referral and he just told me to get out".*

Teachers shouting and becoming frustrated for no reason was another example non-offenders gave as being unjust in their communication. Eight non-offenders considered their parents as being unfair in their communication, with main reasons including not being allowed a level of independence, especially in relation to cultural rules preventing them from some level of participation.

*M: "I don't like the way woman are treated within our culture. And she'll be like but we can't do anything but with my dad you say anything like that and he'd be like you've got to learn the way stuff is he just like tells me to accept it".*

Two non-offenders mentioned how their parents failed to provide them with valid reasons to justify this reasoning and that this led to frustration and dis-satisfaction. Four non-offenders also specify

## 6.9 Summary of chapter 7

examples in which parents were viewed as being unfair by taking their siblings side in conflict and not listening to their point of view.

Overall the unjust use of power and authority held mainly by the police and teachers adds to the dissatisfaction, which explains why most of the YOs tend not to trust or respect these people. Participants prefer communicating with those on equal terms as them, in more informal settings. The former are also people who are perceived as being more helpful, understanding and are often perceived as putting more effort in building a trusting, respectful relationship with the young people.

### 6.9 Summary of qualitative analysis

- More YOs were satisfied with their communication and literacy skills in comparison to the non-offender group and a small proportion of both believed their skills to be below average.
- The majority of both groups believed that having good literacy and communication skills is important, with over half of the YOs believing this also applied to the YJS, especially for communication, which was seen as potentially reducing punishment.
- A larger number of non-offenders used literacy as a recreational activity in comparison to YOS. The majority of both used technological methods of literacy which were perceived as easier to use, especially for those who may not have good literacy skills.
- Both groups perceived their communication with their friends and family to be more informal in comparison to teachers, yet more YOs admitted to not altering the way they would communicate to others depending on the formality of the situation.
- A larger number of YOs in comparison to non-offenders report difficulties attending to large amounts of information within school classrooms.
- A high number of young people from both groups report difficulties in understanding teachers in class due to complex vocabulary used by teachers, with slightly more YOs reporting this. Vocabulary used in court was also a problem reported by a large number of YOs.
- More YOs avoided confiding in others in comparison to non-offenders due to embarrassment, trust issues and misunderstanding.
- Both groups reported conflict with authority figures, but this was more serious and frequent with YOs in comparison to non-offenders. Both groups were also satisfied with how conflict was solved, but this involved avoiding communication to resolve conflict for the YOs in comparison to the non-offenders, who had more experience of using this strategy.
- Both groups believed that communication increased their social confidence and maintaining a positive self-impression was also important for both groups.

## **6.9 Summary of chapter 7**

- More YOs reported authority figures as reducing their self-esteem, which included teachers and the police, due to the negative way in which they were spoken too.
- Respect provided by authority figures influenced the level of respect gained for them as reported by both groups and this affected the likelihood of conflict mainly for the YOs.
- Instances where behaviour by authority figures was perceived as unjust led to aggression, frustration and conflict from participants of both groups, especially the YOs.

# Chapter 7 Discussion

---

The aim of this thesis was to compare the language, literacy and communication abilities of YO's on court orders to a group of non-offenders matched on SES, Non-verbal IQ and education attendance. This was achieved by using a combination of quantitative language assessments and qualitative semi-structured interviews and the research questions can now be addressed.

This chapter will discuss:

- Results of the standardised language tests and to what extent the YO's performance was significantly below the standardised language norms (Section 7.1).
- Comparison of the YO's' and Non-offenders quantitative language scores using logistical regression analyses (Section 7.2).
- Participants' qualitative perceptions and experiences of using language, communication and literacy and how this provides insight into the relationship between language and behaviour (Section 7.3 & 7.4).
- How the data supports the social model of adaptation or deviance of language and behaviour (Redmond and Rice, 1998), (Section 7.5).
- Relationship between the demographics of the YO's and their language and behaviour (Section 7.6).
- Linguistic theories of deficit and difference in explaining the difference in language ability between YO's and non-offenders (7.7).
- Implications of the findings for the SLT service delivery for YO's and their parents, and the need for speech and language support in the YJS and in secondary schools (Section 7.8).
- Strengths and limitations of the study and use of a mixed methods approach when investigating language, literacy and communication in YO's. (Section 7.8).
- Reflections on the role of the researcher in the process of studying and analysing the language, literacy and communication skills of YO's (Section 7.9).

## **7.1 Research question 1**

### **7.1 Answering Research Question 1: To what extent can a group of YOs on community court orders be identified as having a speech-language, communication needs?**

#### **7.1.1 The language, literacy and communication abilities of YOs**

The YOs scored below the normative scores on all the language tests, suggesting limitations across the spectrum of language. The most significant differences were found in the UP task, the writing task, the pragmatics profile and some of the spoken language tasks, such as MLU and the expository discourse task. Within each of the above tests the YOs were scoring at least 2sd below the normative mean scores. This finding is in keeping with previous studies of YOs that have also used standardised language tests (Gregory and Bryan, 2011; Bryan, 2007, Snow and Powell, 2008; Snowling, 2000).

##### **7.1.1.1 Listening Comprehension**

The YOs scored poorly on the UP task, highlighting poor comprehension abilities. This supports previous research by Gregory and Bryan (2011) who found poor comprehension using the same test in their sample of YOs.

##### **7.1.1.2 Literacy**

The YOs scored poorly on the literacy tasks, supporting research with youth offenders in custody (Davis et al, 2004; Snowling, 2000). However, these studies focused primarily on reading whereas the lowest scores in the present study were found on the writing task, which required the YOs to write an argument in the style of a letter. This showed how difficult it was for the YOs found to complete a functional aspect of literacy in comparison to a word spelling test for example. In addition, the assessment measured writing holistically, scoring aspects that included spelling, punctuation, grammar and creative writing style. It could be argued that the low scores found here may be expected when most of the group wrote relatively short written extracts, as shown by the word count mean for this particular task. However, because the group found this task difficult, the YOs may have purposely written less to avoid highlighting their apparent literacy limitations.

The YOs underperformed on the remaining literacy tests when compared to the tests norms for their age. This included the word reading, the reading comprehension and the spelling task, supporting research finding YOs in custody to have low literacy abilities (Snowling, 2000; Davis, 2004; Svensson, 2001). The spelling and word reading tests involved decoding individual words whereas the comprehension test required participants to retain information about a short story and make relevant inferences. It could be that the YOs had difficulty decoding individual words out of context, -

## **7.1 Research question 1**

given they performed well on the target words aspect of the comprehension test. This test assessed ability to read highlighted words within a sentence context and they performed at ceiling on this. However, the YOs still failed to fully comprehend the passage of information provided in the stories, with their mean score being further away from their age expected score in comparison to both their word reading and spelling mean scores. Few studies have measured reading comprehension in the YO population, but Davis (2004) found those in custody to be performing well below age expectation. Similarly, Svensson (2001) found half of their group of YOs fell below age norm expectation on a test measuring reading comprehension of short stories. However, the type of stories included in this reading comprehension test may have been challenging for the YOs, as the content of the stories were not very relevant to adolescents and YOs.

### **7.1.1.3 Spoken Language**

The YO sample performed poorly when asked to explain a familiar game or sport. Despite having the required knowledge of the content of the chosen game or sport, their ability to verbally express the requirements and characteristics of this was limited, as shown by the low MLU and expository discourse scores. The Subordination Index (SI) scores obtained from the group also highlight the limited syntactic complexity of their speech. The YOs' SI scores revealed an abundant use of simple clauses that were often in the form of main clauses, as opposed to subordinate clauses, in which subordinate conjunctions were rarely produced. This is supported by the lack of vocabulary present in most of the YOs speech extracts, shown by the low number of total words and total different words in comparison to the SALT database. Snow and Powell (2008) also found YOs on court orders performed poorly on standardised tests of narrative ability.

The normative scores on the SALT are based on much longer utterances than those produced by the YOs. Even when the total number of utterances were matched using the YOs central tendency scores, the YOs still scored less well than the normative SALT mean score for all of the spoken language measures. In fact, the YOs performed more poorly on these measures when utterance length was matched. This strengthens the point that the utterances produced by the YOs were limited in their syntactic complexity and word length and that they were unable to explain concepts succinctly. The number of different words used was closer to the SALT norm score, but this may seem likely when the utterance length for the SALT norm comparison set is reduced.

### **7.1.1.4 Pragmatics**

YOs scored below the criterion suggested for their age on the CELF pragmatic language test. This test measures the application of language used in social situations, including the ability to correctly read



## **7.1 Research question 1**

and signal gesture non-verbally. In keeping with previous research with children with conduct disorder and autism (Gilmour, Hill, Place and Skuse, 2004), the YOs found applying and interpreting the rules of social communication difficult. In contrast, Sanger (2001) found female YOs to display pragmatic abilities in accordance with age expectation based on the *Comprehension Assessment of Spoken Language* (CASL) (Carrow, 1999) test. However, Sanger also found that the group revealed difficulties applying this knowledge of pragmatic communication to actual social situations based on the interview responses obtained.

### **7.1.1.5 Criminal Vocabulary test**

The non-standardised criminal vocabulary test was designed specifically for this study and did not include a comparative database of normative scores. However, the group mean score suggests that the YOs were performing well on both the receptive and expressive elements of the task. The mean scores were at ceiling for the receptive element, suggesting YOs understood words that were commonly used in the YJS. Although they found the expressive task more difficult since it required them to define complex words, their mean score was still in the upper quartile of the test range.

### **7.1.1.6 Cognitive ability**

The recalling sentences task was included to measure verbal syntax, as well as working memory aspects of attention and storage. YOs performed 1sd below their expected score based on their age equivalent mean. These low scores in keeping with their low SI scores and suggest a lack of knowledge about sentence structure and grammar. This may be explained by difficulties in attending to or storing large chunks of spoken information in working memory. Working memory is shown to positively relate to language development (Vellutino 1995, Wolf 2000), which is why measures of working memory are sometimes used in the diagnosis of a specific language impairment (Dethorne and Watkins, 2006). Research has also found YOs to show poor executive function and that there is a high presence of ADHD in this population (Raine, 1993, Snowling 2006). Working memory was not specifically measured in the present study, since the recalling sentences task requires linguistic knowledge (phonological decoding), which confounds the tests ability to measure specific attentional aspects of working memory (Snowling, 1991).

The group also performed below age expectation on the *Non-Verbal Matrices task* (Wechsler, 1999). Measures of non-verbal IQ are often taken to ascertain whether difficulties in language development are specific to language rather than in cognitive processing, a process known as cognitive referencing (Cromer 1976). Using this definition, the sample of YOs present in this study may not qualify for a diagnosis of SLI or SLCN, despite showing difficulties across the spectrum of language

## **7.1 Research question 1**

and literacy based on the standardised test scores. Instead, the difficulties in their language may be interpreted as being due to general cognitive delay, assuming that cognition and language are positively related (Botting, 2005). This may also explain why many YOs often fail to gain the required speech and language intervention that could address these language limitations (Dethorne and Watkins, 2006). Research studies of the language of YOs has often found that the majority of their sample have not received any previous speech-language therapy input (Snow and Powell, 2008; Sanger 2001).

### **7.1.2 Identifying SLCN using normative referencing**

An alternative method of assessing a SLCN is normative referencing using scores from standardised tests. Studies of YOs have often defined a language limitation as a SLCN or language difficulty when raw scores have been 1-2sd below age equivalent test norms (Bryan, 2007; Gregory and Bryan, 2011; Snow and Powell, 2008). Thus if 1sd was used as a criterion for diagnosing SLCN, then the whole group of YOs in this present study would qualify for SLT intervention. Even if the criterion was 1.5-2sd below test norms, this would still have resulted in the present group qualifying for SLT input, based on their SLCN in listening comprehension, writing, spoken language and pragmatics.

The above is based upon comparing the YOs' group mean scores to the test norms, but there was a large amount of variance within the group on each language test. Even so, the SD scores from the spoken language tests reveal that very few YOs met the normative age scores according to the SALT database and this was only in relation to SI and different word total scores. Very few YOs met the normative test mean, or scored within 1sd of it, on the pragmatics test, reading comprehension, writing and the UP task. A slightly higher frequency of YOs scored close to the normative test mean on word reading, spelling and recalling sentences. This highlights that language and literacy ability in the youth offending population may be more varied than first considered. Most of the research that has found language and literacy limitations using standardised language tests comment on the high percentage of youth offenders showing SLCN, but not all demonstrate this. For example, Bryan (2007) found that 49 of the 58 YOs in custody met the mean on the TROG, although this test was aimed at a much younger age group. Sanger (2001) comments on 20% of the group qualifying for language therapy using normative referencing suggesting that the majority did not. Similarly, 14 of the 73 YOs on ISSPs that Gregory and Bryan (2011) tested did not display any SLCN. However, within a specific population like YOs, the number identified as having a SLCN is still high compared to the typically developing population (Snowling 2000).

One reason for the YOs poor performance on all of the language tests could be because they are being compared to normative scores obtained from typically developing young people who have

#### **7.4 Research question 5**

experienced more education. However, poor school attendance is common within the YO population (Centre for Social Justice 2009; Breakthrough Britain) and so the raw scores obtained from the sample of YOs were also compared to normative test scores expected for an age group 2 years younger (14 years), to match the mean number of education years they had missed. Despite the scores being closer to these test norms, the YOs still displayed problems in the same language areas. Their group mean score was still below the test norms by over 1.5sd for these language areas, suggesting that SLCN that requires SLT intervention. Thus, education attendance may not be a significant influencing contributor to the poor language of YOs.

#### **7.2 Research Question 2 and 3: Does a group of YOs on community court orders demonstrate lower language abilities than a group of non-offenders matched on education attendance, social disadvantage and non-verbal IQ? Are any differences specific to the components of language being assessed?**

A limitation in relying on standardised test norms to establish the prevalence of SLCN in the youth offending population, is the extent to which these norms accurately reflect the demographic of YOs (Bryan 2004). YOs often reside in areas of social disadvantage and may have learning disabilities or mental health concerns not found in the normative samples, which impact on the relationship between offending behaviour and language (Clegg et al 2009; Ministry of Justice, 2013, Transforming Youth Custody). Scores from the YOs were compared to a group of non-offenders residing in areas of social disadvantage and who were matched on years of educational attendance. Because the YOs had low non-verbal IQ which may be associated with their language ability, the comparison group of non-offenders was also matched on non-verbal IQ scores.

##### **7.2.1 Non-offender performance on the quantitative language tests**

The mean test scores for the non-offender group were in line with test norms expected for their age group apart from on components of spoken language. For example, their mean score was almost 2 SDs below the norm on expository discourse and was 1SD below the norm on writing. Other spoken language measures were also vulnerable with mean scores on vocabulary and explaining concepts succinctly being close to 1SD below the test norm. This suggests that both the YOs and the non-offenders found difficult those functional aspects of spoken and written language, which require evaluation, abstract thinking, and third person perspective.

The non-offenders performed within 1SD below the test norms on the other language tests and met the test norm for spelling, SI and Recalling Sentences. They scored above the test mean on Understanding Paragraphs and reading comprehension. This shows the non-offenders had

#### **7.4 Research question 5**

comparatively good listening and reading comprehension skills, which require some level of inference making. This may also reflect their syntactic ability and cognitive processing skills, as measured by the SI and RS task. However, their non-verbal problem solving ability was quite low for their age group and matched the YO's performance.

Research has shown an association between social disadvantage and language development, especially in relation to oral language and vocabulary (Spencer, Clegg and Stackhouse, 2012), and parental vocabulary input and stimulation (Hoff, 2003, Farkas et al, 2004; Hart and Risley, 1995). A similar trend has been found with regards to receptive language and literacy, (Locke et al ,2002; Law et al, 2011) which contradicts the finding that this sample of non-offenders, who were also residing in areas of social disadvantage, performed in accordance with age expectation in some of the language tests within these areas.

The descriptive mean scores show that both groups differ in all of the aspects of language and literacy measured by the quantitative language tests. The non-offender group had higher mean scores in comparison to the YO group in all aspects of language, apart from the criminal vocabulary test, which both groups performed well in. This suggests a possible association between language and offending behaviour independent of education attendance, social disadvantage and non-verbal IQ.

#### **7.2.2 Testing the relationship between offending behaviour and language**

The individual logistical regression analyses confirmed this descriptive trend. There was statistically significant negative correlations between the language test scores and offender status, i.e. as language ability increased, the likelihood of being an offender decreased. Effect sizes were particularly large for some of the literacy and spoken language tests and this was supported by the larger regression coefficients and log ratios. These large effect sizes were evident in word reading, spelling, word count for the writing, expository discourse, MLU, SI and the total number of words present in the speech extract. The smaller effect sizes and regression coefficients for the remaining language tests could be due to smaller sample sizes present in the literacy tasks for the offender group and because of the larger variance associated with some of the tasks, such as the reading comprehension task. Both groups performed poorly on the writing task and well on the target words test, which may also have reduced the power this variable had in separately predicting offender group. Overall this finding suggests that low language, communication and literacy contribute to the cause of offending behaviour.

#### 7.4 Research question 5

The high number of significant regressions may be due to the large number of tests carried out, inflating the type one error rates. Despite applying the Bonferoni correction to each one of these tests, the individual language scores were computed together to form composite language scores based on theoretical grounds and from the Principal Components Analysis (PCA) results. The spoken language composite and the literacy composite were found to predict offender status in the same direction and with moderate effect sizes. When all three composites were added together in one model alongside Recalling Sentences and Understanding Paragraphs, all three language composites significantly predicted offender status negatively but the two individual language tests did not. The criminal vocabulary test significantly predicted offender status in the opposite direction, i.e. increased score was associated with the offender group. This may be due to the experience this group has had with such vocabulary, as the test comprised words frequently used within the YJS. The fact that this language score only significantly predicted offender group when it was included alongside the spoken language and literacy composites, suggests that it strongly correlated with these other language scores. This was supported by Pearson correlation analyses produced for each test.

The backward logistical regression test revealed the spoken language composite to be the strongest predictor of offending behaviour. The specific language tests that explained the composites shared variance with offender status was MLU and word total, supporting the results obtained by the individual regression analysis. The spelling and word reading test contributed the most to the literacy composite's ability to predict offender group, again supporting the findings from the individual regression analysis. The scores from the target words test also significantly added to the variance the literacy's composite shared with offender status. However, similarly to the criminal vocabulary scores it only weakly predicted offender group independently, suggesting that the variance it shared with the other literacy elements increased its predictive power. The Pearson's correlation analyses also support this explanation.

The findings from the quantitative aspect of this research study show an association between language literacy and offending behaviour that can be inferred as low language, literacy and communication causing offending behaviour based upon the regression analysis. This causal relationship even exists when SES, Non-Verbal IQ and education attendance are controlled for. This supports research that has investigated the differences between oral language and literacy performances of youth offenders in comparison to matched control groups (Snow and Powell 2008; Snowling, 2000). This would also support the longitudinal research on children with speech language difficulties showing higher incidences of later behavioural and attentional problems (Lindsay et al

#### 7.4 Research question 5

2007; Bownlie et al 2004, Snowling et al 2006). However, the fact that this was a cross-sectional design means that the causation cannot be assumed, unlike the above studies in which time was controlled for through the incorporation of longitudinal design.

#### **7.3 Research Question 4: What perceptions do young people have of their literacy and communication skills and do these perceptions validate the findings obtained from the quantitative language assessments?**

Although findings from studies using quantitative language assessments have revealed a relationship between language, communication and literacy with offending behaviour, this has been in isolation of social context (Ukrainetz & Blomquist 2002; Rapin, 1996). The advantage of using a qualitative interview method is that it can include relevant social contexts such as secondary education, youth justice and the home environment. Qualitative interviews also allow the emergence of a detailed subjective experience and perception of the YOs, which can extend knowledge on how language, literacy and communication influences the occurrence of offending behaviour (Sanger 2003, Ehren 2000, Whitmore 2000).

The quantitative results in the present study can be validated by triangulating them with the participants' ratings of their own communication and literacy that were provided in the interviews. Triangulation involves comparing findings from alternate methods to increase validity (Flick, 1998). Participants were asked to rate their own literacy and communication abilities using a rating scale of 1-5. Eighty-one percent of the YOs rated themselves as having literacy and communication skills as average or above, as did seventy two percent of the non-offenders. This partly supports the quantitative finding that the non-offenders performed in accordance with age expectation on the literacy tests but is in contrast to their spoken language test results. The YOs response did not reflect the quantitative findings that showed the group was performing poorly across all of the language and literacy measures. This may suggest the YOs have unrealistic perceptions of their language abilities or that they may be unaware of the language, communication and literacy abilities expected for their age. It could also be that YOs are aware of their difficulties in communication and literacy but deny this in order to save embarrassment.

Ninety-five percent of the non-offenders expressed dissatisfaction with their current communication and literacy ability in comparison to thirty-nine percent of the YOs. This lends support to the possibility that the YOs potentially did not have a realistic awareness of their current communication and literacy attainment. The non-offenders were also more motivated to improve their skills, which may be due to factors such as the perceived level of support provided by others and having more

#### 7.4 Research question 5

self-confidence and self-efficacy to help increase motivation. In addition, a higher number of non-offenders than YOs considered good communication and literacy skills as being important for life and employment.

Overall both groups considered their literacy skills to be worse than their communication skills and improving skills on the former was considered a priority. This supports the quantitative finding that all literacy scores were low for the YOs and some were for the non-offenders, yet both groups also performed poorly on the spoken composite, which was a stronger predictor of offending status.

Where improvements were sought, these were in relation to spelling and aggression/frustration, which were areas which the YO demonstrated significant problems in and that contributed the most to offending behaviour. Creative writing was another aspect of literacy both groups wanted to improve, as was the need to develop the skills and confidence to talk to different people, highlighting the importance in targeting support for functional aspects of language.

Having good communication and literacy skills were viewed as important to successful participation in the YJS by around half of the YO group. These responses highlight the importance of having good language, literacy and communication skills in the YJS where reading contracts and appointment letters and speaking and listening to various staff all increase the chances of successfully completing court orders and avoiding further punishment. This finding supports Davis et al (2004) who found that programs used to address offending behaviour required high literacy and communication skills.

One explanation for the difference found in the literacy scores between YOs and non-offenders could be due to the difference in participation of recreational reading and writing. A minority of YOs read books or wrote outside of school-time, whereas nearly all of the non-offenders took part in some level of recreational literacy. YOs and some non-offenders chose not to engage in this past-time due to boredom, but it may be that their poor literacy skills made the task more difficult and was therefore less appealing.

The majority of both groups used technological methods of literacy such as texting and messaging and around half of participants from both groups believed that these methods did not require good literacy skills, which may be why more YOs preferred to use these methods of literacy. The language used to communicate with these messaging tools was also perceived to be different by all participants. This difference was in relation to slang and abbreviated words that did not conform to the traditional methods of literacy and were considered more efficient. Some YOs also preferred typing rather than handwriting because of the additional tools like spellcheck, which took away their responsibility for correct punctuation, spelling and grammar. Schneps et al (2013) found that young

## **7.4 Research question 5**

people with dyslexia preferred reading off electronic devices because they were visually more appealing, highlighting the advantages that technology can bring to adolescents with language difficulties. Research has also found that messaging applications and online usage is frequently used by adolescents (Porath 2011,) and some regard this as a possible explanation of why literacy abilities are beginning to decline (Baron, 2008). This is due to the over reliance in applications of spell check or abbreviating words and not having to spell correctly when messaging peers. In addition, the slang and shortening of words negatively affected the formal school-work and literacy attainment of a small group of both YOs and non-offenders.

### **7.4 Research Question 5: What experiences do young people have of using language in various settings such as school, home and the youth justice system and does this differ depending on whether they are offending or not?**

#### **7.4.1 Explaining differences in confiding in others**

YOs were far less likely than non-offenders to confide in others about personal problems. Examples for why included being embarrassed when talking about a problem, and the need to maintain a positive front, which is not atypical of adolescents generally (Tajfel and Turner, 1979; Jerome, 2002). Gender of parent was also a factor in the frequency of participants confiding in their parents. The their communicative relationship with mothers was perceived as being more relaxed, informal and comfortable, which was why participants were more likely to confide in them than their fathers. However, this finding could be explained by the relatively high number of YOs who had no contact or very little contact with their father. For the non-offender group, most had contact with both parents but still approached their mother more, regarding her as less strict. In addition, some of the girls reported that their mother listened and showed more understanding than their father about such matters as conflict between their religion and teenage culture.

#### **7.4.2 Explaining the frequency of conflict and aggression**

The YOs experienced more episodes of conflict than the non-offenders. This conflict involved authority figures such as teachers, the police, and parents supporting the qualitative findings of Sanger et al (2000). Non-offenders still reported arguing but this was less often, less aggressive and was often contained at home. Non-offenders were also more likely to show acceptance of authority, to be more fearful of authority figures such as parents and teachers, and thus were more likely than the YOs to avoid conflict with them. Reasons YOs gave for arguing were because of mood and power struggles in the search for independence. A small group of non-offenders also reported power and independence as contributing factors but for most of them, the reasons for arguing were more down to not being allowed something or having to tidy their room or do chores. Results from this theme



## **7.4 Research question 5**

support some of the explanations for behaviour common in the adolescent period that may not be due to language specifically. The need for autonomy has been shown to instigate conflict between adolescents and individuals in positions of authority and this may be explained by the storm and stress theory introduced by Hall (1904), as well as by identity theories (e.g. Eriksson, 1968; Marcia, 1966). Research has also found higher prevalence of mood disorder and other psychiatric illness within this developmental stage (Rutter, 1967; Buchanan and Holmbeck, 1998). One explanation for the difference between YOs and non-offenders in their conflict frequency could be the lack of communicative strategies YOs have in their repertoire, as demonstrated by their poor quantitative assessment results on listening comprehension and spoken language.

### **7.4.3 Using language to solve conflict**

Another difference between the YOs and non-offenders was the way in which language played a role in resolving conflict. A large number of YOs reported avoiding the use of communication in resolving conflict, preferring to avoid any discussion after an argument and thereby ignoring the problem. In contrast, a high number of non-offenders preferred and often talked through an issue with whoever they were in conflict with as a way of solving the problem.

### **7.4.4 Poor comprehension fuelling frustration**

Another explanation for the increase in aggression and conflict experienced by YOs is due to their difficulty attending to information when in school. The presence of attention difficulties and ADHD in YOs has been reported in previous studies (e.g. Raine, 1993; Youth Justice Reform, 2004) and has shown to be associated with speech and language difficulties (Snowling, 2006).

Difficulty understanding others was a prominent theme for participants in both groups and also explains the frustration experienced by participants, especially the YOs. Both groups had better understanding when with their family and friends, mainly because these did not use complex vocabulary. The informality of their relationship with friends and family may also explain this difference found by all participants. This finding supports both previous research and findings from this study that highlight the YOs low listening and reading comprehension scores as well as their limited vocabulary (Bryan, 2007; Gregory & Bryan 2011; Sanger, 2003). The non-offenders performed in accordance with age expectation on these tests, suggesting that they may not have found this such a problem. However, the fact that the non-offenders still commented on comprehension difficulties in schools highlights this is an issue that needs addressing and is in keeping with the findings about young people from low SES backgrounds who find teachers' use of complex vocabulary affects their ability to comprehend in school (Spencer et al, 2010).

## **7.4 Research question 5**

YOs commented on difficulties comprehending specific vocabulary used in the YJS, particularly in court, contradicting their good performance on the criminal vocabulary test used in this study. It may be that the words used in this vocabulary measure were not specific to the words used in court but rather represented the words used in other less formal YJS settings. For this reason, the words may have been easier to understand as shown by YOs performance on the receptive element of the test. Another explanation is that the YOs encounter this vocabulary in connected speech within the YJS and within more complex sentence structures.

In response to difficulties attending or comprehending verbal instruction at school, YOs behaved aggressively or avoided work and some YOs commented on teachers becoming frustrated in response to this. Teachers' frustration would then increase the aggression and frustration felt by the YOs, thus escalating the conflict. This sub-theme was only mentioned by one non-offender.

### **7.4.5 Pragmatics**

An alternative reason for why more YOs than non-offenders had experienced negative communicative interactions with authority figures, could be because they fail to alter their style of communication depending on the formality of the situation. Where informal language is used in formal situations, authority figures are likely to perceive this as being disrespectful, which can result in conflict. This interpretation is supported by the low pragmatic scores obtained by the YOs, which measured flexibility in communication within different contexts and also by previous research using quantitative assessments, which has found YOs to possess poor pragmatic functioning (Sanger 2001).

### **7.4.6 Differences in the level of support experienced and how this affects behaviour**

How well participants understood others was based on the level of support they perceived was provided by others, which helped reduce feelings of frustration. Despite participants reporting problems in understanding teachers, nearly all the non-offenders and around half of the YOs were satisfied with the level of support teachers provided. In fact, participants believed they received the most help from teachers compared to others, particularly with regards to their literacy development. Sub-themes that related to this satisfaction include teachers' ability to chunk information and provide visual methods of learning, which YOs preferred to reading books. Some YOs described friends as negatively affecting their communication and literacy development, for example by distracting them in class or conforming to disruptive behaviour and slang speak or swearing. These examples of conformity and peer influence are common behaviours that occur during adolescence and can be associated with a development of social identity (Tanti, 2011). However, none of the non-offenders referred to their friends in this way. There is also evidence that

## **7.5 Research question 6**

young people with behaviour problems will often develop relationships with other deviant peers, increasing the occurrence of offending behaviour (Fergusson et al, 1999; Simons et al, 1991; Quinton et al, 1993).

The theme of dis-respect was also shown to increase the frustration levels of participants, particularly YOs' relationship with authority figures. Those individuals that YOs were more likely to confide in and argue with less were those they felt offered more support with their language skills, particularly their understanding. Part of this dis-respect stemmed from experience of negative pre-judgements held by authority figures such as police and teachers, and their abuse of power. Examples of this reaction would often increase YOs frustration and aggression, often resulting in further conflict. This was also found by Sanger (2003) in interviews with female YOs in custody. In contrast, non-offenders would still show authority figures like their parents and teachers respect, even in situations where they believed they were being treated unfairly.

### **7.4.7 Self-perception and self-confidence affecting behaviour**

Participants in both groups reported how their self-confidence and their desire to maintain a positive self-presentation to their peers affected how they behaved in communicative interactions. This might result in avoiding certain communicative behaviours such as reading aloud in class, or lead to an increase of aggression and frustration in examples where participants (mainly YOs) felt authority figures challenged their self-confidence and self-esteem. As this was perceived as being dis-respectful and unfair by YOs, this often increased their aggression and frustration, which were strategies to increase their esteem levels. This finding validates previous qualitative research on YOs' communicative experience with authority figures (Sanger 2003, 2000).

## **7.5 Research Question 6: Do the results support either the social adaptation model or social deviance model of language and behaviour?**

### **7.5.1 Model of social adaptation**

The qualitative findings from this study show that limitations in language, literacy and communication can instigate offending behaviour. Poor literacy skills may deter participation in further literacy activity outside of school, which in turn impedes literacy development and therefore also further language development. A perception of poor communication skills and low self-confidence can also lead to an avoidance of social interaction and requests for help, which again inhibits further development. Avoidance of school work for example was been found in this study to be the result of poor attention and comprehension abilities which could lead to class disruption and aggressive behaviour. Instances of aggression and conflict might also increase because of the lack of

## 7.5 Research question 6

flexibility in how YOs communicate with authority figures in formal situations where they may not have the relevant communicative repertoires to resolve disagreements. These explanations support a social adaptation of language and behaviour (Redmond and Rice 1998). This model proposes that language limitations affect behaviour by inducing specific strategies as a way of compensating for these limitations. Examples of these include avoiding situations where social interaction is expected or by using aggressive behaviour to communicate, which often stems from a frustration with not being able to communicate effectively verbally. The themes that emerged from the qualitative interviews support these externalised and internalised behaviour compensatory strategies. Similarly, Sanger (2003, 2000, 1999) found these strategies were also used by female YOs in custody. Studies on young people with language impairment also found them to display low ratings of social competence using quantitative assessments (Cohen and Lipsett 1991; Qui & Kaiser, 2004).

### 7.5.2 Model of social deviance

An alternative model of social deviance has been proposed by Redmond and Rice (1998) to explain the association between language and behaviour. This suggests that behaviour is explained by personality traits such as mental health, attention and cognition that can also explain differences in language ability. The YOs in this study performed below age expectation on the non-verbal IQ test suggesting that their cognitive ability may also be limited. It could be that higher order top-down processes are explaining both the language and offending behaviour. Furthermore, the YOs reported problems attending to information which often resulted in disruptive behaviour. This would support other findings that deficits in working memory, social cognition and executive functioning ability can explain the association found between language and behaviour in young people (Bishop, 1997; Marton et al, 2005).

Deficits found in pragmatic skills are associated with limitations in these cognitive processes, as interacting with others requires functioning social cognition and attention (Marton et al 2005). As discussed, YOs in this study also scored below the criterion expected for their age on the pragmatics sub-test. Associations between language difficulties and emotional regulation also support this point. Mouridsen (2009), for example, found children diagnosed with Developmental Language Disorder (DLD) who were later convicted of sexual offences showed limitations in their expressive language ability, as well as their ability to interpret gesture and empathise. The authors concluded that emotional regulation could explain the limitations found in both language and cognitive processing. Similarly, a study by Ripley and Yuill (2005) found that a group of boys excluded from school scored low on the emotional symptoms section of the SDQ and another by Redmond and Rice (2002) found children with language impairments scored low on the withdrawn and internalized

## 7.5 Research question 6

behaviour subscales of the CBCL and TRF, which shared commonalities with emotional regulation. Attention has also been found to explain associations between language and behaviour, for example, Snowling et al (2006) found ADHD and social difficulties to be frequently reported in adolescents with SLI who also had low IQ scores. Similarly, associations have also been found with language impairment, Non-verbal IQ and psychological disorders such as anxiety (Cohen and Lipsett, 1991).

### 7.5.3 Evaluating the two models

It is not possible to confirm that the language difficulties found by the YOs in this study are because of limitations in cognition associated with top-down processes because none of these specific aspects of cognitive ability were measured. The only evidence that partially supports the model of social deviance is in the low non-verbal IQ scores obtained by the YOs and their reports of experiencing attention difficulties. The interview themes revealed that the YOs had low self-confidence, which may also support the deviance model, as YOs often avoided situations that threatened their positive self-impression on others. This interpretation is in accordance with the social deviance model of language and behaviour, as it would be the psychological trait of self-esteem/confidence that is influencing the behaviour as opposed to the language per se. Being insulted by others threatens this positive sense of self, which can result in increased instances of aggression as a means of increasing their self-esteem. Similar findings were reported by Bryan (2004) YOs' self-reports of being teased about their speech problems, which fuelled their aggression. The theme of low self-esteem is also often apparent in the youth offending population (DFES, 2011: Support and Aspiration; Marton, 2005) as well as being typical of the period of adolescence (Jerome 2002). However, this interpretation cannot be proved due to the omission of any measure of such psychological traits. In addition, the causal relationship cannot be inferred using cross sectional studies, as it could still be language that is also contributing to the feeling of low self-esteem. YOs in this study reported not wanting to read aloud in class or work with more able peers for the fear of displaying weakness in their language. Similarly, Sanger (2003) found that female YOs reported feeling 'dumb' because of not being able to understand jokes in social situations. Yet, the YOs in this group seemed to perceive their language and literacy abilities as being average or above, suggesting that they felt confident in their language skills. However, this might still be a defence strategy by which the presentation of language limitation is avoided where possible to save embarrassment.

In summary, the interview themes that emerged from participants do help to support the social adaptation model explanation of language and behaviour. Compared to the non-offenders, YOs reported more instances of aggression and withdrawal behaviour strategies that were associated

## 7.6 Research question 7

with their language, communication and literacy difficulties. In contrast, the non-offender group displayed overall better language and literacy abilities and reported less aggressive and less avoidant responses in their communicative interactions with others.

### **7.6. Research Question 7: Do any of the demographics of young offenders confound the association between language, literacy communication and behaviour and how might these relate to the theories of social dis-advantage, adolescence and attachment discussed?**

The quantitative and qualitative findings propose that language, literacy and communication is associated with offending behaviour and because both groups were matched on years of education, SES and Non-Verbal IQ, a direct relationship could be inferred, independent of these confounds (Rutter and Lord, 1987). The qualitative results from this study suggest that it may be the language, communication and literacy difficulties that are causing the offending behaviour, although this hypothesis cannot be assumed by cross-sectional group comparisons and other mediating variables may influence this relationship. The research discussed in chapters 1-3 highlights school attendance, SES, and Non-verbal IQ as potential mediators that confound the influence language has on offending behaviour, but there may be others that were not controlled for in this study.

#### **7.6.1 Attachment**

Research has shown that the looked after population of children and young people present with poor language abilities (Manso et al, 2009; Oates, 1984; Coster et al, 1989) and this includes YOs (Sanger, 2000). Explanations for this include the lack of language input especially of emotional content from parents of children who suffer abuse or neglect (Coster et al, 1989; Beeghly et al, 1986). Contrary to this, little difference was found in the present study between those youth offenders who were looked after compared to those who were not. The only test the looked after group performed more poorly on was the non-verbal IQ test. Young people with attachment disorders can show abnormalities in aspects other than language such as attention and mental health, which may also explain differences found in their language ability (Howe, 2006; Clegg et al, 2005; Dunn et al, 1991). However, the difference found between this looked-after sub-group and the other YOs was minimal for both the Non-Verbal and other language tests and despite mental health being a prolific factor in YOs, this was not measured for in this study. Future research should consider obtaining information regarding attachment disorder and mental health of YOs in order to reliably measure the association these have with language and behaviour. Particular focus should be given to measuring differences in performance on functional tasks of social cognition and pragmatic language ability between YOs with and without attachment disorder.

## **7.6 Research question 7**

### **7.6.2 Parenting styles**

Parenting can have a significant impact on language development even though this is often confounded by differences in SES (Farkas, 2004; Hart and Risley, 1995) and adolescence (Ary et al, 1999). The interview themes revealed differences in how conflict was resolved between parents of both offenders and non-offenders with more avoidance strategies being used by parents and the YOs. When the non-offenders were describing the communicative interactions with their parents more examples of communicating about the problem were given where by both parties would come to a mutual understanding. However, this was the only difference found between YOs and non-offenders as the majority of both groups perceived their parents as providing a good amount of support for their language development, albeit more frequent in the younger years. The specific parenting strategies or styles were not directly assessed in this study either and so the level of impact this may have on the language difference found between both groups can only be inferred. Knowledge of parenting techniques and parent-child interactions could be assessed quantitatively and qualitatively using questionnaires and interview methods in order to measure potential differences between parents of YOs and non-offenders.

### **7.6.3 Gender**

There was a slight gender imbalance in the recruitment of the YOs and non-offender group, with more males in the YO group. However, this is not dissimilar to the typical gender demographic of YOs who are predominately male (Ministry of Justice: Transforming Youth Custody, 2013). Research has often found that female adolescents perform better at English than their male counterparts (DFES 2013) and the fact that the ratio of males to females was more equal in the non-offender group might suggest that this group as a whole may perform better on the language tests. The quantitative results however show little difference in the language scores between males and females in the non-offender group, and the female YOs scored a lot lower in comparison to the female non-offenders. Contrary to evidence showing females as performing better in English, the non-offender males performed slightly better than the females on spoken language tasks.

Some differences found in the frequency of qualitative themes in both groups may be partly explained by differences in gender. A larger number of female than male non-offenders reported using communication to talk about conflict and the same pattern emerged in the YO group. A smaller number of non-offenders, particularly females, reported problems in attending to information, yet both female and male YOs reported this. Similarly, a slightly higher number of male than female non-offenders reported that their school work was negatively affected by modern

## 7.6 Research question 7

technological methods of literacy and more non-offender males than females also believed that their literacy skills were average or above. This may explain why a large proportion of the YOs also believed their language skills were good, given that the majority were male.

### 7.6.4 Ethnicity

There were more non-offenders from ethnic minority backgrounds compared to the YOs, who were mostly white Caucasian. Crime statistics reveal that a high percentage of youth crime is committed by YOs of mixed ethnicity (Ministry of Justice: Transforming Youth Custody, 2013) and ethnic minority groups are also prevalent in areas of low SES (Tackey, Barnes and Khambhaita, 2011). However, the quantitative results revealed no difference in language scores dependent on ethnic grouping for either YOs or non-offenders and no interaction was present. The ethnic grouping had little effect on the interview themes either, but sub-themes of religion and culture were prominent in the non-offender group that led to parent confrontation. Some non-offenders were dissatisfied with how their parents communicated with them, perceiving them as being unfair in relation to cultural and religious restraints that parents imposed upon them.

### 7.6.5 Non Verbal ability, SES and Education

Despite the study controlling for SES, educational attendance and non-verbal IQ, other factors may have reduced the extent to which these were successfully measured and controlled for.

Both groups were matched on non-verbal ability using the matrices task obtained from the Wechsler (1999) Abbreviated Scale of Intelligence test (WASI). It could be argued that using this test alone does not fully measure non-verbal ability, as other aspects of cognition were not tested. Thus, the conclusion that the YOs may have had general cognitive delay rather than specific language difficulties may not be valid. The reason for choosing only the matrices task from the WASI was due to time constraints and the expectation that the YOs would have short attention spans, justifying the use of a short and less complex measure of non-verbal ability.

Another variable, which could confound the association between language and offending, was SES. There are many definitions and measures of SES that for practical reasons could not all be incorporated into this study. The *National Multiple Indices of Deprivation* (2010) was chosen to measure and define SES because of the wide ranging variables it includes in defining SES in locations across England and Wales. However, previous studies have used other methods like family income and parental education to study the effects of SES on language (e.g. Feinstein, 2003; Whitehurst et al, 1994). Despite the National Indices taking into account income, this is based on the average income for a specific location. It could be argued that some families located in areas that are



## 7.6 Research question 7

considered as being low in SES based on the average income for that area, could be earning higher than this wage. Similarly, some parents located in these areas may be educated to a level higher than the average family and so may not accurately reflect their assigned low SES status. The locations that were compared to the National Indices were also based upon the geographical location of the school that the non-offenders and some of the YOs attended and not all would necessarily reside within these locations. This may also explain the good language scores found in the non-offender group, who were considered to be living in areas of low SES, where language has been found to be less prominent and developed. However, obtaining additional information such as parental income and education is especially challenging in this population where recruitment for participation in research is considered difficult (Gregory and Bryan 2011). Despite this, future research should at least aim to incorporate multiple methods of measuring SES, such as parental income and HOME environment, in order to fully control for its influence on language and behaviour.

Both groups were matched on years of school education attended as opposed to chronological age. This was because YOs often miss large amounts of education due to exclusions and poor attendance (Audit Commission, 2004, Centre for Social Justice: Breakthrough Britain, 2009; Ministry of Justice: Transforming Youth Custody, 2013). Research has also shown that reduced school attainment has more impact on language development than chronological age (Brownlie et al, 2004). This may explain the YOs' lower than average Key Stage tests results (which include English). In addition, there were significant positive correlations between performance on some of the language tests and the percentage of attendance found for both groups combined. The percentage of attendance varied between both groups and it significantly predicted offender status, emphasising the fact that YOs had much lower average yearly school attendance throughout their education experience, compared to the non-offenders. Further, the logistical regression analysis revealed the yearly average percentage of school attendance to predict more variance associated with offender group than the language composite scores, even though neither were statistically significant when included together in one model. This suggests that both language and yearly percentage of education attendance are influential in predicting the emergence of offending behaviour.

The comparison group of non-offenders were matched on the mean number of years of education that was missed by the young offender group (excluding outliers). There are limitations in using the mean to match both groups, especially when a large amount of variance is present within the offender group. However, the outliers were excluded and other central tendency figures were also referred to in order to gain an accurate reflection of the groups typical school attendance. The

## **7.7 Linguistic theories**

finding that yearly percentage of school attendance did not significantly correlate with offender language scores, supported the point that the overall variance in attendance did not affect language outcome. In some cases, YOs' data on school attendance was missing. Where data was missing, this was replaced by the mean percentage of yearly attendance calculated from the data obtained. Thus there was some level of inference and prediction of attendance for the YOs and so the overall mean of years missed may not be a fully accurate reflection of school attendance for this demographic. One reason for the lack of YOs' data was the amount of change in schooling some had had, as well as being off the school record for long periods of time. With this in mind, the predictions used may in fact be an over-estimation of average school attendance. It could be that the YOs attended school far less than their mean percentage suggested for the years that data was deemed missing. If this is true then the comparison group should have been even younger in order to match to a lower educational attendance rate, which may have decreased the difference found in language scores. However, the overall mean of years missed by the YO group is in keeping with other studies that have also included a comparison group matched on years of education attended (e.g. Snow and Powell, 2008), suggesting this to be an accurate representation of the youth offending demographic. The fact that the YOs scored significantly lower in language scores in comparison to a much younger group of non-offenders reinforces the finding that YOs do have language communication and literacy difficulties. One possible way for future research to overcome this limitation would be to compare YOs' language abilities to a cohort of non-offenders at each school year from late primary to college years in order to control for both chronological age and educational attendance. In addition, the majority of the YOs in this study had statements of educational needs, which were not matched with the non-offender group. These special education needs could have affected language development and increased the likelihood of offending behaviour. With this in mind, it would be beneficial for research to investigate the role SEN has in affecting the relationship between language and offending behaviour, by comparing language performance to a group of non-offenders matched on SEN.

### **7.7 Using linguistic theories of deficit and difference to explain the relationship between language and offending behaviour**

#### **7.7.1 Theory of deficit**

The results of this study have thus far been interpreted in accordance with a theory of deficit (e.g. Bernstein, 1960); showing the difference in language development favouring the non-offenders. The theory of deficit is associated with the linguistic differences that exist in the speech and language of those from different social backgrounds. Children from low SES have been found to have lower

## 7.7 Linguistic theories

range of vocabulary in comparison to children from social backgrounds of higher SES (Tough, 1977, Bernstein, 1960). The YOs had limited vocabulary in comparison to the non-offenders, as seen by their performance on the literacy and speech tasks and based on the difficulties they had understanding words used in schools. The non-offenders performed below the age referenced test norm, and so could also be considered as displaying a deficit in their vocabulary and language. According to the linguistic theory of deficit, this is due to differences in social backgrounds and SES. However, both groups were matched on low SES and so according to this theory, large differences between these groups should not be expected. The difference in language ability found between both groups in this study, suggests factors other than SES are contributing to the poor language performance of YOs.

Bernstein (1960) uses the linguistic deficit exhibited by those from low social class to explain their negative attitude and participation in education. This negative attitude towards teachers and education was present in the interview responses from the YO group, but less so for the non-offenders. Limitations in language and vocabulary could be explaining these negative attitudes, with educational institutions favouring more complex language skills associated with higher SES (Bourdieu, 1977, Lynch 1998). It could be that because of this limitation in language, the YOs feel excluded from successful participation in school and may not consider language as an important skill to develop. In addition, authority figures are more likely to respond negatively to YOs who are unable to alter their language style in formal situations, which in turn increases this negative attitude and excludes the YOs from mainstream education (Bernstein, 1960). Themes from the interview support this interpretation of the deficit theory, with more YOs feeling disrespected by authority figures such as teachers, and a high number of YOs admitted to not altering their language in different contexts. A large number of YOs did still value the importance of having good language skills, yet a much lower number than non-offenders felt they needed to improve their language skills. This could be due to a lack of motivation in wanting to improve as the theory of deficit would predict, or to more of the group believing that these skills were good enough as the interview revealed. The fact that the non-offender group had a much more positive experience of interacting in school and with authority figures also highlights the point that perhaps not all young people from low SES display language difficulties. It could be that the language deficits associated with low SES predicted by Bernstein (1960) may be more varied and exist on a continuum, as opposed to a definite categorical deficit/non-deficit outcome or it could be as mentioned above that some participants in the non-offender group reside in social backgrounds associated with a higher level of SES.

## 7.7 Linguistic theories

### 7.7.2 Theory of difference

An alternative linguistic theory that may explain the difference in language abilities between both groups, is the linguistic theory of difference (Labov, 1966). Young people and YOs from low SES could be using a language repertoire that is perceived as inadequate in comparison to that expected in social institutions, such as schools. The language used may still be complex in its properties and formation but is considered as different to the language produced by those residing in higher SES. Research has shown that young people use unique language components in order to construct a social identity that emphasizes the difference between their in-group and alternative out-groups (Moore, 2004; Labov, 1966). This is in accordance with social identity and categorisation theories that describe the developmental stages of adolescence (Tajfel and Turner, 1979; Turner, 1987). YOs may also display a unique set of vocabulary that relates to their social upbringing and environment, labelled as their vernacular culture (Cheshire, 1982). It is difficult to use this linguistic theory to explain the low language abilities found in the YOs, as language used in social interaction was not measured. Instead language was assessed using tests that adhere to the more formal aspects of language. Some aspects of vernacular culture were evident from the interview responses, especially in the focus group interviews. Examples of this include aggressive language and discourse associated with violent conflict that reinforces an identity as a criminal, opposing authoritarian figures who challenge this behaviour and attitude. It could still be acknowledged that the language difficulties present in the YO group (and in some case the non-offenders too), are due to the frequency in which their vernacular culture is used and relied upon within varied situations. This could explain the poor performance on the language tests that do not test this social language, but focus on language expected in formal institutions such as education and employment. More of the YOs reported not altering their language style depending on formality, which could suggest an over-reliance on the use of this alternative language repertoire in order to maintain a sense of identity or security. As a result, YOs are perceived as having a language deficit or problem when compared to test norms that adhere to formal language demands such as expected in school and employment institutions. The coding of SI in accordance with the SALT guidelines also fails to account for differences in vernacular culture or geographical dialect. The fact that both groups had strong Yorkshire accents could also explain why certain words, such as pro-nouns or conjunctions, were not always verbalised in their speech. Such differences in local dialect was considered to an extent in this study by not penalising participants on the SI scores who omitted pro-nouns in clauses that still included an additional subject and verb, and so still kept within the SALT guidelines.

## 7.9 Benefits and limitations

### 7.8 Research Question 8: What are the implications for Speech and language support/services?

#### 7.8.1 SLT intervention for YOs and young people at risk of offending

None of the YOs were receiving any speech and language intervention or had been diagnosed with a speech and language impairment by a therapist. It has been suggested that this is due to the association it has with behaviour, resulting in labelling the young person with an emotional-behavioural problem rather than a language problem (Sanger, 2004). The high percentage of YOs that have not received any speech and language support has been documented in research (Snow and Powell, 2008; Bryan, 2004). The use of standardised language assessments are key in determining whether a young person has a recognised speech and language difficulty that warrants intervention. In order to ensure that all YOs and young people at risk of offending receive language intervention and that none 'slip the net', a cut off of point of -1sd below the normative test mean should be adopted when using standardised language tests, to diagnose a language difficulty or impairment. It is therefore important that YOs or young people with behavioural problems are supported to gain access to speech and language therapy, particularly as families and young people living in areas of social disadvantage often feel excluded from this level of intervention, (Lees, 2009). Speech and language services should therefore provide support and intervention programmes within secondary schools, youth justice and to families of young people living in areas of social disadvantage.

Screening young people who enter the youth justice system for SLCN may help to reduce future re-offending rates, which are in accordance with government aims (Ministry of Justice: Swift and Sure Justice, 2013). The Understanding Paragraphs test is a good example of a reliable and valid standardised language assessment that could be used to screen YOs, if this was required by the Youth Justice Board. This study has highlighted the test's ability to differentiate between YOs and non-offenders, whilst still acknowledging individual variance in performance within the YO group. The test was also administered to the YOs efficiently and easily, within a short timeframe.

An increase in awareness of speech and language needs is also required for staff who work with YOs. This is important when current rehabilitation programmes attended by YOs in youth justice often require good language, communication and literacy skills (Davis, 2004). This was also expressed by the YOs in this study and so these programmes need to accommodate the high percentage of SLCN within this population, in order to promote successful engagement. One example raised by YOs was the difficulty understanding words used in court, which is an area that still needs revising despite the government making some changes to the accessibility of youth courts (Audit Commission, 2004).

## **7.9 Benefits and limitations**

The box initiative developed by the Royal College of Speech and Language Therapists (RTK, 2013) and inspired by the research conducted by Gregory and Bryan (2011), is an example of how the awareness of a speech and language difficulty can be promoted and made accessible for youth justice staff.

The fact that the non-offender group in this study were matched on factors associated with offending behaviour (social disadvantage and years of education attendance) yet performed well on most language measures and performed better than the offender group, suggests that there is potential for YOs to develop their language ability. This evidence strengthens the justification for more speech and language intervention for this demographic.

Gregory and Bryan (2011) incorporated an SLT intervention for YOs in custody after screening them for SLCN. Pre and post intervention measures were obtained and, showed large improvements for almost all of the group on the language assessments. However, the intervention itself was short term (between 3-6 months) and research into longer intervention periods is required in order to assess the long term impact of speech and language therapy on the YO population.

### **7.8.2 SLT input for teachers and young people in secondary school education**

Promotion of speech and language awareness and associations with behaviour problems is also needed within secondary schools. The government acknowledges the importance education has in reducing offending rates, aiming to increase the school leaving age to 18 years in 2015, as well as aiming to keep students who fail English and Numeracy GCSEs enrolled in education post 16 (Ministry of Justice; Transforming Youth Custody, 2013). However, despite providing opportunities to engage in further education, more direct support on language, communication and literacy is required to ensure that these young people engage in education successfully. This is most important for secondary education where there is less SLT input than in primary or nursery schools (Wilson, Nash and Earl, 2010; Ritzman and Sanger, 2007).

YOs commented on some of the complex vocabulary that teachers use and were dissatisfied with the way in which teachers conducted lessons that required good language skills. YOs also expressed dis-satisfaction with the way teachers reacted negatively to their comprehension difficulties. SLTs need to share with teachers supportive strategies that can aid young people in school lessons, promoting effective engagement in school education. This is particularly important when teachers themselves have rated children with communication disorders and emotional behavioural difficulties as requiring the most support from educational staff, as well as outside agencies such as SLTs (Mcleoad and McCinnon, 2010). Despite this, teachers have limited knowledge of this association

## 7.9 Benefits and limitations

(Dockrell & Lindsay, 2001; Ritzman and Sanger, 2007), particularly at the secondary school level. However, programmes such as *Secondary Talk* (Hartshorne, 2011) aim to provide secondary school teachers with relevant tools and strategies that can support students who have SLCN, such as chunking information and avoiding complex vocabulary– strategies that participants in this study found useful.

Wilson, Nash and Earl (2010) describe a method of SLT input that can increase teacher knowledge and awareness of speech language intervention aimed specifically at a robust vocabulary programme. This incorporates an indirect form of therapy involving teachers and SLTs. Teachers' understanding of this method of teaching was measured using concept mapping, which was also used as an aid in evaluating and changing the teaching methods used in class. Concept mapping produces a visual representation of knowledge that includes links to components and explanations, highlighting areas of key understanding. The intervention was aimed at children with SLI and focused on functional words that had relevance across the secondary school curriculum. Concept maps were found to promote a deeper understanding of vocabulary teaching methods for teachers, which increased their confidence in effectively teaching this method in classrooms.

Teaching strategies for improving adolescents writing skills have also been reported, with one example arising from a meta-analysis of studies that have investigated students' writing ability (Graham and Perin, 2007). Effective strategies focused on planning and revising written extracts, summarizing reading material, establishing achievable clear goals, incorporating methods of enquiry, and collaboration between peers was identified as a significant factor, as was using word processing tools. Providing templates of good writing was also found to be an important predictor in improving writing ability in adolescents.

Bunning and Ellis (2010) describe the interactive process that often exist in classrooms between teachers and students. The most frequent method on interaction used in class has been labelled as the recitation script, which involves teachers initiating a question that is answered by a pupil, resulting in student feedback from the teacher. Research suggests that pupil engagement and response increase when teacher feedback is linked to wider, course objectives and outcomes (Radford, Ireson and Mahon, 2006). Similar findings have also been found when peer feedback is encouraged to promote an interactive balanced classroom environment (Wells, 1993). Such communicative strategies may be useful in engaging students with SLCN who may also have attention difficulties or feel less inclined to verbally interact in lessons, as was found in this study's interview themes. However, evidence shows that teachers are not always keen on implementing interaction strategies. In a study by Sage (2005), teachers evaluated a course aimed at supporting

## **7.9 Benefits and limitations**

students with SLCN and behavioural problems that centralised the role communication has in school classrooms. The course focused on the use of planning and evaluating thoughts and ideas, listening, comprehension, writing ability and using narrative to improve verbal participation. Teachers were encouraged to provide an interactive lesson, encouraging pupils to express their ideas and formulate goals collaboratively with teachers, as opposed to instructing children. Sage found that 40% of the 25 school staff disliked the interactive style of teaching, preferring the traditional method that involves teachers talking the majority of time and pupils listening and memorising.

SLT intervention within secondary schools is not straightforward due to a number of potential barriers. For example, collaboration between teachers and SLTs can be difficult as teachers are often faced with time constraints and do not always have the quality contact time with small numbers of secondary school students (Macleod and McKinnon, 2007; Ehren, 2002). Parents of children with learning disabilities and/or SEN also comment on the lack of time and resources available in mainstream schools for their children (Lindsay and Dockrell, 2004). Further, the secondary school curriculum is much more complicated than primary level, making it harder to incorporate relevant SL intervention (Ehren, 2002). SLTs are also less confident in working with adolescents, especially those with behavioural problems, due to lack of knowledge and experience working with this population as opposed to pre-school children (Sanger, 2004; Lindsay and Dockrell, 2001; Macleod and McKinnon, 2007). With these barriers in mind, Ehren (2002) suggests implementing indirect SLT intervention that should be relevant to the students' school curriculum. Three key aspects are highlighted to achieve this: responsive, systematic and intensive. The responsive element of the therapy requires constant student assessment to gauge attainment level and to plan the required therapy goals based on student progress and feedback. The systematic approach enables a link between what has been learned to what is currently being taught, in order to form a mutually agreed plan that is understood by the student. A process of modelling and scaffolding also embodies this stage to aid the students' progress in achieving small achievable goals. It is these goals that form the intensive element of the therapy, which increases student attainment that is generalized to other tasks and situations.

### **7.8.3 Using modern technology for SLT intervention on young people**

The majority of young people in this study used modern technology in the practice of literacy, favouring the accessibility of such applications. Speech, language and literacy intervention should therefore incorporate the use of modern technological applications such as tablets, computers and iPads. These tools are used frequently by adolescents and are often preferred to traditional reading and writing. An example that is currently being implemented in the YJS and across secondary schools in the UK is *Rapid English* (2013, cited in Reading YOS, 2014), which uses Information Computer



## 7.9 Benefits and limitations

Technology (ICT) to support and develop literacy abilities of YOs over a short time frame. This method enhances the reading, writing and speaking and listening abilities of YOs as well as diagnosing problems in these areas (Reading YOS, 2014). Schnepps et al (2013) report benefits in using technological methods of literacy for young people with dyslexia, but more research is needed to investigate the benefits of using these as alternatives to the traditional literacy methods for young people and YOs with literacy difficulties.

### 7.8.4 Supporting parents of YOs or young people with emotional-behavioural problems

Support for parents is vital in supporting the SLCN of YOs and young people with behavioural problems. Avoiding communication between YOs and their parents was a common theme in the interviews, as was the frequency of conflict experienced by the YOs. The benefit of positive parent-child communication is evident in research by Riesch, Anderson and Krueger (2006) who found that open emotive communication between parent and child reduced a child's participation in risk behaviour.

*Escape* is an intervention programme that addresses family conflict and child behaviour for those aged between 8-15 years (YJB, 2014). It focuses around social learning and problem solving with the aim of developing parents' understanding of their child's behaviour and how to realistically change this with use of targets. The use of clear consistent communication is also part of the method in controlling behaviour. Evaluation of *Escape* has produced positive results, with parents reporting positive changes in their child's behaviour and school attendance, as well as reporting increases in their own confidence levels (YJB, 2014). Various parenting support interventions and training are also implemented within the YJS in order to minimise poor family functioning. For example, the ADHD parent empowering and skills training is delivered in weekly groups for over two months to parents of children diagnosed with ADHD. Progress is supervised and outcomes have been positive in helping parents manage their child's behaviour. The YJB *Positive Parenting* programme has also been evaluated and has had a positive effect on both parents and young people, with reference to conflict resolution, child behaviour monitoring, and positive communication between parent and child (Policy Research Bureau, 2002).

Similar programmes are also in place for children with attachment disorders such as the *Attachment Communication Training* (ACT) programme. This programme involves training young people and adults on aspects of communication such as listening, sharing and feedback in order to increase confiding, understanding, empathising, and conflict reduction (YJB, 2014). Support programmes have also been developed for parents of looked-after children, which include Multi-Systematic Therapy (MST). These target families of children with behavioural and offending problems and incorporate

## **7.9 Benefits and limitations**

cognitive behavioural techniques and strategies to resolve conflict and ensure positive functioning (DFES and Skills: Care Matters, 2007). Local support care families have also been used to take children of single parents out on activities and help alleviate some of the stress these single parents face when rearing children (DFES and Skills: Care Matters, 2007).

### **7.8.5 Supporting young people's and YOs' social cognition and pragmatic skills**

Howe and Fearnley (2003) describe some of the behavioural and communicative strategies used with clients with attachment disorder who may be at risk of developing associated mental health and emotional behavioural difficulties. The young people are taught how to understand, express and regulate emotion, as well as labelling feelings in others. Cross, Lake, Tunbridge, and Gill (2001) emphasise the importance language has in providing inner speech, enabling emotional regulation, and increased social cognition. This example involved the planning of small goals to increase a child's vocabulary, and focused on emotional words, narrative and word finding ability. Indirect group therapy was also used to generalize these skills to social settings. Intervention led to a measured improvement in language scores on formal assessments, but benefits were also seen in school and in interactions with the psychotherapist. The child was able to deal with difficulties emotionally, adequately expressing these without withdrawing or avoiding the situation. The coping strategies adopted by this child were also used by most of the YOs in difficult situations of conflict, thus incorporating SLT could help them to increase social cognition and emotional intelligence, alongside their language development.

The benefit and importance of addressing pragmatic ability in YOs was also highlighted by Sanger et al (2006). Social Skills Training (SST) is a method used to address deficiencies in aspects of pragmatic language in young people that is best conducted in natural social situations with peers. A process of entrapment occurs when positive social behaviour is rewarded by peers, acting as a positive reinforcement. Sanger et al describe additional components that are required for successful implementation of SST in YOs. They include providing a safe comfortable environment whereby positive participation is encouraged. Providing clear classroom expectations along with role model behaviour for problem solving is also implemented and students are encouraged to actively generate input and suggestions for how best to alter their own behaviour. Activities for intervention should also be relevant and functional for the adolescents and can also be adapted across subjects within the secondary school curriculum. Listening and turn-taking are examples of pragmatic language intervention that can be incorporated into the teaching of other subjects and intervention that targets narrative, and perspective taking may be most beneficial for YOs in addressing their court orders (Sanger et al 2006). Controlling behaviour through punishment rather than addressing

## **7.9 Benefits and limitations**

the interpersonal skills as a way of reducing socially unacceptable behaviour is often imposed by teachers in schools (Maag 1992). Instead the focus should be on the young persons' intent, so that alternative positive communicative strategies can be provided and encouraged that still enable the young person to achieve what they intended to. An example may be co-operative play to increase social acceptance as opposed to aggressive behaviour (Maag 1992). However, the benefit of using SST in peer group situations is unclear. Some research has shown it to have detrimental effects with YOs who reinforce deviant communicative behaviour, yet research has also found homogenous groups of YOs to show greater improvements in social competence in comparison to mixed groups that involve pro-social peers (Mager et al, 2005). These authors concluded that a minority out-group may have been formed by the YOs in the mixed group, which may have encouraged deviant behaviour in order to assert their social identity.

### **7.8.6 Encouraging a positive youth development to increase self-esteem and confidence in young people and young offenders**

Self-esteem and self-confidence was a theme derived from the interviews that contributed to the aggressive behaviour and conflict displayed by the YOs. This could be related to their language limitations, as previous research has shown the two to be associated (Jerome, 2002 and Marton et al, 2005). Increasing self-esteem in YOs and young people may also reduce the risk of participating in offending behaviour (Larson, 2000). This is in accordance with the government's plan to implement a positive youth development to increase self-esteem, confidence and responsibility in young people, particularly those residing in social disadvantage (DFES: Youth Matters, 2005; DFES: Positive for Youth 2010). Examples of such initiatives include volunteering opportunities for young people, increasing their engagement within the local community as well as encouraging the promotion of positive activities, roles, responsibilities and choices. Recent statistics show that over 30% of young people aged 16-19 years took part in volunteering over the 2011/2012 period (DFES: Positive for youth, 2010). Mentoring is an example of volunteering which allows trained members of the public to help young people with any problems they may encounter during and on release of custody. They can act as a befriender, developing a trusting relationship with the young offender and providing a contact that often young people rarely have in times of need. They may help in any problems young people have during custody release (Centre for Social Justice: Breakthrough Britain, 2009). Giving young people a voice and responsibility is also encouraged through youth councils that are set up within schools. This allows students to volunteer as a school council member, granting them an opportunity to contribute to school decisions regarding the running of the school (DFES: Positive for Youth, 2010). This is a method which can also increase a young person's confidence, communication

## **7.9 Benefits and limitations**

and esteem and according to the British Youth Council Report (2009-2010) 19800 15-17 year olds participated in the local authority youth councils.

Larson (2000) comments on the important presence of intrinsic motivation in such activities that require an equal level of challenge and engagement for the young person involved. The theme of boredom and disengagement was commented on by some young people with reference to schooling, which may be due to either finding tasks too difficult or easy as well as not being stimulating enough. The use of structured volunteering activities can incorporate the above in tasks that require team-work in order to enhance social communication and social cognition. As a result, increased social competence can also lead to an increase sense of identity, which is an important part of adolescence and is associated with positive psycho-social outcomes (Larson, 2000; Wily and Berman, 2012). Evidence from structured activities shows increases in the conditional language use and use of agency, which supports the development of formal abstract cognitive thinking (Larson, 2000).

### **7.8.7 Supporting YO's through holistic intervention strategies**

The government aims to promote effective collaboration between the different services of health, education and social care that address risk factors of youth offending in order to reduce re-offending rates (Ministry of Justice: Transforming Youth, 2013; Audit Commission: Misspent Youth, 1996). The Child and Families Bill (2013) also encourages a multi-agency approach in supporting young people with SEN incorporating social, health, and education factors. A more streamlined approach to SEN assessments is also incorporated, taking into account these different factors whilst avoiding duplication of service assessment (Child and Families Bill, 2013). School principals in the US considered SLTs as key professionals in supporting students with communication and behavioural problems and believed that a collaborative service delivery would be the most effective approach to intervention (Ritzman and Sanger, 2007).

Strong communication between schools and parents is needed to support young people who are failing to engage in education. Research has shown how parents from low SES are less likely to actively participate in their child's education (Ogbu, 1974; Berridge, 2007; Parcel and Dufur, 2001; Lareau, 1987), but this may also be due to schools promoting an ethos that favours families from higher SES (Bourdieu, 1977; Lareau, 1987). Lees et al (2009) also found parents from low SES had difficulties accessing the required SLT for their children and that they were not adequately informed about the therapy provided. Parents reported feeling isolated, which reduced their motivation to access the relevant SLT services. This finding supports research that has shown that SLTs do not

## **7.9 Benefits and limitations**

always consider the expertise and knowledge parents have of their child's development, which could prove useful for successful intervention (Lindsay and Dockrell, 2004). As this study has confirmed language limitations that are present in YOs and young people residing in areas of social disadvantage, it is essential that speech and language support is accessible for such individuals. In addition, because the study has also highlighted the potential for increase in language ability in YOs, then it is also important that the identification of a speech and language need and suitable intervention are provided at the earliest stage possible for young people residing in areas of low SES. This is especially important when considering the long-term effects a speech and language difficulty can have on an individual's psycho-social development (Clegg et al 2005). Speech and language intervention should therefore follow a new public health model and a whole systems approach in order to address a need at the earliest opportunity, maximising the potential for improvement in language and psycho-social development (Law et al 2013). This is especially for those who, due to social circumstance, are at a disadvantage in receiving appropriate healthcare treatment (Law et al 2013).

### **7.9 The benefits and limitations of incorporating mixed method research on YOs' language and behaviour.**

This study highlights the importance of using both quantitative and qualitative research methods in exploring the link between language and behaviour in YOs. Research has explored this association using both quantitative standardised language assessments and alternative methods of language assessment that may not be appropriate for or relevant to the youth offender demographic. This study has incorporated quantitative language assessments that target language relevant for adolescents and YOs. In turn, a more reliable estimate of the number of YOS that possess a SLCN can be measured. By measuring the language of YOS quantitatively, similar studies can compare findings more readily, enabling the emergence of larger scale research such as longitudinal projects. Research has often measured YOs' language without studying the actual attitudes and experiences YOs have of language communication and literacy. This is important in not only validating what has already been found using these quantitative assessments, but also in aiming to find out the possible reasons for how language contributes to offending behaviour. Interviews have been used to identify speech, language and communication needs (Spencer, Clegg and Stackhouse, 2010) and in the present study, these enabled investigation of the values and opinions of young people and YOs, which can be used to inform policy decisions that are then in accordance with the views of this population. Therefore, future research should aim to incorporate both quantitative and qualitative methods in exploring this link with young people. Involving young people in the research process also provides them with an opportunity to voice views that are not always heard by policy makers or

## 7.9 Benefits and limitations

researchers (McLeod, 2007). Achieving this empowers young people, to have an impact on policy, which in turn could increase their self-esteem and confidence (Pugach, 2001; McLeod, 2007).

Despite the advantages of using semi-structured interviews with young people, interviewing young people with SLCN can be challenging. It was apparent in the interviews with the YOs that not all questions were fully understood and further clarification was required. Some questions may not have been answered because of this misinterpretation. Most qualitative text-books and resources consider open ended questions as the best strategy for gaining the best response from people using a semi-structured format (Pugach, 2001; Morris, 2003; McLeod, 2007). This requires re-formulating questions using commonly used words and terms such as 'how much do you agree or to what extent'. However, such wording can be too complicated for participants with language difficulties and more flexibility is needed when interviewing YOs, for example re-wording questions adding a closed format, or incorporating prompts to follow up on a response. Alternative methods that rely less on the young person's expressive language and comprehension skills can also be incorporated, for example as used in this study, rating scales to express satisfaction and also mind-maps to generate the different aspects of communication, which the young person could refer back to when required. Morris (2003) comments on useful strategies for researchers interviewing young people, which include observing non-verbal gesture and facial expression in young people who may have difficulties understanding and expressing themselves in an interview schedule, as well as monitoring the use of tonal language, double negatives and remaining patient.

Deciding which qualitative methodology to apply when analysing interview data may also be dependent on the language abilities of the respondent. For example, by altering the interview schedule from an open ended structure to a closed format may limit the detail and depth of account provided by the respondent. As a result, methodologies such as Phenomenology that attach themselves to more open ended accounts of experience and perception (Smith Flowers and Larkin, 2009) may no longer be feasible. Instead, other methods of analysis that are less inductive as an approach may be favoured, such as descriptive Framework Analysis for example, whereby cases can be matched onto already existing themes (Ritchie and Lewis, 2003) or content analysis, in which the frequency of themes can be counted (Flick 1998). However, the current study has shown the importance of obtaining in-depth accounts and so this should be attempted wherever possible, particularly concerning topics of experience and perception. Incorporating prompts in addition to any closed question responses may help achieve a more inductive qualitative analysis.

One of the main limitations of this study was the small sample size and this was primarily down to the high demand in contact time required for each young person to complete the necessary tasks.

## **7.9 Benefits and limitations**

Typically, YOs attend appointments with their designated case-worker as well as with other staff members from various services, in order to fulfil the court order requirements. This makes it difficult for research of this scale to be completed efficiently with each young person, especially when appointments are not always attended. In addition, some of the group had completed their court orders or had ended up in custody by the time the researcher approached their participation for the interview. Despite this, the total number of YOs recruited can be viewed positively when acknowledging the difficulty recruiting YOs to complete language assessments, especially in literacy whereby their low levels will be realised by others, which could cause embarrassment and affect their positive self-image.

### **7.9.1 Validity and reflection**

Despite qualitative research not necessarily aiming to generalise to a population in the same way quantitative methods do, validity is still regarded as important for mixed methods research. The aim of being able to honestly reflect participants' experience and perception is important and the researcher's interpretation of this must be accurately grounded within the data it has emerged from (King and Horrocks 2010, Flick, 1998) This can be achieved by including quotes from the interview transcripts to support any points made. Triangulation is another method that encompasses different accounts of the experience under investigation, whether it be targeting alternative samples relevant to the research question or incorporating different research methods to validate previous accounts (King and Horrocks 2010, Flick, 1998). The inclusion of quantitative language assessments in this project allowed for the validation of the qualitative findings. However, it was difficult to include other peoples experiences and accounts of the young people's language ability due to time constraints and the research project was primarily concerned with the young people's perspectives. The fact that the researcher spent some time within the youth justice service attending group sessions and meeting the case-workers of the young people enabled some form of alternative accounts to emerge and the overall impression was that case workers felt most of the young people struggled with their language ability. In terms of validating the accounts young people gave of their parents, teachers and the police, this becomes more difficult as these people were not approached and asked the same questions the young people were asked. It would be beneficial for future research to investigate and acknowledge the perspectives these people have of how young people communicate in these settings. It could be argued that adolescents and YOs are most likely to hold negative perceptions of teachers and police because they would often challenge them and prevent them from talking and behaving in an anti-social way, for example. However, McLeod (2007) acknowledges the issue of agenda in relation to the aims of the research and as mentioned, the

## 7.9 Benefits and limitations

researcher's agenda was to gain a true reflection of young people's views regarding how they experienced communication with such authority figures and this agenda was met successfully.

In any form of mixed method research that involves the participant as a key contributor to both research outcomes and research process, a form of self-reflection is required. This allows the evaluation of how a researcher and their interaction with the participant could have influenced the whole research process and research findings (King and Horrocks, 2010). The title of being a University researcher and how the YOs perceived this may have had some influence on the findings. For YOs, this highlighted an apparent difference, not just in education but also in social status. Some of this may be due to regarding higher education as something very different from the social identity they experience. Therefore, being labelled as a University researcher has associated attributes and perceptions that could emphasise the social difference in class that exist between these two groups. In addition, as the researcher for this project was also a University teacher, this highlighted additional stigma from the young people who sometimes held negative perceptions of teachers based upon their school experience. A dilemma faced by the researcher in this instance was the extent to which he should be open about his role and title, assuming that these prejudices could influence the research process. It was decided that the researcher would take a stance of open honesty when asked about his role. However, the fact that the researcher was still a student may have reduced the difference in status and social class, especially being was a young male that some of the group may have been able to relate to. Other researchers also comment on the benefits of honesty in developing a trusting respectful relationship with young people (McLeod, 2007).

The researcher also gained trust and respect from the young people by participating in activities with the YOs. This included attending group sessions that covered topics relevant to their crime and court order, as well as participating in recreational activities. This allowed the researcher to introduce himself and become part of the regular session, allowing a sense of familiarity, which help achieve a level of trust. The fact that the researcher was not regarded as a member of the staff, may have reduced his status in this setting, promoting the likelihood of respectful rapport to emerge. The specific order in which tasks were conducted also encouraged the development of a relationship between the researcher and young person. This was achieved by placing the interactive tasks such as the expository discourse and understanding paragraphs task before the tasks perceived as more sensitive and difficult; (interview and writing assessment).

The level to which the researcher holds assumptions and pre-judgements is also important to consider, especially as knowledge of YO language and behaviour is and was helpful in modifying the research process to maximise engagement and participation. This point questions the extent to



## **7.9 Benefits and limitations**

which some qualitative methods regard bracketing out previous assumptions as essential in producing valid qualitative analysis that honestly reflect the views of the participant. Examples include variants of Phenomenology and inductive grounded theory, as opposed to the more deductive methods of qualitative inquiry (Smith, Larkin and Flowers, 2009).

# Conclusion

---

This study highlights the language, communication and literacy needs that are present within the youth offending population, and identifies the implications for YOs' engagement and participation in the YJS and secondary education. It also shows that the language, communication and literacy cause offending behaviour and that this relationship is independent of other confounds such as social disadvantage, educational attendance and non-verbal IQ. However, it acknowledges the limitations of the methods used to control for these confounds and acknowledges the role other confounds have in contributing to this association (parenting and mental health).

This research project contributes to the study of YOs by including language assessments that address functional aspects of language that should be considered more relevant for the YO population. The lack of available standardised language assessments that target such functional language aimed at an adolescent age has been acknowledged (Bryan, 2004). The development of language tests that could be used for diagnosing a SLCN would be beneficial for SLTs working with YOs or young people and so this should be considered for future research. However, creating innovative tests or measures that achieve this for functional aspects of language such as pragmatics is also important. Incorporating qualitative methods in research and practice allows a holistic description of a young person's overall language, communication and literacy abilities. Interviews can highlight areas that a young person is particularly concerned about, and reveal other aspects of language, communication, and literacy that quantitative language assessments fail to identify.

As the association between language and behaviour is becoming clearer, more focus should be on measuring the long-term impact of language intervention for YOs and collecting evidence about whether language and literacy support can reduce re-offending rates. Research would need to recruit and follow up a large cohort of YOs or young people at risk of offending, monitoring and assessing language development using quantitative and qualitative methods. The effect language intervention can have on YOs' participation of youth justice programs should also be assessed in order to highlight how much these programs rely on adequate language skills. Despite this, the relationship between language and behaviour is complex and involves a number of different mediators and confounds. Re-offending rates will only decrease and potential offending behaviour be prevented if all these risk factors are identified and dealt with by the relevant services that adopt a whole systems approach to intervention. It is important that all these services have the required knowledge and awareness of a language difficulty and they must collaborate in order to maximise support for young people at risk of developing a language difficulty, such as YOs (Law et al, 2013).

## **Final conclusion**

More research is needed to identify how SLTs, literacy tutors and support workers can collaborate with these services; the extent to which they currently do and how language, communication and literacy support can impact on the behaviours associated with these other risk factors.

Services should also take up a preventative approach to speech and language intervention as opposed to delaying treatment or screening until an obvious diagnosis is obtained, by which point the result could mean further long term difficulties (Law et al, 2013; Clegg et al, 2005). By adhering to these guidelines, speech and language therapy will incorporate a new public systems approach that aims to target young people at risk of developing a language difficulty, whom may not be able to access the required support (Law et al, 2013). Examples include young people who reside in social-economic disadvantage.

# Appendices

---

## Appendix 1: Interview Schedule Questions.

P = Prompts

### Section 1

1. What do you think the word communication means?  
P: What else is involved? - how people speak, being able to express what you want to clearly so others understand and to listen to what other people say and understanding. Also non-verbal communication.  
So based on what you've just said what do you think makes good or bad communication?  
P- What are the reasons for this? – why do you think this?
2. If communication is about speaking well, understanding, listening and non-verbal communication, would you say you had good or bad communication skills?  
Scale: (1 -5 ; 1 being very poor and 5 being excellent).  
P: What reasons for this?  
What about your literacy skills – reading and writing? (Rating 1-5).  
Would you like to have better skills?
3. How often do you read or write? –why is this if not  
What do you read or when do you read (texting)? Do you do any reading on-line or when playing video games?  
Do you think writing is different from texting and emailing in the language you use?  
Do you think you need to have good reading and writing skills to use the above?  
Do you think emailing/texting etc. has affected your reading and writing skills?
4. How important do you think it is to have good communication?  
P: What about for e.g. jobs/education/social life and relationships  
How important is it to have good reading and writing skills?  
P: Why – what reasons for this?
5. How much do you think your teachers have helped in developing your communication /reading and writing skills?  
(Rating: 1-5)  
Do you think they have made your communication/reading and writing skills worse in any way?

## Appendices

How much do you think they should help you develop your communication/reading and writing skills? (Rating: 1-5)

### Section 2

1. How much do you understand what your teachers tell you? (Rating 1-5)  
P: Why have you rated them like this – what is it they do that makes it this score?  
How does this affect your learning at school?  
How much do you understand other people – friends and family? P: Why do you think this is different?
2. How satisfied are you with the way teachers talk to you? – (Rating scale 1-5)  
P: What would you change and why?
3. How do you talk to your teachers and how different is this from the way you talk to your parents/carers? – P: What are the reasons for this?
4. How do you talk to your friends and how does this differ to teachers and family/carers?  
Does the way you talk to your friends change depending on which friends you speak to?
5. If you had bad communication skills (speaking, listening and understanding) how much would this affect your experience in court and why?  
  
What about with the police?  
  
What about in the Youth offending service – like probation/case workers or other staff in YJS?
6. Do you think having poor reading and writing skills would affect your situation in court and with the police/YJS?  
P: Why? – Do you have to do much reading and writing in court/police/YJS?
7. How much do you understand what police /judges and people in the YJS say when they talk to you? (Rating 1-5 – reasons for this asked).
8. How satisfied are you with the way these speak to you? (Rating 1-5)  
P: Why and how could it be changed?
9. If you had something personal you wanted to talk about, would you talk to anyone about it?  
P: NO- why not? YES- who would you talk to and why?

## Appendices

### Section 3

1. How do you talk to your parents/carers and how do they talk to you?

P: Reasons for this.

Is this different for either your mum or dad (male/female carers)

P: In what way?

How much do you like the way your parents/carers talk to you? – (Rating 1-5)

P: Why and what would you prefer?

How much do you think your parents/carers like the way you speak to them? (Rating 1-5)

P: What do you think they like about the way you speak to them?

P: What is it you think that they don't like about the way you speak to them?

2. If you have an argument with your parent/carer how might this be sorted out?

P: Who sorts this out – you or your parents?

Do you think this is a good way of trying to solve them or could it be better/worse? - reasons

How often do you argue with your parents/family (Rating – never/hardly ever/once month/once week/once daily/more than once a day).

What are these arguments mainly about?

Who starts the argument and why?

3. Do you have conflict or argue with anyone else?

P: friends/teachers/police/neighbours YJS staff...

P: If so - Why do you argue with them? Do you handle this argument any differently from parent carer conflict? – reasons for this.

P: If not – Why do you think you only argue with your parents/carers? (or whoever you argue with).

## Appendices

### Appendix 2

#### **Criminal Youth Justice Vocabulary questionnaire: An Assessment of Understanding of Terminology Used in the Criminal Youth Justice System.**

##### **Section 1 – Vocabulary.**

10 of the following words will be read out by the researcher (randomly and one at a time) and then the young person will be asked if they can verbally define the word. They will be scored in response to this – 2 for full correct answer, 1 for partially correct and 0 for incorrect. A partially correct answer will involve a definition limited to the actual word itself but through an example – **Responsible** – “it’s like being responsible for something or someone” (1 point).

A separate police statement that is used during an arrest will also be read out to the young person and available for them to read in which they will be asked to explain what this statement means. Scoring follows the above procedure.

##### **Second part: Recognition.**

A separate recognition task involving 10 different word definitions (from the below list after the previous 10 have been removed) will also be given. The young person will be given a definition at random from one of the below words and then will be asked to choose the correct word that matches the word from a choice of 4 possible. Participants will be scored 1 for the correct answer and 0 for incorrect answers.

Participants may be helped with a word that they do not understand that is used in the definition.

Attend: To deal with something or to go to.

Breach: The breaking of a law or failure to obey an agreement.

Comply: To do as someone would expect.

Victim: A person injured or killed as a result of an event.

Conviction: The act or process of finding someone guilty.

Custody: Arrest or imprisonment.

Guilty: Responsible or at fault for a wrong doing or an offence committed.

Supervision: To have someone watch over a task.

Responsible: To be accountable for your own actions and be in control of them.

Offence: An illegal act.

Police statement: A recorded account of factual events that have taken place.

Sentence: A punishment given to someone who is found guilty in court.

## Appendices

Judge: A person appointed to decide a disagreement in a court of justice.

Unacceptable: Unsatisfactory or not good enough and not allowed to continue.

Appointment: An arrangement to meet at a specific time.

Reparation: The act of making up for wrong-doing like compensation or a payment for causing harm/damage.

Order (court): A command from authority or an instruction telling you what you can or cannot do.

Programme: A list of series of events or plan of future events.

Prison: A place someone is kept in captivity, whilst they await trial for punishment.

Consequences: The result or effect of an action.

Solicitor: A member of the legal profession whose job it is to help advise clients.

Prosecution: The solicitors who conduct a case against someone to try and prove that their guilty.

Arrest: To seize someone and take them into custody to talk to them about an offence they may have committed.

Requirement: When something is needed.

Timetable: A list of times at which events are shown to take place.

Youth Rehabilitation order: A community sentence given by court, which is based on programmes to help the offender address certain issues.

Community: All the people living in a specific local place.

Bail: securing the temporary release of a prisoner before their trial (court) or temporary release of a suspect from the police (police bail).

Reprimand: an official warning/caution for under 18 year olds as a result of a first minor offence, which can involve planned ways of addressing this offence.

Plea or to plead in court – A way in which the defendant can say if they are guilty or not to a charge which can result in a different sentence.

Remorse – Deep regret or sorrow for something wrong that has been done.

Defendant: A person who is accused of an offence in a court of law.

Remand: To send someone away from court to wait until their trial begins. The accused can be sent home or may be kept imprisoned until the trial begins.

Verdict – A decision made after judging facts given in a court trial.

Inappropriate – Unsuitable for something or not right for something/someone.



## Appendices

Curfew – A regulation or rule stopping someone to be somewhere at a certain time.

Caseworker – The member of staff at the YOS responsible for you and your order or programme.

### **Section 2: Statements**

What do you think this means?

“You do not have to say anything, but it may harm your defence if you do not mention when questioned something which you later rely on in court. Anything you do say may be given in evidence”.

You can remain silent but if you do it could mean it makes your case worse in court, if it turns out that it was something that could have helped you. But if you do choose to answer questions then it will be used as evidence against you in court.

## Appendices

### Appendix 3: Ethics Confirmation Form



Department of Human Communication Sciences  
31 Claremont Crescent  
Sheffield S10 2TA UK

Head of Department  
Professor Joy Stackhouse, PhD., F.R.C.S.L.T., C.Psychol., A.F.B.Ps.S

Telephone: +44 (0) 114 222 2418/ 2402/ 2405  
International: +44 (0) 114 222 2418  
Fax: +44 (0) 114 273 0547  
Email: [hcs-support@sheffield.ac.uk](mailto:hcs-support@sheffield.ac.uk)  
<http://www.shef.ac.uk/hcs>

7<sup>th</sup> November 2011

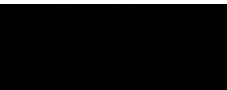
Dear Tom

Title: Language, literacy and communication skills in young offenders and non-offenders

Thank you for your submission to the HCS Research Ethics Committee. The committee has reviewed your submission and supporting documents and grants you approval to commence the research.

We hope your project proceeds smoothly

Yours sincerely



Prof R Varley  
Chair of HCS Ethics Committee

## Appendices

### Appendix 4: Table to show how many YO's met the 16 year old normative mean score of the language assessments.

Language Test	Test Mean (16yrs)	Offender sd (mean sd for group in bold).
Understanding Paragraphs	11.8	<b>-2sd</b> Met mean – N=6 -1sd – N=3 -1.5sd – N=6 -2sd – N=12 -2.5sd - N=9
Recalling Sentences	82.5	<b>-1sd</b> Met mean – N=8 -1sd – N=15 -1.5sd – N=6 -2sd – N=7 -2.5sd – N=5
Non Verbal IQ	27	<b>-1.5sd</b> Met mean – N=3 -1sd – N=15 -1.5sd – N=6 -2sd – N=7 -2.5sd - N=12
Word Reading	120	<b>-1.26sd</b> Met mean – N=12 -1sd – N=16 -1.5sd – N=8 -2sd – N=7 -2.5sd – N=7
Reading Comprehension	167	<b>-1.4sd</b> Met mean – N=3 -1sd – N=7 -1.5sd – N=4 -2sd – N=7 -2.5sd – N=12
Spelling	41	<b>-1.3sd</b>

## Appendices

		<p>Met mean – N=8</p> <p>-1sd – N=16</p> <p>-1.5sd – N=7</p> <p>-2sd – N=6</p> <p>-2.5sd – N=11</p>
Writing	30	<p><b>-2.3sd</b></p> <p>Met mean – N=2</p> <p>-1sd – N=7</p> <p>-1.5sd – N=2</p> <p>-2sd – N=7</p> <p>-2.5sd – N=7</p>
Expository Discourse	34.5	<p><b>-3.7sd</b></p> <p>Met mean – N=0</p> <p>-1sd – N=1</p> <p>-1.5sd – N=1</p> <p>-2sd – N=2</p> <p>-2.5sd – N=38</p>
Subordination Index (SI)	1.68	<p><b>-1.7sd</b></p> <p>Met mean – N=5</p> <p>-1sd – N=12</p> <p>-1.5sd – N=10</p> <p>-2sd – N=5</p> <p>-2.5sd – N=17</p>
MLU	12.23	<p><b>-2.4sd</b></p> <p>Met mean – N=1</p> <p>-1sd – N=2</p> <p>1.5sd – N=5</p> <p>-2sd – N=7</p> <p>-2.5sd – N=27</p>
Total number of words	662	<p><b>-1.54sd</b></p> <p>Met mean – N=0</p> <p>-1sd – N=2</p> <p>-1.5sd – N=14</p> <p>2sd – N=27</p> <p>2.5sd – N=0</p>

## Appendices

Number of different words	190	<p><b>-1.64sd</b></p> <p>Met mean – N=3</p> <p>-1sd – N=4</p> <p>-1.5sd – N=2</p> <p>-2sd – N=12</p> <p>-2.5sd – N=20</p>
Pragmatics*	184.5	<p><b>-2.07sd</b></p> <p>Met criterion – N=0</p> <p>-1sd – N=6</p> <p>-1.5sd – N=6</p> <p>-2sd – N=9</p> <p>-2.5sd – N=22</p>

## Appendices

**Appendix 5: Table to show how many YOs and non-offenders met the 14 year old normative mean score of the language assessments.**

Language Test	Test Mean (14yrs)	Offender sd	Non Offender sd
Understanding **Paragraphs	11.7sd	<b>-1.87sd</b> Met mean – N=6 -1sd – N=4 -1.5sd – N=3 -2sd – N=9 -2.5sd –N=23	<b>0.28sd</b> Met Mean – N=13 -1sd –N=6 -1.5sd – N=2 -2sd – N=1 -2.5sd –N=3
Recalling Sentences	79	<b>-0.78sd</b> Met mean – N=11 -1sd – N=12 -1.5sd –N=5 - 2sd –N=7 -2.5sd – N=3	<b>-0.13sd</b> Met Mean – N=13 -1sd –N=6 -1.5sd – N=2 -2sd – N=1 -2.5sd – N=2
Non Verbal IQ	26	<b>-1.2sd</b> Met Mean – N=8 -1sd –N=17 -1.5sd – N=3 -2sd – N=7 -2.5sd –N=8	<b>-0.8sd</b> Met Mean – N=5 -1sd –N=13 -1.5sd – N=3 -2sd – N=3 -2.5sd – N=1
Word Reading	116	<b>-1.2sd</b> Met Mean – N=17 -1sd –N=20 -1.5sd – N=5 -2sd – N=2 -2.5sd –N=5	<b>-0.2sd</b> Met Mean – N=16 -1sd –N=4 -1.5sd – N=2 -2sd – N=0 -2.5sd –N=4
Reading Comprehension	153-158	<b>-1sd</b> Met Mean – N=6 -1sd –N=7 -1.5sd – N=6 -2sd – N=4 -2.5sd –N=11	<b>+0.07</b> Met Mean – N=12 -1sd –N=8 -1.5sd – N=5 -2sd – N=0 -2.5sd – N=2

## Appendices

Spelling	39-40	<b>-1sd</b> Met Mean – N=13 -1sd – N=17 -1.5sd – N=6 -2sd – N=3 -2.5sd –N=12	<b>0sd</b> Met Mean – N=15 -1sd – N=5 -1.5sd – N=1 -2sd – N=2 -2.5sd –N=2
Writing	28	<b>-2.1sd</b> Met Mean – N=1 -1sd –N=1 -1.5sd – N=6 -2sd – N=11 -2.5sd – N=18	<b>-1sd</b> Met Mean – N=3 -1sd –N=9 -1.5sd – N=5 -2sd – N=5 -2.5sd – N=3
Expository Discourse***	33.9	<b>-3.42sd</b> Met Mean – N=0 -1sd – N=1 -1.5sd – N=1 -2sd – N=2 -2.5sd – N=38	<b>-1.9sd</b> Met Mean – N=0 -1sd – N=5 -1.5sd – N=4 -2sd – N=7 -2.5sd – N=9
Subordination Index (SI)***	1.65	<b>-1.56sd</b> Met Mean – N=4 -1sd –N=14 -1.5sd – N=5 -2sd – N=4 -2.5sd – N=15	<b>-0.1sd</b> Met Mean – N=9 -1sd –N=13 -1.5sd – N=2 -2sd – N=1 -2.5sd –N=0
MLU***	12.12	<b>-2.4sd</b> Met Mean – N=2 -1sd –N=5 -1.5sd – N=4 -2sd – N=7 -2.5sd –N=23	<b>-0.95sd</b> Met Mean – N=3 -1sd –N=9 -1.5sd – N=9 -2sd – N=3 -2.5sd –N=1
Total number of words	708	<b>-1.3sd</b> Met Mean – N=0 -1sd –N=5 -1.5sd – N=26 -2sd – N=11	<b>-0.7sd</b> Met Mean – N=2 -1sd –N=15 -1.5sd – N=8 -2sd – N=0

## Appendices

		-2.5sd –N=0	-2.5sd –N=0
Number of different words	197	<b>-1.48sd</b> Met Mean – N=3 -1sd –N=4 -1.5sd – N=8 -2sd – N=15 -2.5sd –N=11	<b>-0.46sd</b> Met Mean – N=6 -1sd –N=10 -1.5sd – N=3 -2sd – N=6 -2.5sd –N=0



# References

---

Abercrombie, N., & A. (1988). *Contemporary British Society*. Policy Press.

Abraham, J.E., & Lindsay, G.A. (1990) *The Junior Rating Scale*. NFER Nelson:Windsor.

Achenbach, T. (1991). *Manual for the Youth Self-Report and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M., & Edelbrock, C. S. (1983). *Manual for the child behavior checklist and revised behavior profile*. Burlington: University of Vermont Department of Psychiatry.

Achenbach, T. M., & Edelbrock, C. (1986). *Manual for the teacher's report form and teacher version of the child behavior profile*. Burlington: University of Vermont, Department of Psychiatry.

Adalbjarnardottir, S., & Hafsteinsson, L. G. (2001). Adolescents' Perceived Parenting Styles and Their Substance Use: Concurrent and Longitudinal Analyses. *Journal of Research on Adolescence*, 11(4), 401-423.

Adams, M. (1990) *Beginning to Read*. MIT Press: Cambridge, MA.

Adams, C., Crooke, D., Crutchley, A., Hesketh, A., Reeves, D. (2001) *Assessment of Comprehension and Expression (6 - 11)*. NFER-Nelson: London.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of Attachment: A Psychological Study of the Strange Situation*. Hillsdale, NJ: Erlbaum.

Alison Bryant, J., Sanders-Jackson, A., & Smallwood, A. M. K. (2006). IMing, Text Messaging, and Adolescent Social Networks. *Journal of Computer-Mediated Communication*, 11(2), 577-592.

Allen, R., & Wasserman, G. A. (1985). Origins of language delay in abused infants. *Child Abuse & Neglect*, 9(3), 335-340.

## References

- Allen, R. E., & Oliver, J. M. (1982). The effects of child maltreatment on language development. *Child Abuse & Neglect*, 6(3), 299-305.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4<sup>th</sup> ed). Washington, DC: Author.
- Aram, D. M., Ekelman, B. L., & Nation, J. E. (1984). Preschoolers with language disorders: 10 Years later. *Journal of Speech and Hearing Research*, 27(2), 232-244.
- Aram, D. M., Morris, R., Hall, N. E. (1993). Clinical and research congruence in identifying children with specific language impairment. *Journal of Speech and Hearing Research* 36(3), 580.
- Armsden, G., Pecora, P.J., Payne, V.H., Szatkiewicz, J.P. . (2000). Children placed in long-term foster care: An intake profile using the Child Behavior Checklist/4-18. *Journal of Emotional & Behavioral Disorders*, 8(1), 49.
- Armstrong, D., Hine, J., Hacking, S., Armaos, R., Jones, R., Klessinger, N., France, A. (2005). *Children, risk and crime: the On Track Youth Lifestyles Survey* (278) London : The Home Office.
- Arnett, J. J. (1999). Adolescent Storm and Stress, Reconsidered. *American Psychologist*, 54(5), 317-326.
- Ary, D.V., Duncan, T.E., Biglan, A., Metzler, C.W., Noell, J.W, Smolkowski, K. (1999). Development of adolescent problem behaviour. *Journal of Abnormal Child Psychology*, 27(2), 141-150.
- The Audit Commission (1996). *Misspent Youth: Young People and Crime*. The Audit Commission. Retrieved from <http://archive.audit-commission.gov.uk/auditcommission/subwebs/publications/studies/studyPDF/1172.pdf>.
- The Audit Commission (2004). *Youth Justice 2004: A Review of the Reformed Youth Justice System*. The Audit Commission. Retrieved from [http://archive.audit-commission.gov.uk/auditcommission/sitecollectiondocuments/AuditCommissionReports/NationalStudies/Youth%20Justice\\_report\\_web.pdf](http://archive.audit-commission.gov.uk/auditcommission/sitecollectiondocuments/AuditCommissionReports/NationalStudies/Youth%20Justice_report_web.pdf).

## References

- Augoustinos, M. (1987). Developmental effects of child abuse: Recent findings. *Child Abuse & Neglect*, 11(1), 15-27.
- Bandura, A. (1986). *Social foundations of social thought and action*. Englewood Cliffs, NJ: Prentice Hall.
- Baron, N. (2008). *Always on: Language in an online and mobile world*. (Oxford: Oxford University Press).
- Bebbington, A. & Miles, J. (1989) The background of children who enter local authority care. *British Journal of Social Work*, 19,349–368.
- Beeghly, M., Bretehrton, I., & Mervis, C.B (1986). Mothers' internal state language to toddlers. *British Journal of Developmental Psychology*, 4(3) 247-260.
- Beitchman, J. H., Douglas, L., Wilson, B., Johnson, C., Young, A., Atkinson, L., . . . Taback, N. (1999). Adolescent substance use disorders: Findings from a 14-year follow-up of speech/language/impaired and control children. *Journal of Clinical Child Psychology*, 28(3), 312-321.
- Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: and evolutionary theory of socialization. *Child development*, 62(4), 647-670.
- Bercow, J., (2008). *The Bercow Report: A Review of Services for Children and Young People (0–19) with Speech, Language and Communication Needs* ( Nottingham : DCSF) [available at: <http://www.dcsf.gov.uk/bercowreview>].
- Berman, R. A., & Verhoeven, L. (2002). Cross linguistic perspectives on the development of text production abilities: Speech and writing. *Written Language and Literacy*, 5, 1-43.
- Bernstein, B. (1960). *Class, Codes and Control Volume 1: Theoretical Studies Towards and Sociology of Language* (reprint of 1971 volume). London: Routledge, 95–118.
- Berridge, D. (2007). Theory and explanation in child welfare: education and looked-after children. *Child & Family Social Work*, 12(1).

## References

- Besharov, D. J. (1981). Toward better research on child abuse and neglect: Making definitional issues an explicit methodological concern. *Child Abuse & Neglect*, 5(4), 383-390.
- Beyers, W., Goossens, L. (2008). Dynamics of perceived parenting and identity formation in late adolescence. *Journal of Adolescence*, 31, 165–184.
- Bishop, D. V. M., & Adams, C. (1990). A prospective study of the relationship between specific language impairment, phonological disorders and reading retardation. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 31(7), 1027-1050.
- Bishop, D., (1997). *Uncommon Understanding: Development and Disorders of Language Comprehension*. Hove: Psychology Press.
- Bishop, D. V. M. (1998). Development of the Children's Communication Checklist (CCC): A method for assessing qualitative aspects of communicative impairment in children. *Journal of Child Psychology and Psychiatry* 39(6), 879-891.
- Bishop D. V. M. (2003). *Test for Reception of Grammar*. The Psychological Corporation. Version 2.
- Bishop, D. V. M., (2004). *Expression, Reception and Recall of Narrative Instrument*. ERNNI. London : The Psychological Corporation, Harcourt Assessment.
- Björkquist, L.M., & Järpsten, B. (1983) *DLSM. Diagnostiska Läsa- och skrivmaterial för mellanstadiet*.Handledning del 1. Administrering och utvärdering. [Diagnostic reading and writing test for ten- to twelve-year-olds.] Psykologiförbundet: Stockholm.
- Blustein, D.L., Walbridge, M.M., Friedlander, M.L., Palladino, D.E. Contributions of psychological separation and parental attachment to the career development process. *Journal of Counselling Psychology*, 38, 39–50.
- Bourdieu, P, & Passeron, J.C. (1977). *Reproduction in Education, Society and Culture*. Translated by Richard Nice. Beverly Hills: Sage.
- Botting, N. (2005). Non-verbal cognitive development and language impairment. *Journal of Child Psychology and Psychiatry*, 46(3), 317-326.

## References

- Bowlby, J. (1969). *Attachment. Attachment and Loss: Vol. 1. Loss*. New York: Basic Books.
- Bracken, B. A. (2002). *Bracken School Readiness Assessment*. San Antonio, TX: The Psychological Corporation.
- Bradley, R.H., Caldwell, B.M. (1977). Home Observation for measurement of the environment: a validation study of screening efficiency. *American Journal of Mental Deficiency, 84*,417–420.
- Bretherton, I., & Beeghly, M. (1982). Talking about internal states: The acquisition of an explicit theory of mind. *Developmental Psychology, 18*, 906–921.
- Brinton, B., and Fujiki, M. (1989). *Conversational Management with Language-Impaired Children*, pp. 63-93. Rockville, MD: Aspen Publishers.
- British Columbia Ministry of Education (BCE). (2003). *Interpreting and Communicating British Columbia Foundation Skills Assessment Results 2002*. Retrieved December 8, 2003, from [<http://www.bced.gov.bc.ca/assessment/fsa/02interpret.pdf>].
- British Youth Council, (2009). *British Youth Council Annual Review 2009-2010*. London.
- Brownlie, E. B., Beitchman, J. H., Escobar, M., Young, A., Atkinson, L., Johnson, C., . . . Douglas, L. (2004). Early language impairment and young adult delinquent and aggressive behavior. *Journal of Abnormal Child Psychology, 32*(4), 453-467.
- Bryan, K. (2004). Preliminary study of the prevalence of speech and language difficulties in young offenders. *International Journal of Language and Communication Disorders, 39*(3), 391-400.
- Bryan, K., Freer, J., & Furlong, C. (2007). Language and communication difficulties in juvenile offenders. *International Journal of Language and Communication Disorders, 42*(5), 505-520.
- Bryant, A. L., Schulenberg, J. E., O'Malley, P. M., Bachman, G., & Johnston, L. D. (2003). How academic achievement, attitudes, and behaviors related to the course of substance use during adolescence: A 6-year, multiwave national longitudinal study. *Journal of Research in Adolescence, 13*(3), 361-397.

## References

- Bryant, A. L., Schulenberg, J. E., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (2003). How Academic Achievement, Attitudes, and Behaviors Relate to the Course of Substance Use During Adolescence: A 6-Year, Multiwave National Longitudinal Study. *Journal of Research on Adolescence*, 13(3), 361-397.
- Buchanan, C., & Holmbeck, G. (1998). Measuring Beliefs About Adolescent Personality and Behavior. *Journal of Youth and Adolescence*, 27(5), 607-627.
- Bureau of Labor Statistics, U.S. Department of Labor, and National Institute for Child Health and Human Development. *Children of the NLSY79, 1986-2000*. Produced and distributed by the Center for Human Resource Research, The Ohio State University. Columbus, OH: 2012.
- Bunning, K., & Ellis, M. (2010). A preliminary investigation into communication in the special needs classroom during Key Stage 3 English lessons. *Child Language Teaching and Therapy*, 26(2), 180-194.
- Carrow-Woolfolk, E. (1999). *Comprehensive assessment of spoken language*. Circle Pine, MN: American Guidance Service.
- Cashmore, J., Paxman, M., & Townsend, M. (2007). The educational outcomes of young people 45 years after leaving care: an Australian perspective. *Adoption & Fostering Journal*, 31(1), 50-61.
- Cheek, J.M., and Buss, A.H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology*, 41, 330-39.
- Cheshire, J. (1982). *Variation in an English dialect: A Sociolinguistic Study*. Cambridge University Press: Cambridge.
- Cheshire, J & Gardner-Chloros, P. (1998). Codeswitching and the sociolinguistic gender pattern. *International Journal of the Sociology of Language*, 129, 5-34.
- Clegg, J., Hollis, C., Mawhood, L. and Rutter, M. (2005) Developmental Language Disorders – a follow-up in later adult life. Cognitive, language and psychosocial outcomes. *Journal of Child Psychology and Psychiatry* 46( 2), 128-149.

## References

Clegg, J., Ginsborg, J. (2006). *Language and Social Disadvantage: Theory into Practice*. Wiley and Sons Ltd.

Clegg, J., Stackhouse, J., Finch, K., Murphy, C., & Nicholls, S. (2009). Language abilities of secondary age pupils at risk of school exclusion: A preliminary report. *Child Language Teaching and Therapy*, 25(1), 123-139.

Cohen, N. J., & Lipsett, L. (1991). Recognized and unrecognized language impairment in psychologically disturbed-children - child symptomatology, maternal depression, and family dysfunction - preliminary-report. *Canadian Journal of Behavioural Science-Revue Canadienne Des Sciences Du Comportement*, 23(3), 376-389.

Cole K. N., Coggins T. E., Vanderstoep C. (1999). The influence of language/cognitive profile on discourse intervention outcome. *Language, Speech, and Hearing Services in Schools*, 30: 61–67  
Read

More: <http://informahealthcare.com.eresources.shef.ac.uk/doi/full/10.1080/02699200500074313>

Connell, R.W., D.J. Ashendon, S. Kessler, and G.W. Dowsett. (1982). *Making the Difference: Schools, Families and Social Division*. Sydney: George Allen and Unwin.

Connor-Smith, J.K., Compas, B.E., Wadsworth, M.E., Thomsen, A.H., Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology*, 68, 976–992.

Conners, C. K. (1969). A teacher rating scale for use in drug studies with children. *American Journal of Psychiatry*, 126, 884–888.

Conti-Ramsden, G., and Botting N. (2004). Social difficulties and victimisation in children with SLI at 11 years of age. *Journal of Speech, Language and Hearing Research*, 47, 145–61.

Conti-Ramsden, G., Durkin, K. (2010). Young people with specific language impairment: A review of social and emotional functioning in adolescence. *Child language Teaching and Therapy* 26(2) 105-121.

## References

- Coplan, R.J., Rubin, K.H., Fox, N.A., Calkins, S.D., Stewart, S.L. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence, and passive and active-solitude in young children. *Child Development*, 65,129-138.
- Coster, W., Gersten, M. S., Beeghly, M., & Cicchetti, D. (1989). Communicative functioning in maltreated toddlers. *Developmental Psychology*, 25(6), 1020-1029.
- Courtney, M. E., & Dworsky, A. (2006). Early outcomes for young adults transitioning from out-of-home care in the USA. *Child & Family Social Work*, 11(3), 209-219.
- Crawford, M.T., Sherman, S.J., Hamilton, D.L. (2002). Perceived entitativity, stereotype formation, and the interchangeability of group members. *Journal of Personality and Social Psychology*, 83 1076–1094.
- Crocetti, E., Rubini, M., Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. *Journal of Adolescence*, 31, 207–222.
- Cromer, RF. (1976). The cognitive hypothesis of language acquisition and its implications. In Morehead, D.M. & Morehead, A.E. (Eds.), *Normal and deficient child language*. Baltimore: University Park Press.
- Crookes, G. 1990. The utterance and other basic units for second language discourse analysis. *Applied Linguistics*, 11(2) 183-199.
- Cross, M., Blake, P., Tunbridge, N., Gill, T. (2001). Collaborative working to promote the communication skills of a 14-year-old student with emotional, behavioural, learning and language difficulties. *Child Language Teaching and Therapy*, 17(3), 227-246.
- Cross. (1999). Lost for words. *Child & Family Social Work*, 4(3), 249-257.
- Cross, M. (1998). Undetected communication problems in children with behaviour problems *International Journal of Language and Communication Disorders*, 33, 509-514.



## References

- Csikszentmihalyi, M., & Larson, R. (1987). The Experience Sampling Method. *Journal of Nervous and Mental Disease*, 175, 537–544.
- Damico, J. S. (1985). Clinical discourse analysis: A functional approach to language assessment. In C. S. Simon (ed.), *Communication Skills and Classroom Success: Assessment of Language-Learning Disabled Students* (pp. 168-203). San Diego: College Hill Press.
- Dancey, C.P, & Reidy, J. (2004). *Statistics without maths for psychology (3rd<sup>ed</sup>)*. Pearson Education Limited, Essex: England.
- Davies, K. , Lewis, J. , Byatt, J. , Purvis, E. and Cole, B. (2004) *An Evaluation of the Literacy Demands of General Offending Behaviour Programmes*. Home Office Research Findings No. 233. London, Home Office .
- Davis K., L., J., Byatt, J., Purvis, E., Cole, B. (2004). An evaluation of the literacy demands of general offending behaviour programmes. *Findings*, 1-4.
- Davis, A. D., Sanger, D. D., & Morris-Friehe, M. (1991). Language skills of delinquent and nondelinquent adolescent males. *Journal of Communication Disorders*, 24(4), 251-266.
- Davison, F. M., & Howlin, P. (1997). A follow-up study of children attending a primary-age language unit. *European Journal of Disorders of Communication*, 32(1), 19-36.
- Denham, S. A. (1986). Social Cognition, Prosocial Behavior, and Emotion in Preschoolers: Contextual Validation. *Child development*, 57(1), 194-201.
- Denham, S. A., Cook, M. C, & Zoller, D. (1992). Baby looks very sad: Discussions about emotions between mother and preschooler. *British Journal of Developmental Psychology*, 10, 301-315.
- Department for Children, Schools and Families, Home Office, Youth Justice Board and Association of Chief Police Officers (2009) *Safer School Partnerships Guidance* London: HMSO.
- Department for Communities and Local Government (2008). *English Indices of Deprivation 2007*. National Indicators for Local Authorities and Local Authority Partnerships: Updated National

## References

Indicator Definitions, (HM Government).

Department for Communities and Local Government (2011). *English Indices of Deprivation 2010*. National Indicators for Local Authorities and Local Authority Partnerships: Updated National Indicator Definitions, (HM Government).

Department for Communities and Local Government (2013). *English Indices of Deprivation 2012*. National Indicators for Local Authorities and Local Authority Partnerships: Updated National Indicator Definitions, (HM Government).

Department for Education (DFES)(2010). *Positive for Youth: A New Approach To Cross Government Policy for Young People Aged 13 To 19*. Retrieved from <https://www.gov.uk/government/publications/positive-for-youth-a-new-approach-to-cross-government-policy-for-young-people-aged-13-to-19>.

Department for Educational (DFES), (2011). *Children looked after by local authorities in England: Year ending 31 March 2010*, SSFR. Retrieved from <https://www.gov.uk/government/publications/children-looked-after-by-local-authorities-in-england-year-ending-31-march-2010>.

Department for Education (DFES), (2012). *Better Communication Research Programme. Improving provision for children and young people with speech language and communication needs*. Lindsay, G., Dockrell, J., Law, J and Roulstone, S. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/219622/DFE-RR247-BCRP1.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/219622/DFE-RR247-BCRP1.pdf).

Department for Education (DFES, 2012). *Special Educational Needs in England: January 2012*. Statistics First Release. Retrieved from SFR <https://www.gov.uk/government/publications/special-educational-needs-in-england-january-2012>.

Department for Education, (2013). *GCSE and Equivalent Attainment by Pupil Characteristics in England 2011/12*. Statistics First Release. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/219337/sfr04-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/219337/sfr04-2013.pdf)

## References

- DeThorne L. S., Johnson B. W., Loeb J. (2005). A closer look at MLU: what does it really measure? *Clinical Linguistics and Phonetics*, 19: 635–648.
- Dethorne, L.S., Watkins, R.V. (2006). Language abilities and nonverbal IQ in children with language impairment: Inconsistency across measures. *Clinical Linguistics & Phonetics*, Vol. 20(9), 641–658.
- Dockrell J.E., & Lindsay, G. (2001) Children with specific speech and language difficulties: The teachers' perspective. *Oxford Review of Education* 27(3): 369–94.
- Draper, P., & Harpending, H. (1982). Father Absence and Reproductive Strategy: An Evolutionary Perspective. *Journal of Anthropological Research*, 38(3), 255-273.
- Drury, J., Catan, L., Dennison, C., & Brody, R. (1998). Exploring teenagers' accounts of bad communication: A new basis for intervention. *Journal of Adolescence*, 21(2), 177-196.
- Dubowitz, H. (1994). Neglecting the Neglect of Neglect. *Journal of Interpersonal Violence*, 10(4), 556-560.
- Dunn, J., Brown, J., Slomkowski, C., Tesla, C., & Youngblade, L. (1991). Young children's understanding of other people's feelings and beliefs: individual differences and their antecedents. *Child Dev*, 62(6), 1352-1366.
- Dunn L.M., Dunn L, M., Whetton C., Burley J. (1997). *The British Picture Vocabulary Scale*. 2nd ed. National Foundation for Educational Research, NFER-Nelson.
- Durbin, J., Watson, G.S. 1971. Testing for Serial correlation in least squares regression. III *Biometrika*, 58, 1–19.
- Durkin, K., & Conti-Ramsden, G. (2010). Young people with specific language impairment: A review of social and emotional functioning in adolescence. *Child Language Teaching and Therapy*, 26(2), 105-121.
- Egeland, B., Sroufe, L. A., & Erickson, M. (1983). The developmental consequence of different patterns of maltreatment. *Child Abuse & Neglect*, 7(4), 459-469.

## References

- Ehren B. J. (2000). Views of cognitive referencing from the pragmatist's lens. *ASHA Special Interest Division 1, Language Learning and Education Newsletter*, 7 (1): 3–8.
- Ehren, B.J. (2002). Speech-Language pathologists contributing significantly to the academic success of high school students: A vision for professional growth. *Topics in Language Disorders*, 22(2), 60-80.
- Ellis, B. J., & Garber, J. (2000). Psychosocial antecedents of variation in girls' pubertal timing: Maternal depression, stepfather presence, and marital and family stress. *Child development*, 71(2), 485-501.
- Elliott, C. D., Smith, P., & McCulloch, K. (1997). *Technical manual British Ability Scales II*. Windsor, Berkshire: NFERNELSON Publishing Company.
- Elliot, A.J., Thrash, T.M. (2004).The intergenerational transmission of fear of failure. *Personality and Social Psychology Bulletin*, 30, 957–971.
- Entwhistle, H. (1978). *Class, Culture and Education*. Methuen.
- Erikson, E.H., (1968) *Identity: Youth and crisis*. W.W. Norton.
- Evans, J.L., & Miller, J. (1999). Language sample analysis in the 21<sup>st</sup> century. *Seminars in Speech and Language*, 20, 101-116.
- Farber, S. L. (1981). *Identical twins reared apart: A reanalysis*. New York: Basic.
- Farkas, G., & Beron, K. (2004). The detailed age trajectory of oral vocabulary knowledge: Differences by class and race. *Social Science Research*, 33(3), 464-497.
- Farrell, M. M., Phelps, L. . (2000). A Comparison of the Leiter-R and the Universal Nonverbal Intelligence Test (UNIT) with Children Classified as Language Impaired *Journal of Psychoeducational Assessment* September 2000, 18(3), 268-274, .

## References

- Feinstein, L. (2003). Inequality in the early cognitive development of British children in the 1970 cohort. *Economica*, 70. 73-97.
- Fergusson, D., Woodward, L., & Horwood, L. J. (1999). Childhood Peer Relationship Problems and Young People's Involvement with Deviant Peers in Adolescence. *Journal of Abnormal Child Psychology*, 27(5), 357-369.
- Fernandez, E. (2008). Unravelling Emotional, Behavioural and Educational Outcomes in a Longitudinal Study of Children in Foster-Care. . *British Journal of Social Work*, 38(7), 1283-1301.
- Fey M. E., Long S. H., Cleave P. L. (1994). Reconsideration of IQ criteria in the definition of specific language impairment. In *Specific Language Impairments in Children*, R. V Watkins, M. L Rice. Paul H. Brooks, Baltimore,MD; 161–178.
- Field, A. (2009). *Discovering Statistics Using SPSS*. London: SAGE.
- Fletcher-Campbell, F. (1998). Progress or procrastination? The education of young people who are looked after. *Children & Society*, 12(1), 3-11.
- Flick, U. (1998). *An Introduction to Qualitative Research*. London: SAGE.
- Fogel, A. (1993). *Developing Through Relationships. Origins of communication, self, and culture*. Harvester Wheatsheaf: Hemel Hempstead.
- Fraur, F., Erdfelder, E., Lang, A.G., Buchner, A. (2007). G\*Power 3: Aflexible statistical power analysis for the social, behaviorual and bio-medical sciences. *Behaviour Research Methods*, 39(2), 175-191.
- Freeman, K., Hartshorne, M. (2009). I CAN Talk: Speech, Language and Communication Needs and the Early Years. *ICAN Talk Series*, (7). ICAN.
- Gaines, R., Sandgrund, A., Green, A. H., & Power, E. (1978). Etiological factors in child maltreatment: A multivariate study of abusing, neglecting, and normal mothers. *Journal of Abnormal Psychology*, 87(5):531-540.

## References

- Galambos, N. L., & Almeida, D. M. (1992). Does parent –adolescent conflict decrease in early adolescence? *Journal of marriage and the family*, *54*, 737-747.
- Garner, P. W., Jones, D. C., & Palmer, D. J. (1994). Social Cognitive Correlates of Preschool Children's Sibling Caregiving Behavior. *Developmental Psychology*, *30*(6), 905-911.
- Gathercole, S. & Badderly, A. D., (1996). *The Children's Test of Non Word Repetition*. London : The Psychological Corporation, Harcourt Assessment.
- Gathercole, S. E., Willis, C., Emslie, H., & Baddeley, A. D. (1991). The influences of number of syllables and wordlikeness on children's repetition of nonwords. *Applied Psycholinguistics*, *12*(03), 349-367.
- Gathercole, S., & Baddeley, A. (1990). Phonological memory deficits in language disordered children: Is there a causal connection? *Journal of Memory and Language*, *29*, 336–360.
- Gaudin, J. M., Polansky, N. A., Kilpatrick, A. C., & Shilton, P. (1996). Family functioning in neglectful families. *Child Abuse & Neglect*, *20*(4), 363-377.
- Gay, A., Peter, J. P., Vincent, H. P., & James, P. S. (2000). Children placed in long-term foster care: An intake profile using the child behavior checklist/4-18. *Journal of Emotional and Behavioral Disorders*, *8*(1), 49.
- Gelles, R. J., & Cornell, C. P. (1983). International perspectives on child abuse. *Child Abuse & Neglect*, *7*(4), 375-386.
- Giblin, P. T., Starr, R. H., & Agronow, S. W. (1984). Affective behavior of abused and control children: Comparisons of parent-child interactions and the influence of home environment variables. . *The Journal of Genetic Psychology*, *144*, 69-82.
- Gillam, R.B., Pena, E.D., & Miller, L. (1999). Dynamic Assessment of narrative and expository discourse. *Topics in Language Disorders*, *20*, 33-47.
- Gilmour, J., Hill, B., Place, M., Skuse, D.H. (2004). Social communication deficits in conduct disorder: a clinical and community survey. *Journal of Child Psychology and Psychiatry*, *45*(5), 967-978.

## References

Girolametto, L., Weitzman, E., Wiigs, M., & Pearce, P. S. (1999). The Relationship between Maternal Language Measures and Language Development in Toddlers with Expressive Vocabulary Delays. *American Journal of Speech-Language Pathology*, 8(4), 364-374.

Goldthorpe, J.H., Lockwood, D., Bechofer, F., Platt, J. (1969). *The affluent worker in the class structure*. Cambridge: Cambridge University Press.

Goodman, R. (1997). The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 38, 581-586.

Graham, P., Dingwall, R., & Wolkind, S. (1985). Research issues in child abuse. *Social Science & Medicine*, 21(11), 1217-1228.

Graham, S., & Perin, D. (2007). A Meta-Analysis of Writing Instruction for Adolescent Students. *Journal of Educational Psychology*, 99(3), 445-476.

Gray, P. (2005). The politics of risk and young offenders' experiences of social exclusion and restorative justice. *The British Journal of Criminology*, 45(6), 938-957.

Gregory, J., & Bryan, K. (2011). Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties. *International Journal of Language and Communication Disorders*, 46(2), 202-215.

Grice, H. P. (1975). Logic and conversation. In P. Cole and J. L. Morgan (eds.), *Syntax and Semantics: Vol. 3. Speech Acts* (pp. 41-58). New York: Academic Press.

Guendouzi, J. (2003). 'SLI', a generic category of language impairment that emerges from specific differences: a case study of two individual linguistic profiles. *Journal of Clinical Linguistics and Phonetics*, 17(2), 135-152.

H. M. Government & The Department for Education. (2005). *Youth Matters*. (CM6629) London: The Stationery Office. H.M. Government & The Department for Education and Skills. (2007). *Care*

## References

- Matters: Time for Change*. (CM7137). London: The Stationery Office. H.M. Government & Department for Education. (2011). *Support and Aspiration: A New Approach to Special Educational Needs and Disability*. (CM8027). London: The Stationery Office.
- H.M. Government & The Ministry of Justice (1997). *No More Excuses: a New Approach to Tackling Youth Crime in England and Wales*. (CM3809). London: The Stationery Office.
- H.M. Government & The Ministry of Justice. (2010). *Breaking the Cycle: Effective Punishment, Rehabilitation and Sentencing of Offenders*. (CM7972). London: The Stationery Office.
- H.M. Government & The Ministry of Justice (2011). *Breaking the Cycle: The Government Response*. (CM8070). London: The Stationery Office.
- H.M. Government & The Ministry of Justice. (2013). *Swift and Sure Justice: The Government's Plans for Reform of the Criminal Justice System*. (CM8388). London: The Stationery Office.
- H.M. Government & The Ministry of Justice. (2013). *Transforming Youth Custody: Putting education at the heart of detention*. (CM8564). London: The Stationery Office.
- Hall, G.S. (1904). *Adolescence: Its psychology and its relation to physiology, anthropology, sociology, sex, crime religion and education* (Vol i & ii) Englewood Cliffs: NJ: Prentice-Hall.
- Ham, M., & Larson, R. (1992). *Stressful life events: Concordance rates between youth and their parents*. Unpublished manuscript.
- Hamilton, J., (1999). *Speech and Language Communication Therapy: A Perspective from HMYOI Polmont*. Internal Report (Forth Valley Primary Care NHS Trust).
- Hammill D. R., Brown V. L., Larsen S. C., Wiederholt J. L. (1994). *Test of Adolescent and Adult Language 3Ed*. Pro-Ed, Austin, TX.
- Hansen, J., & Bowey, J. A. (1994). Phonological Analysis Skills, Verbal Working Memory, and Reading Ability in Second-Grade Children. *Child development*, 65(3), 938-950.
- Harakeh, Z., Scholte, R. H. J., Vermulst, A. A., de Vries, H., & Engels, R. C. M. E. (2010). The relations between parents' smoking, general parenting, parental smoking communication, and adolescents' smoking. *Journal of Research on Adolescence*, 20(1), 140-165.



## References

- Hare, A. L., Marston, E. G., & Allen, J. P. (2011). Maternal Acceptance and Adolescents' Emotional Communication: A Longitudinal Study. *Journal of Youth and Adolescence*, 40(6), 744-751.
- Hart, B., Risley, T. (1995). *Meaningful Differences in Everyday Experience of Young American Children*. Paul Brookes: Baltimore.
- Hartos, J. L., & Power, T. G. (2000). Association between mother and adolescent reports for assessing relations between parent-adolescent communication and adolescent adjustment. *Journal of Youth and Adolescence*, 29(4), 441-450.
- Hartshorne, M. (2011). Speech Language and Communication in Secondary Aged Pupils. *ICAN Talk Series 10*. ICAN.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention. *Psychological Bulletin*, 112(1), 64-105.
- Hayden, C. (2010). Offending behaviour in care: is children's residential care a 'criminogenic' environment? *Child & Family Social Work*, 15(4), 461-472.
- Heiman, T., Zinck, L. C., & Heath, N. L. (2008). Parents and youth with learning disabilities: Perceptions of relationships and communication. *Journal of Learning Disabilities*, 41(6), 524-534.
- Heneker, S. (2005). Speech and language therapy support for pupils with behavioural, emotional and social difficulties (BESD) – a pilot project. *British Journal of Special Education*, 32(2), 86-91.
- Hernández, P. (1996). *Test Autoevaluativo Multifactorial de Adaptación Infantil (TAMAI)*. TEA, Madrid.
- Hoff-Ginsberg, E. (1998). The relation of birth order and socioeconomic status to children's language experience and language development. *Applied Psycholinguistics*, 19(04), 603-629.
- Hoff, E. (2003). The Specificity of Environmental Influence: Socioeconomic Status Affects Early Vocabulary Development via Maternal Speech. *Child development*, 74(5), 1368-1378.

## References

- House of Commons (HOC) Children School and Families Committee (2008). *Looked after children, third report of session 20082009*. Vol1, London: TSO.
- Howe, D. (2006). Developmental attachment psychotherapy with fostered and adopted children. . *Child and Adolescent Mental Health.*, 11(3), 128-134.
- Howe, D., Fearnley, S. (2003). Disorders of attachment in adopted and fostered children: Recognition and treatment. . *Clinical Child Psychology and Psychiatry*, 18(3), 369-387.
- Huang, R. J., Hopkins, J., & Nippold, M. A. (1997). Satisfaction with standardized language testing: A survey of speech-language pathologists. *Language, Speech, and Hearing Services in Schools*, 28(1), 12-23.
- Hunt, K.W. (1970). Syntactic maturity in school children and adults. *Monographs of the society for research in child development*, 35,(serial number 134, No1).
- Hunter, F. T. (1984). Socializing procedures in parent-child and friendship relations during adolescence. *Developmental Psychology*, 20(6), 1092-1099.
- Hyter, Y. D., Rogers-Adkinson, D. L., Self, T. L., Simmons, B. F., & Jantz, J. (2001). Pragmatic Language Intervention for Children with Language and Emotional/Behavioral Disorders. *Communication Disorders Quarterly*, 23(1), 4-16.
- Jacobson, C. (1996) *Manual till Ordkedjetestet*. [The wordchains test; Manual, revised edition.] Psykologiförlaget: Stockholm.
- Jackson, S., Bijstra, J., Oostra, L., & Bosma, H. (1998). Adolescents' perceptions of communication with parents relative to specific aspects of relationships with parents and personal development. *Journal of Adolescence*, 21(3), 305-322.
- Janus, M., Offord, D. (2007). Development and psychometric properties of the early development instrument (EDI): A measure of children's school readiness. *Canadian Journal of Behavioural Science*, 39 (1),1-22.

## References

- Jerome, A. C., Fujiki, M., Brinton, B., & James, S. L. (2002). Self-esteem in children with specific language impairment. *Journal of Speech, Language, and Hearing Research, 45*(4), 700-714.
- Jerrim, J., Vignoles, A. (2013). Social mobility, regression to the mean and the cognitive development of high ability children from disadvantaged homes. *Journal of the Royal Statistical Society, Series A, 176*(4), 887–906).
- Johnson, M., (1998). *Canterbury and Thanet Verbal Reasoning Skills Assessment*. Ashford : Eastern and Coastal Kent Community Services.
- Kail, R. (1994). A method of studying the generalized slowing hypothesis in children with specific language impairment. *Journal of Speech and Hearing Research, 37*, 418–421.
- Kamhi, A.G. (2008). Trying to make sense of developmental language disorders. *Language, Speech & Hearing Services in Schools, 29*(1), 35.
- Kandel, D. B., Davies, M., & Baydar, N. (1990). The creation of interpersonal contexts: Homophily in dyadic relationships in adolescence and young adulthood. In L. Robins & M. Rutter (Eds.), *Straight and devious pathways from childhood to adulthood* (pp. 221–241). Cambridge, England: Cambridge University Press.
- Kaplan, E., Goodglass, H. and Weintraub, S., (1983). *Boston Naming Test* (Philadelphia: Lea & Febiger).
- Kerr, M., & Stattin, H. (2000). What Parents Know, How They Know It, and Several Forms of Adolescent Adjustment: Further Support for a Reinterpretation of Monitoring. *Developmental Psychology, 36*(3), 366-380.
- King, N., Horrocks, C. (2010). *Interviews in Qualitative Research*. London: SAGE.
- Kovacs, M. (1985). The Children's Depression Inventory. *Psychopharmacology Bulletin, 21*, 995–998.
- Kroger, J. (2007). *Identity development: Adolescence through adulthood*. Sage, Thousand Oaks.

## References

- Labov, W., (1972). *Language in the Inner City: Studies in the Black English Vernacular*. Philadelphia , PA : University of Pennsylvania Press.
- Lahey, P. (1990). Who shall be called language impaired? Some reflections and one perspective. *Journal of Speech and Hearing Disorders*, 55, 612-620.
- Lareau, A. (1987). Social Class Differences in Family-School Relationships: The Importance of Cultural Capital. *Sociology of Education*, 60(2), 73-85.
- Larson, R.W. (2000). Towards a psychology of positive youth development. *American Psychologist*, 55, 170-183.
- Larson, R., & Ham, M. (1993). Stress and "Storm and Stress" in Early Adolescence: The Relationship of Negative Events With Dysphoric Affect. *Developmental Psychology*, 29(1), 130-140.
- Law, J., McBean, K., Rush, R. (2011). Communication skills in a population of primary school-aged children raised in an area of pronounced social disadvantage. *International Journal of Language and Communication Disorders*, 46(6), 657–664.
- Lees, J., Stackhouse, J., & Grant, G. (2009). Learning to talk: Community support and views of parents from socially disadvantaged families. *Journal of Research in Special Educational Needs*, 9(2), 91-99.
- Leitao, S., Hogben, J., & Fletcher, J. (1997). Phonological processing skills in speech and language impaired children. *International Journal of Language & Communication Disorders*, 32(2s), 91-111.
- Leslie, L. K., Landsverk, J., Ezzet-Lofstrom, R., Tschann, J. M., Slymen, D. J., & Garland, A. F. (2000). Children in foster care: factors influencing outpatient mental health service use. *Child Abuse & Neglect*, 24(4), 465-476.
- Lindsay, G. and Dockrell, J. (2000). The Behaviour and Self-esteem of Children with Specific Speech and Language Difficulties. *British Journal of Educational Psychology* 70( 4), 583-601.
- Lindsay G., Dockrell J. (2004). Whose job is it? Parents' concerns about the needs of their children with language problems. *Journal of Special Education*, 37, 225–235

## References

- Lindsay, G., Dockrell, J. E., & Strand, S. (2007). Longitudinal patterns of behaviour problems in children with specific speech and language difficulties: Child and contextual factors. *British Journal of Educational Psychology*, 77(4), 811-828.
- Lloyd, J. E. V., Li, L., & Hertzman, C. (2010). Early experiences matter: Lasting effect of concentrated disadvantage on children's language and cognitive outcomes. *Health & Place*, 16(2), 371-380.
- Locke, A., Ginsborg, J., & Peers, I. (2002). Development and disadvantage: Implications for the early years and beyond. *International Journal of Language and Communication Disorders*, 37(1), 3-15.
- Lockwood, D. (1966). Sources of variation in working class images of society. *Sociological Review*, 14(3), 249-267.
- Loeber, R., Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual review of psychology* 48(1), 371-410.
- Luyckx, K., Goossens, L., Soenens, B., Beyers, W. (2006). Unpacking commitment and exploration: preliminary validation of an integrative model of late adolescent identity formation. *Journal of Adolescence*, 29, 361-378.
- Lynch, M. A., & Roberts, J. (1982). *Consequences of child abuse*: London: Academic Press.
- Lynch, K., O'Riordan, C. (1998). Inequality in higher education: A study of class barrier. *British Journal of Sociology of Education* 19(4) 445.
- Maag, J.W. (1992). Integrating Consultation Into Social Skills Training: Implications for Practice. *Journal of Educational and Psychological Consultation*, 3(3), 233-258, 233-258.
- Mack, J., & Lansley, S. (1985) *Poor Britain*, London, George Allen and Unwin.
- Mackie, L., & Law, J. (2010). Pragmatic language and the child with emotional/behavioural difficulties (EBD): A pilot study exploring the interaction between behaviour and communication disability. *International Journal of Language and Communication Disorders*, 45(4), 397-410.

## References

- Mager, W., Milich, R., Harris, M.J., Howard, A. (2005). Intervention Groups for Adolescents With Conduct Problems: Is Aggregation Harmful or Helpful? *Journal of Abnormal Child Psychology*, 33(3), 349-362.
- Magnusson, D., Stattin, H., & Allen, V. L. (1985). Biological maturation and social development: A longitudinal study of some adjustment processes from mid-adolescence to adulthood. *Journal of Youth and Adolescence*, 14(4), 267-283.
- Malet, M. F., McSherry, D., Larkin, E., Kelly, G., Robinson, C., & Schubotz, D. (2010). Young children returning home from care: The birth parents' perspective. *Child and Family Social Work*, 15(1), 77-86.
- Manso, J. M.M., Sanchez, M. E. G-B., Alonso, M. B., & Barona, E. G. (2010). Pragmatic language development and educational style in neglected children. *Children and Youth Services Review*, 32(7), 1028-1034.
- Manso, J. M.M., Sánchez, M.E.G-B., Alonso, M. B. (2009). Social adaptation and communicative competence in children in care. *Children and Youth Services Review*, 31(6), 642-648.
- Marcia, J. E. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology*, 5, 551-558.
- Marcia, J.E., Friedman, M.L. (1970). Ego identity status in college women *Journal of Personality*, 38, 249-263.
- Markwardt-Frederick, C, Jr. (1989). *Peabody Individual Achievement Test-Revised*. Circle Pines MN: American Guidance Services.
- Marshall, J., Goldbart, J., & Phillips, J. (2007). Parents' and speech and language therapists' explanatory models of language development, language delay and intervention. *International Journal of Language & Communication Disorders*, 42(5), 533-555.
- Marta, E. (1997). Parent-adolescent interactions and psychosocial risk in adolescents: An analysis of communication, support and gender. *Journal of Adolescence*, 20(5), 473-487.

## References

- Martin, H. P. (1979). Child abuse and child development. *Child Abuse & Neglect*, 3(2), 415-421.
- Marton, K., Abramoff, B., & Rosenzweig, S. (2005). Social cognition and language in children with specific language impairment (SLI). *Journal of Communication Disorders*, 38(2), 143-162.
- McAuley, C., & Davis, T. (2009). Emotional well-being and mental health of looked after children in England. *Child and Family Social Work*, 14(2), 147-155.
- McClung, M., & Gayle, V. (2010). Exploring the care effects of multiple factors on the educational achievement of children looked after at home and away from home: An investigation of two Scottish local authorities. *Child and Family Social Work*, 15(4), 409-431.
- McCormick, C.E., Mason, J.M. (1986). *Intervention procedures for increasing preschool children's interest in and knowledge about reading* In Teale, W.H., Sulzby, E. (1986), (Eds.). *Emergent literacy: writing and reading*. Ablex: Norwood, NJ 90–115.
- McFadden, T.U (1996). Creating Language Impairments in Typically Achieving Children: The Pitfalls of "Normal" Normative Sampling. *Language, Speech, and Hearing Services in Schools* 27(1), 3-9.
- McLeod, A. (2007). Whose agenda? Issues of power and relationship when listening to looked-after young people. *Child & Family Social Work*, 12(3), 278-286.
- McLeod, S., & McKinnon, D. H. (2010). Support required for primary and secondary students with communication disorders and/or other learning needs. *Child Language Teaching and Therapy*, 26(2), 123-143.
- Meilman, P. W. (1979). Cross-sectional age-changes in ego identity status during adolescence. *Developmental Psychology*, 15(2), 230-231.
- Meltzer, H. (2000). *The mental health of children and adolescents in Great Britain : the report of a survey carried out in 1999 by Social Survey Division of the Office for National Statistics on behalf of the Department of Health, the Scottish Health Executive and the National Assembly for Wales* London: Office for National Statistics.

## References

- Meeus, W. (1996). Studies on identity development in adolescence: an overview of research and some new data. *Journal of Youth and Adolescence*, 25, 569–598.
- Meeus, W., Ledema, J., Helsen, M., Vollebergh, W. (1999) Patterns of adolescent identity development: review of literature and longitudinal analysis *Developmental Review*, 19, 419–461.
- Miller J. F., Chapman R. S. (1993). *SALT: Systematic Analysis of Language Transcripts*. University of Wisconsin, Madison, WI.
- Montemayer, R., Hanson, E. (1985). A Naturalistic View of Conflict between Adolescents and their Parents and Siblings *The Journal of Early Adolescence*, 5, 23-30.
- Moore, E. (2004). Sociolinguistic style: A multidimensional resource for shared identity creation. *Canadian Journal of Linguistics*, 49(3-4), 375-396+431.
- Morris, J. (2003). Including all children: finding out about the experiences of children with communication and/or cognitive impairments. *Children & Society*, 17(5), 337-348.
- Morrison, G., & Zetlin, A. (1988). Perceptions of communication, cohesion, and adaptability in families of adolescents with and without learning handicaps. *Journal of Abnormal Child Psychology*, 16(6), 675-685.
- Morrison, G. M., & Zetlin, A. (1988). Perceptions of communication, cohesion, and adaptability in families of adolescents with and without learning handicaps. *Journal of Abnormal Child Psychology*, 16(6), 675-685.
- Mouridsen, S. E., & Hauschild, K. M. (2009). A long-term study of offending in individuals diagnosed with a developmental language disorder as children. *International Journal of Speech-Language Pathology*, 11(3), 171-179.
- Myers, L., & Botting, N. (2008). Literacy in the mainstream inner-city school: Its relationship to spoken language. *Child Language Teaching and Therapy*, 24(1), 95-114.
- National Childrens Bureau (2007). *Understanding why*. NCB: London. Retried from [http://www.ncb.org.uk/media/177349/understanding\\_why.pdf](http://www.ncb.org.uk/media/177349/understanding_why.pdf).



## References

- Newcomer, P., Hammil, D. (1988). *Test of language development intermediate* (2<sup>nd</sup> ed). Austin, TX: PRO ED.
- Nippold, M. A., Hesketh, L. J., Duthie, J. K., & Mansfield, T. C. (2005). Conversational versus expository discourse: A study of syntactic development in children, adolescents, and adults. *Journal of Speech, Language, and Hearing Research, 48*(5), 1048-1064.
- Nippold, M. A., Mansfield, T. C., & Billow, J. L. (2007). Peer conflict explanations in children, adolescents, and adults: Examining the development of complex syntax. *American Journal of Speech-Language Pathology, 16*(2), 179-188.
- Nippold, M. A., Schwartz, I.E. . (2002). Do children recover from specific language impairment? *International Journal of Speech-Language Pathology, 4*(1), 41-49.
- Noller, P., & Callan, V. J. (1990). Adolescents' perceptions of the nature of their communication with parents. *Journal of Youth and Adolescence, 19*(4), 349-362.
- Oates, R. K. (1984). Personality development after physical abuse. *Archives of Diseases in Childhood 59*, 147-150.
- Ogbu, J. (1974). *The Next Generation*. New York: Academic Press.
- Olson, D.H. (1985). *Family inventories: Inventories used in a national survey of families across the life cycle*. St Paul, MN: Family Social Science, University of Minnesota.
- Palikara, O., Lindsay, G., & Dockrell, J. E. (2009). Voices of young people with a history of specific language impairment (SLI) in the first year of post-16 education. *International Journal of Language and Communication Disorders, 44*(1), 56-78.
- Parcel, T. L., & Dufur, M. J. (2001). Capital at home and at school: Effects on student achievement. *Social Forces, 79*(3), 881-912.

## References

- Parcel, T. L., & Menaghan, E. G. (1990). Maternal Working Conditions and Children's Verbal Facility: Studying the Intergenerational Transmission of Inequality from Mothers to Young Children. *Social Psychology Quarterly*, 53(2), 132-147.
- Payne, A. C., Whitehurst, G. J., Angell, A. L. (1994). The role of the home literacy environment in the development of language ability in preschool children from low-income families. *Early Childhood Research Quarterly*, 9(3), 427-440.
- Pecora, P. J., Williams, J., Kessler, R. C., Hiripi, E., O'Brien, K., Emerson, J., . . . Torres, D. (2006). Assessing the educational achievements of adults who were formerly placed in family foster care. *Child & Family Social Work*, 11(3), 220-231.
- Pena, E.D., Spaulding, T.J., Plante, E. (2006). The composition of normative groups and diagnostic decision making: shooting ourselves in the foot. *American Journal of Speech Language Pathology*, 15(3), 247-254.
- Pena, E. D., Iglesias, A., & Lidz, C. S. (2001). Reducing Test Bias Through Dynamic Assessment of Children's Word Learning Ability. *Am J Speech Lang Pathol*, 10(2), 138-154.
- Pennington, B. F., & Ozonoff, S. (1996). Executive Functions and Developmental Psychopathology. *Journal of Child Psychology and Psychiatry*, 37(1), 51-87.
- Perin, D. (1983) Phonemic segmentation and spelling. *British Journal of Psychology* 74: 129–144.
- Perron, B.E., Howard, M.O. (2008). Prevalence and correlates of traumatic brain injury among delinquent youths. *Criminal Behaviour and Mental Health*, 18, 243-255.
- Phelps,-Teraski, D & Phelps-Gunn, T. (1992). *Test of pragmatic language*. Austin, TX: PRO-ED.
- Phillips, R. (2007). The need for information on how the attachment difficulties of adopted and looked after children affect their schooling. *Adoption & Fostering Journal*, 31(3), 28-38.

## References

- Phinney, J.S. (1992). The Multigroup Ethnic Identity Measure: a new scale for use with diverse groups. *Journal of Adolescent Research*, 7, 156–176.
- Policy Research Bureau (2002). *Positive Parenting: The National Evaluation of the Youth Justice Board's Parenting Programme*. Youth Justice Board, London.
- Porath, S. (2011). Text messaging and teenagers: A review of the literature. *Journal of the Research Center for Educational Technology*, 7(2), 86-100.
- Pugach, M. C. (2001). The stories we choose to tell: Fulfilling the promise of qualitative research for special education. *Exceptional Children*, 67(4), 439-453.
- Putnins A. L. (1999). Literacy, numeracy and non-verbal reasoning skills of South Australian young offenders. *Australian Journal of Education*, 43, 157–171.
- Puyuelo, M., Renom, J., Solanas, A., Wiig, E.H. (2002) *Bateria de lenguaje objetiva y criterial Screening (BLOC-Screening)*, Barcelona.
- Qi, C. H., & Kaiser, A. P. (2004). Problem behaviors of low-income children with language delays: An observation study. *Journal of Speech, Language, and Hearing Research*, 47(3), 595-609.
- Quinton, D., Pickles, A., Maughan, B., & Rutter, M. (1993). Partners, peers and pathways: Assortative pairing and continuities in conduct disorder. *Development and Psychopathology*, 5, 763–783.
- Radford J, Ireson J and Mahon M (2006) Triadic dialogue in oral communication tasks: what are the implications for language learning? *Language and Education* 20(3): 191–210.
- Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N. and Collishaw, S. (2011) *Child abuse and neglect in the UK today*. London: NSPCC.
- Raine, A. (1993). *The psychopathology of crime*, New York : Academic Press.
- Rapin, I. (1996). Practitioner Review: Developmental Language Disorders: A Clinical Update. *Journal of child psych and psychiatry* 37(6), 643-655.

## References

- Raven, J. C. (1998). *Standard progressive matrices*. Oxford: Oxford Psychologists' Press.
- Raven J. C. (1938). *Raven's progressive matrices (1938): Sets A, B, C, D, E*. Melbourne, Victoria, Australia: Australian Council for Educational Research.
- Reading Youth Offending Service. (2014). *Rapid English Effective Practice Submission*. Reading YOS. Retrieved from <http://www.justice.gov.uk/youth-justice/effective-practice-library/rapid-english-communication-course>.
- Redmond, S. M., & Rice, M. L. (1998). The socioemotional behaviors of children with SLI: Social adaptation or social deviance? *Journal of Speech, Language, and Hearing Research, 41*(3), 688-700.
- Redmond, S. M., & Rice, M. L. (2002). Stability of behavioral ratings of children with SLI. *Journal of Speech, Language, and Hearing Research, 45*(1), 190-201.
- Reed, V. A., Patchell, F. C., Coggins, T. E., & Hand, L. S. (2007). Informativeness of the spoken narratives of younger and older adolescents with specific language impairment and their counterparts with normal language. *Clinical Linguistics and Phonetics, 21*(11-12), 953-960.
- Reed, V. A., & Spicer, L. (2003). The Relative Importance of Selected Communication Skills for Adolescents' Interactions with Their Teachers: High School Teachers' Opinions. *Language, Speech, and Hearing Services in Schools, 34*(4), 343-357.
- Renfrew, C. (1997). *The Bus Story* (3<sup>rd</sup> ed.). Oxford: Speechmark Publishing Ltd.
- Rice, M., Howes, M., Connell, P. (1998) *The Prison Reading Survey: A Report to HM Prison Service Planning Group*. Cambridge: Institute of Criminology.
- Riesch, S. K., Anderson, L. S., & Krueger, H. A. (2006). Parent-child communication processes: Preventing children's health-risk behavior. *Journal for Specialists in Pediatric Nursing, 11*(1), 41-56.
- Riesch, S. K., Anderson, L. S., & Krueger, H. A. (2006). Parent-Child Communication Processes: Preventing Children's Health-Risk Behavior. *Journal for Specialists in Pediatric Nursing, 11*(1), 41-56.

## References

- Ripley, K., & Yuill, N. (2005). Patterns of language impairment and behaviour in boys excluded from school. *British Journal of Educational Psychology*, *75*, 37-50.
- Ritchie, J., Lewis, J. (2003). *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: SAGE Ltd.
- Ritzman, M.J., Sanger, D. (2007). Principals' Opinions on the Role of Speech-Language Pathologists Serving Students With Communication Disorders Involved in Violence. *Language, Speech & Hearing Services in Schools*, *38*(4) 365-77.
- Roberts, R.E., Sobhan, M. (1992). Symptoms of depression in adolescence: a comparison of Anglo, African, and Hispanic Americans. *Journal of Youth and Adolescence*, *21*, 639–651.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press, Princeton: NJ.
- The RTK , (2013). *An evaluation of the pilot for the RCSLT's criminal justice training package 'the Box' and screening tool*. RK Ltd.
- Rust, J., Golombok, S., Trickey, G. (1993). *Wechsler Objective Reading Dimensions (WORD)*. London: Psychological Corporation.
- Rutter, M., Giler, H., Hagell, A. (1998) *Anti-Social Behaviour by Young People*. Cambridge: University Press.
- Rutter, M., Graham, P., Chadwick, O. F. D., & Yule, W. (1976). Adolescent turmoil: fact or fiction? *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *17*(1), 35-56.
- Rutter, M. (1967). A children's behaviour questionnaire for completion by teachers: preliminary findings. *Journal of Child Psychology and Psychiatry*, *8*, 1-11.
- Rutter, M., Tizard, J., & Whitmore, K. (1970). *Education, health and behaviour*. London: Longmans.
- Rutter, M., & Lord, C. (1987). Language impairment associated with psychiatric disorder. In Yule, W.,

## References

- Rutter, M & Bax, M (Eds) *Language Development and Disorders: Clinic In Developmental Medicine*, 101/102, 206-233. London: Simp/Seineman
- Ryan, C. (2002). Porridge with attitude, *The Guardian*.
- Rydell, R.J., Hugenberg, K., Ray, D., Mackie, D.M. (2007). Implicit theories about groups and stereotyping: the role of group entitativity. *Personality and Social Psychology Bulletin*, 33, 549–558.
- Sage, R. (2005). Communicating with students who have learning and behaviour difficulties: A continuing professional development programme. *Emotional and Behavioural Difficulties*, 10(4), 281-297.
- Salveron, M., Lewig, K., & Arney, F. (2009). Parenting groups for parents whose children are in care. *Child Abuse Review*, 18(4), 267-288.
- Samuolis, J., Layburn, K., Schiaffino, K.M. (2001). Identity development and attachment to parents in college students. *Journal of Youth and Adolescence*, 30, 373–384.
- Sandler, I.N., Tein, J., Mehta, P., Wolchik, S., Ayers, T. (2000). Coping efficacy and psychological problems of children of divorce. *Child Development*, 71, 1099–1118.
- Sanger, D., Moore-Brown, B., & Alt, E. (2000). Advancing the Discussion on Communication and Violence. *Communication Disorders Quarterly*, 22(1), 43-48.
- Sanger, D., Moore-Brown, B., Magnuson, G., & Svoboda, N. (2001). Prevalence of Language Problems among Adolescent Delinquents: A Closer Look. *Communication Disorders Quarterly*, 23(1), 17-26.
- Sanger, D., Moore-Brown, B. J., Montgomery, J., Rezac, C., & Keller, H. (2003). Female incarcerated adolescents with language problems talk about their own communication behaviors and learning. *Journal of Communication Disorders*, 36(6), 465-486.
- Sanger, D., Scheffler, M., Crake, B., Hilgert, K., Creswell, J. W., & Hansen, D. (2000). Maltreated female delinquents speak about their communicative behaviours. *Communication Disorders Quarterly* 21, 176.

## References

- Sanger, D. D., Hux, K., & Ritzman, M. (1999). Female juvenile delinquents' pragmatic awareness of conversational interactions. *Journal of Communication Disorders, 32*(5), 281-295.
- Sanger, D., Maag, J., & Spilker, A. (2006). Communication and behavioral considerations in planning programs for female juvenile delinquents. *Journal of Correctional Education, 57*(2), 108-125.
- Sanson, A., Prior, M., & Smart, D. (1996). Reading disabilities with and without behaviour problems at 7-8 years: Prediction from longitudinal data from infancy to 6 years. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 37*(5), 529-541.
- Sawyer, M. G., Carbone, J. A., Searle, A. K., & Robinson, P. (2007). The mental health and well-being of children and adolescents in home based foster care. *Medical Journal of Australia., 186*(4), 181-184.
- Semel E., Wiig E. H., Secord W. A. (1995). *Clinical Evaluation of Language Fundamentals (Ed 3)*. Psychological Corporation: San Antonio, TX.
- Semel, E., Wiig, E. H. and Secord, W. A., 2006. *Clinical Evaluation of Language Fundamental ( CELF IV )*. London : The Psychological Corporation, Harcourt Assessment.
- Schneps, M.H., Thomson, J., Sonnert, G., Pomplun, M., Chen, C., and Heffner-Wong, A., (2013). Shorter Lines Facilitate Reading in Those Who Struggle. *PLOS ONE*. doi: 10.1371/journal.pone.0071161.
- Scholte, R. H. J., Van Lieshout, C. F. M., & Van Aken, M. A. G. (2001). Perceived Relational Support in Adolescence: Dimensions, Configurations, and Adolescent Adjustment. *Journal of Research on Adolescence, 11*(1), 71-94.
- SCOTTISH INDEX OF MULTIPLE DEPRIVATION (SIMD), (2006). *Scottish Index of Multiple Deprivation* (available at: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/simdbackgrounddata2simd06>) [accessed on 9 November 2009].
- Simons, R. L., Whitbeck, L. B., Conger, R. D., & Conger, K. J. (1991). Parenting factors, social skills, and value commitments as precursors to school failure, involvement with deviant peers, and delinquent behavior. *Journal of Youth and Adolescence, 20*, 645–664.

## References

- Skidelski, R. (1969). *English Progressive Schools*. Penguin Books Ltd.
- Smetana, J., & Gaines, C. (1999). Adolescent-parent conflict in middle-class African American families. *Child development*, 70(6), 1447-1463.
- Smith, J.A., Flowers, P., Larkin, M. (2009). *Interpretative Phenomenological Analysis (IPA): Theory, Method and Research*. London: SAGE Ltd.
- Smith, P. K., Cowie, H., & Blades, M. (2003). *Understanding Children's Development* (4th ed.): Blackwell Publishing.
- Smith, P., Fernandes, C. and Strand, S. (2001). *Cognitive Abilities Test 3: Technical Manual*. London, UK : NferNelson.
- Snow, P. C., & Powell, M. B. (2008). Oral language competence, social skills and high-risk boys: What are juvenile offenders trying to tell us? *Children & Society*, 22(1), 16-28.
- Snow, P. C., Powell, M.B. (2004a). Developmental language disorders and adolescent risk: A public-health advocacy role for speech pathologists? . *Advances in speech language pathology*, 6, 221.
- Snow, P. C., Powell, M.B. (2004b). Interviewing offenders: the importance of oral language competence. . *Current issues in criminal justice*, 16, 220-225.
- Snowling, M. (1981). Phonemic deficits in developmental dyslexia. *Psychological Research*, 43(2), 219-234.
- Snowling, M., Goulandris, N., Bowlby, M., & Howell, P. (1986). Segmentation and speech perception in relation to reading skill: A developmental analysis. *Journal of Experimental Child Psychology*, 41(3), 489-507.
- Snowling, M., Chiat, S., & Hulme, C. (1991). Words, nonwords, and phonological processes: Some comments on Gathercole, Willis, Emslie, and Baddeley. *Applied Psycholinguistics*, 12, 369-373.



## References

- Snowling M.J., Stothard S.E., McLean J. (1996). *Graded Nonword Reading Test*. Bury St Edmunds: Thames Valley Test Company.
- Snowling, M. J., Adams, J.W., Bowyer-Crane, C. & Tobin, V. . (2000). Levels of literacy among juvenile offenders: The incidence of specific reading difficulties. *Criminal Behaviour and Mental Health*, 10(4), 229-241.
- Snowling, M. J., Bishop, D. V. M., Stothard, S. E., Chipchase, B., & Kaplan, C. (2006). Psychosocial outcomes at 15 years of children with a preschool history of speech-language impairment. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 47(8), 759-765.
- Spencer, S., Clegg, J., & Stackhouse, J. (2012). Language and social disadvantage: a comparison of the language abilities of adolescents from two different socio-economic areas. *International Journal of Language & Communication Disorders*, 47, 3, 274–284.
- Spencer, S., Clegg, J., & Stackhouse, J. (2010). 'I don't come out with big words like other people': Interviewing adolescents as part of communication profiling. *Child Language Teaching & Therapy*, 26(2), 144-162.
- Statistics Canada. (2004). *Postal Code Conversion File (PCCF), Reference Guide*. Retrieved September 19, 2008, from [<http://www.statcan.ca/english/freepub/92F0153GIE/92F0153GIE2005001.pdf>].
- Steinberg, L. (1987). Impact of Puberty on Family Relations: Effects of Pubertal Status and Pubertal Timing. *Developmental Psychology*, 23(3), 451-460.
- Steinberg, L. (2001). We Know Some Things: Parent-Adolescent Relationships in Retrospect and Prospect. *Journal of Research on Adolescence*, 11(1), 1-19.
- Stothard, S.E., Snowling. M., Bishop, D., Chipchase, M., and Kaplan, C. (1998). Language impaired pre-schoolers: A follow up into adolescence. *Journal of Speech, Language and Hearing Research*, 41, 407-418.
- Stritzke, W. G. K., Nguyen, A., & Durkin, K, (2004). Shyness and computer-mediated communication: A self-presentational theory perspective. *Media Psychology*, 6, 1-22.

## References

- Strauss, C (2001). *Depression and the development of cognitive coping*. Unpublished thesis, University of Sussex.
- Svensson, I. (2011). Reading and writing disabilities among inmates in correctional settings. A Swedish perspective. *Learning and Individual Differences*, 21(1), 19-29.
- Svensson, I., Lundberg, I., Jacobson, C. (2001)The prevalence of reading and spelling difficulties among inmates of institutions for compulsory care of juvenile delinquents. *Dylseixa*, 7(2), 62–76..
- Svensson, I. Lundberg, C. Jacobson (2003). The nature of reading difficulties among inmates in juvenile institutions. *Reading and Writing: An Interdisciplinary Journal*, 16, 667–691.
- Swenson, R.R., Prelow, H. M. (2005). Ethnic identity, self-esteem, and perceived efficacy as mediators of the relation of supportive parenting to psychosocial outcomes among urban adolescents. *Journal of adolescence*, 28(4), 465-477.
- Tackey, N.D., Barnes, H., Khambhaita, P. (2011). *Poverty, Ethnicity and Education*. Joseph Rowntree Foundation.
- Tajfel, H., Turner, J.C. (1979). An integrative theory of intergroup conflict In Austin, W.G., Worchel, S. (Eds.), *The social psychology of intergroup relations*, (33–47). Brooks/Cole, Monterey, CA .
- Tanner, K., & Turney, D. (2003). What do we know about child neglect? A critical review of the literature and its application to social work practice. *Child & Family Social Work*, 8(1), 25-34.
- Tanti, C., Stukas, A. A., Halloran, M. J., & Foddy, M. (2011). Social identity change: Shifts in social identity during adolescence. *Journal of Adolescence*, 34(3), 555-567.
- Thayer, S. E., Ray, S. (2006). Online communication preferences across age, gender and duration of internet use. *Cyber Psychology and Behaviour*, 9(4), 432-440.
- The Centre for Social Justice (2009). *Breakthrough Britain: Ending The Costs of Social Breakdown*. Retrieved from <http://www.centreforsocialjustice.org.uk/publications/breakthrough-britain-family-breakdown>.

## References

- Thompson, J.F. (1972). *Foundations of Vocational Education: Social and Philosophical Concepts*. Prentice Hall.
- Thorun, A. R., (1986). *The Fullerton Language Test for Adolescents* (Palo Alto, CA: Consulting Psychologists Press).
- Tizard, B., & Hughes, M. (1984). *Young Children Learning: Talking and Thinking at Hand at School*. London: Fontana.
- Tomblin, J. B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E. and O'Brien, M., (1997). Prevalence of specific language impairment in kindergarten. *Journal of Speech, Language and Hearing Research*, **40**, 1245–1269.
- Tomblin, J. B., Zhang, X., Buckwalter, P., & Catts, H. (2000). The Association of Reading Disability, Behavioral Disorders, and Language Impairment among second-grade children. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, **41**(4), 473-482.
- Toppelberg, C. O., & Shapiro, T. (2000). Language disorders: A 10-year research update review. *Journal of the American Academy of Child and Adolescent Psychiatry*, **39**(2), 143-152.
- Torgeson, J. K., Wagner, R. K. and Rashotte, C. A., (1999). *Test of Word Reading Efficiency ( TOWRE )*. Austin , TX : PRO-ED.
- Tough, J. (1977). *The Development of Meaning* . London: George Allen and Unwin Ltd.
- Trower, P., Bryant, B., & Argyle, M. (1978). *Social skills and mental health*. London: Methuen & Co. Ltd.
- Turkstra, L. S. (2000) Should my shirt be tucked in or left out? The communicative context of adolescence. *Aphasiology*, **14**(16),349-364.
- Turner, K., Pring, T. and Bryan, K., (In Preparation, 2010), Communication needs of the male, mental health, high secure population. *Submitted to British Journal of Psychiatry*.

## References

Turner, J.C., Hogg, M.A., Oakes, P.J., Reicher, S.D., Wetherell, M.S. (1987). *Rediscovering the social group: A self-categorization theory*. Blackwell, Oxford, UK.

UK Princes Trust. (2007). *The cost of exclusion: Counting the cost of youth disadvantage in the UK*. London: Princes Trust.

Ukrainetz, T. A., & Blomquist, C. (2002). The criterion validity of four vocabulary tests compared with a language sample. *Child Language Teaching and Therapy, 18*(1), 59-78.

U.S Department of Education (1994). *Sixteenth annual report to congress on the implementation of the individuals with disabilities education act*. Washington DC: U.S Government Printing Office.

Vellutino, F. R., Scanlon, D. M., & Spearing, D. (1995). Semantic and Phonological Coding in Poor and Normal Readers. *Journal of Experimental Child Psychology, 59*(1), 76-123.

Vincent, D., de La Mere, M. (1992). McMilian Individual Reading Analysis (MIRA). Windsor, Berks: NFER-Nelson.

Vygotsky, L. (1962). *Thought and language*. Cambridge, MA: MIT Press.

Wadman, R., Durkin, K., & Conti-Ramsden, G. (2008). Self-Esteem, Shyness, and Sociability in Adolescents With Specific Language Impairment (SLI). *Journal of Speech, Language, and Hearing Research, 51*(4), 938-952.

Wadsworth, M. E., & Compas, B. E. (2002). Coping with family conflict and economic strain: The adolescent perspective. *Journal of Research on Adolescence, 12*(2), 243-274.

Walker, H. M., & Sprague, J. R. (2000). The path to school failure, delinquency, and violence: Causal factors and some potential solutions. *Intervention in School and Clinic, 35*(2), 67-73.

Wallace, G. & Hammill, D. D. (2002). *Comprehensive Receptive and Expressive Vocabulary Test, (CREVT-2)* (2nd ed.). Los Angeles: Western Psychological Services.

Wasserman, G. A., & Allen, R. (1985). Maternal withdrawal from handicapped toddlers. *Journal of Child Psychology and Psychiatry, 26*(3), 381-387.

## References

Wasserman, G. A., Rhianon, A., & Solomon, C. R. (1985). At-Risk Toddlers and Their Mothers: The Special Case of Physical Handicap. *Child development*, 56(1), 73-83.

Wechsler, D. (1992). *Wechsler Intelligence Scale for Children*, (3rd ed). London. Psychological Corporation.

Wechsler, D. (1991). *Wechsler Intelligence Scale for Children - Revised (WISC-R)*: UK manual. New York: Harcourt Brace Jovanovich.

Wechsler, D., (1999). *Wechsler Abbreviated Scale of Intelligence (WASI)*. San Antonio , TX : Harcourt Brace.

Wechsler, D. (2005). *Wechsler Individual Achievement Test –Second UK Edition (WIAT-II UK)*. London: Pearson Assessment.

Wells, G. (1993) Re-evaluating the IRF Sequence. *Linguistics and Education* 5(1): 1–37.

Wells, G., (1985). *Language Development in the Preschool Years*. Cambridge : Cambridge University Press.

Welsh, M. C. & Pennington, B. F. (1988). Assessing frontal lobe functioning in children: views from developmental psychology. *Developmental Neuropsychology*, 4, 199–230.

White, R., Cunneen , C. (2006). *Social Class, Youth Crime and Justice*. In Goldson, B., & Muncie, J. Youth Crime and Justice, (pp17-29) London: SAGE.

Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. (1994). A Picture Book Reading Intervention in Day Care and Home for Children From Low-Income Families. *Developmental Psychology*, 30(5), 679-689.

Whitehurst, G. J., Epstein, J. N., Angell, A. L., Payne, A. C., Crone, D. A., & Fischel, J. E. (1994). Outcomes of an Emergent Literacy Intervention in Head Start. *Journal of Educational Psychology*, 86(4), 542-555.

## References

Whitmire K., A. (2000). Adolescence as a developmental phase: a tutorial. *Topics in Language Disorders*, **19**, 1–18.

Wiederholt, J. L., & Bryant, B. R. (1986). *Gray Oral Reading Test (GORT)*. Austin, TX: Pro-Ed.

Wiig, E., & Secord, W. (1989). *Test of Language Competence* (Expanded ed.). Psychological Corporation: San Antonio, TX.

Wiig, E. H., Secord, W. A., & Semel, E. (1992). *Clinical evaluation of language fundamentals—Preschool*, (CELF Preschool). Toronto, Canada: The Psychological Corporation/A Harcourt Assessment Company.

Wiley, R. E., & Berman, S. L. (2012). The relationships among caregiver and adolescent identity status, identity distress and psychological adjustment. *Journal of Adolescence*, **35**(5), 1203-1213.

Williams, A., Thurlow, C. (2005). *Deconstructing adolescent communication*. C. Thurlow (Ed.) *Adolescence: Perspectives on Communication in the Teenage Years*.

Williams, W.H., Cordan, G., Mewse, A.J., Tonks, J., Burgess, C.N.W. (2010). Self reported traumatic brain injury in male young offenders: A risk factor for re-offending, poor mental health and violence. *Nueropsychological Rehabilitation: An international Journal*, **20**(6), 801-812.

Williams, W.J., Mewse, A.J., Tonks, J., Mills, S., Burgess, C.N.W., Cordon, G. (2010). Traumatic brain injury in a prsion population, prevalance and risk for offending, *Brain Injury*, **24**(10), 1184-1188.

Wilson, G., Nash, M., & Earl, G. (2010). Supporting students with language learning difficulties in secondary schools through collaboration: The use of concept maps to investigate the impact on teachers knowledge of vocabulary teaching. *Child Language Teaching and Therapy*, **26**(2), 163-179.

Winters, C. A. (1997). Learning disabilities, crime, delinquency, and special education placement. *Adolescence*, **32**(126), 450-462.

## References

- Wissink, I. B., Deković, M., Yağmur, Ş., Stams, G. J., & de Haan, M. (2008). Ethnic identity, externalizing problem behaviour and the mediating role of self-esteem among Dutch, Turkish-Dutch and Moroccan-Dutch adolescents. *Journal of Adolescence*, 31(2), 223-240.
- Wolf, M., Bowers, P.G., Biddle, K. (2000). Naming-speed processes, timing and reading: A conceptual Review. *Journal of Learning Disabilities*, 33, 387–407.
- Woodcock, R.W. (1987) Woodcock Reading Mastery Tests – Revised. Circle Pines, MN: American Guidance Service
- Yau, J., & Smetana, J. (2003). Adolescent-Parent conflict in Hong Kong and Shenzhen: A comparison of youth in two cultural contexts. *International Journal of Behavioral Development*, 27(3), 201-211.
- Youth Justice Board. (2004). *Progress Report on the Implementation of the Board's National Specification for Learning and Skills in Juvenile Prison Service Establishments 2003/4*. Youth Justice Board, London.
- Youth Justice Board (2013). *Restorative Justice*. Youth Justice Board, London.
- Youth Justice Board (2014). *Escape Parenting Practice*. Youth Justice Board London. Retrieved from <http://escapeparenting.co.uk/youth-justice-board-parenting-toolkit-includes-escape/>.
- Youth Justice Board (2014). *Attention Deficit Hyperactive Disorder (ADHD)*. Youth Justice Board, London. Retrieved from <http://www.justice.gov.uk/downloads/youth-justice/yjb-toolkits/parenting/specialist-issues-adhd.pdf>.
- Youth Justice Board (2014). *Attachment Disorder*. Youth Justice Board, London. <http://www.justice.gov.uk/downloads/youth-justice/yjb-toolkits/parenting/specialist-issues-attachment-disorder.pdf>
- Zachman, L., Huisingsh, R., Barrett, M., Orman, J & Blagden, C. (1989). *The WORD Adolescent test*. East Moline, IL: Linguisystems.

## References

Zwiers M. L., & Morissette P. J., (1999). *Effective Interviewing of Children: A Comprehensive Guide for Counsellors and Human Service Workers*. Philadelphia, PA: Accelerated Development, available at:<http://www.howardleague.org/weeklyupdates2005updatesOctober05.htm>).