DEPARTMENT OF HUMAN COMMUNICATION SCIENCES, UNIVERSITY OF SHEFFIELD

The speech, language and communication profiles of young people in custody, in England. Evaluating models of service delivery to meet their needs.

A mixed-methods study

Kim Turner
January 2019

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

Acknowledgements

This thesis is dedicated to the memory of my dear friend, Carolyn Fuller, who was so proud of me for taking on this project and would, no doubt, have been the first to send a congratulations card on its completion.

Huge thanks to my supervisors Judy Clegg and Sarah Spencer who have provided lots of support and encouragement to keep on going. Principally Judy who has been there throughout and has kept me, largely, on track! Also a special nod to Jenny Thomson whose door was always open, with an APA book and a kind word on hand.

Thanks to everyone at Feltham who has been supportive of both the study and me as an individual. Especially Glenn Knight, the No1 at the time, without whose support the study would not been possible and Laura who kept me running throughout.

Thanks to all of the therapists and NHS Trusts involved with the study without whom it would equally have been an impossible task. Special thanks to Sarah Evans, Lucy Ward and Miriam Jemmett who agreed to be involved with the study even though they had nothing in particular to gain from doing so.

On a practical level, I could not have completed this particular marathon without the cat sitting of my father and the hosting of my beautiful friend, Jen Chesters. Alongside my family and close friends you have helped me to maintain my sanity with plentiful distractions outside of 'PhD land'.

Whilst distractions are helpful, I could not have stayed on track without the HCS PGR family. Particular thanks to Fizz, Chris and Tanja for showing me how it's done and the Weekend team (Sam and Helen) for the solidarity.

Abbreviations

Below is an alphabetical list of abbreviations found in this document. All abbreviations are written in full on the first use in each of the four major sections of the thesis.

ACCT	Assessment, Care in Custody and Teamwork
ACT	Acceptance and Commitment Therapy
ACES	Adverse Childhood Experiences
ADHD	Attention Deficit Hyperactivity Disorder
ADOS-2	Autism Diagnostic Observation Schedule 2nd Edition
APD	Auditory Processing Disorder
APSD	Antisocial Process Screening Device
AQ 50	Autism Quotient Questionnaire Adult Version 50 questions
ASC	Autism Spectrum Condition
ASD	Autism Spectrum Disorder
ASSET	Young Offender Assessment Profile
ASSET-plus	Young Offender Assessment Profile (revised)
ATSI	Aboriginal and Torres Strait Islander
BAME	Black, Asian and Minority Ethnic groups
BTEC	Business and Technology Education Council (UK)
CAMHS	Child and Adolescent Mental Health Service
CAT-ASVAB	Computerised Aptitude Test - Armed Services Vocational Aptitude Battery
CBT	Cognitive Behavioural Therapy
CELF	Comprehensive Evaluation of Language Fundamentals
CEN	Clinical Excellence Network
CHAT	Comprehensive Health Assessment Tool
CI	Chief Investigator
CJS	Criminal Justice System
CLCI	Cormier-Lang Crime Index
CLS	Core Language Score
CMHT	Community Mental Health Team
CNT	Contingency Naming Test
CPA	Care Programme Approach
DASS	The Depression, Anxiety and Stress Scale
DEX	Dysexecutive questionnaire
DLD	Developmental Language Disorder
DNA	Did Not Attend
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4th Edition
DTO	Detention and Training Order
EHCP	Education, Health and Care Plan
ESL	English as a Second Language
FS	Formulated Sentences
FTE	First Time Entrant
GCSE	General Certificate of Secondary Education
GOOD	Good Order Or Discipline

GP	General Practitioner
HCPC	Health and Care Professions Council
HI	Hearing Impairment
HMIP	Her Majesty's Inspectorate of Prisons
HM YOI	Her Majesty's Young Offender Institution
HRA	Health Research Authority
ICD-10	International Classification of Diseases, Tenth Revision
ICF	International Classification of Functioning, Disability and Health
ICU	Inventory of Callous and Unemotional traits
ICW	Information Carrying Words
IDACI	Income Deprivation Affecting Children Index
IEP	Individual Education Plan
IMD	Indices of Multiple Deprivation
IQ	Intelligence Quotient
IRAS	Integrated Research Application System
ISSP	Intensive Supervision and Surveillance Plan
JETS	Juvenile Enhanced Thinking Skills
KBIT	Kaufman Brief Intelligence Test
L&D	Liaison and Diversion
LAC	Looked After Children
LCQ	La Trobe Communication Questionnaire
LD	Learning Disability
LI	Language Impairment
LSA	Learning Support Assistant
LSOA	Lower layer Super Output Area
MDMA	Methylenedioxymethamphetamine
MDT	Multi-Disciplinary Team
MLU	Mean Length of Utterance
MP	Member of Parliament
MPEG	Motion Pictures Expert Group
NA	Not Applicable
NHS	National Health Service
NOCLOR	North Central London Research Consortium
NOMS	National Offender Management Service
NPV	Negative Predictive Value
NVQ	National Vocational Qualification
OCD	Obsessive Compulsive Disorder
ODD	Oppositional Defiant Disorder
OHRN	Offender Health Research Network
ONS	Office for National Statistics
OT	Occupational Therapist
PAT	Phonological Awareness Test
PCM	Pulse Code Modulation
PFCE	Parent, Family and Community Engagement
PHAB	Phonological Assessment Battery

PIQ	Performance Intelligence Quotient
p-NOMIS	Prison National Offender Management Information System
PPV	Positive Predictive Value
PRU	Pupil Referral Unit
PTSD	Post-Traumatic Stress Disorder
R&D	Research and Development
RCF	Rey Complex Figure
RCSLT	Royal College of Speech and Language Therapists
REC	Research Ethics Committee
RS	Recalling Sentences
RTI	Response to Intervention
S1A	Service 1 Lead Clinician
S2A	Service 2 Fulltime Speech and Language Therapist
S2B	Service 2 Volunteer Speech and Language Therapist
S2C	Service 2 Lead Clinician
S3A	Service 3 Speech and Language Therapist
S3B	Service 3 Speech and Language Therapist
S3C	Service 3 Learning Support Assistant
S3D	Service 3 Learning Support Assistant
S3E	Service 3 Lead Clinician
SALT	Systematic Analysis of Language Transcripts
SAM	Social Adaptation Model
SCG Tool	Setting Communication Goals Tool
SCOLP	Speed and Capacity Of Language Processing
SD	Standard Deviation
SDM	Social Deviance Model
SEBD	Social Emotional and Behavioural Difficulties
SEN	Special Educational Needs
SES	Socioeconomic Status
SI	Subordination Index
SLCN	Speech, Language and Communication Needs
SLT	Speech and Language Therapy/Therapist
SPSS	Statistical Package for Social Scientists
SSLT	Student Speech and Language Therapist
SRS	Social Responsiveness Scale
TAS	Toronto Alexithymia Scale
TASIT	The Awareness of Social Inference Test
TBI	Traumatic Brain Injury
TLC	Test of Language Competence
TLC-E	Test of Language Competence Extended Edition
TOAL	Test of Adolescent and Adult Language
TONI	Test of Non-verbal Intelligence
TOWK	Test of Word Knowledge
TROG	Test of Reception Of Grammar
TYC	Transforming Youth Custody

UK	United Kingdom
UN	United Nations
URMS	University Research Management System
US	United States
USA	United States of America
VIQ	Verbal Intelligence Quotient
WAIS	Wechsler Adult Intelligence Scale
WASSP	Wright and Ayre Stuttering Self-rating Profile
WCE	Word Classes Expressive
WCR	Word Classes Receptive
WCT	Word Classes Total
WD	Word Definitions
WHO	World Health Organisation
WISC	Wechsler Intelligence Scale for Children
WMA	Windows Media Audio
WNL	Within Normal Limits
WORD	The adolescent WORD test
WTE	Whole Time Equivalent
YJB	Youth Justice Board
YO	Young Offender
YOI	Young Offender Institution
YOS	Youth Offending Service
YOSALT	Ealing Youth Offending Speech and Language Therapy Project
YOT	Youth Offending Team
YP	Young People

Abstract

Introduction

Research confirms that young people in contact with the criminal justice system have high levels of speech, language and communication needs (SLCN). There is only one published research paper (Bryan, Freer, & Furlong, 2007) identifying the prevalence of SLCN in young people in young offender institutions (YOI) in England. There is no published research as to how speech and language therapy (SLT) services are delivered to this population.

Aim

This study comprises of two main phases. Phase 1 identifies the prevalence of SLCN in young people in English YOIs and provides an updated profile of the type of SLCN these young people present with. The profiles of SLCN are analysed in association with socioeconomic background, education, mental health and offending behaviour. Phase 2 determines the purpose, structure and function of SLT services in English YOIs.

Method

Phase 1 comprises of secondary data analysis of speech, language and communication assessments collected over one year at a London region YOI.

Phase 2 comprises of four components; a survey followed by a semi-structured interview conducted with the lead clinician at each site, collation of six months of SLT service data from each site and six in-depth case studies provided by the clinicians working in these settings.

Results

Phase 1 identified over half the participants met the criteria for a language disorder (≥ -1.5SD). In addition, the percentage of participants excluded from school, accessing mental health services and designated looked after child status was significantly higher than in the general population.

All services involved in Phase 2 were providing one to one assessment and interventions for a range of different SLCN. Benefits could be seen in more universal service provision but resources and regime issues were seen as barriers. It was felt that the speed of change and levels of pressure were higher than in other clinical settings.

(300 words)

Table of Contents

SECTION 1: A REVIEW OF THE LITERATURE

1. Introduction 1

2. The history of the custodial youth justice estate in England 2

2.1. Introduction 2

2.2. The Beginnings of the Juvenile Secure Estate 2

2.3. The introduction of the separate system 5

2.4. Parkhurst Prison 5

2.5. Industrial Schools 6

2.6. Borstals 8

2.7. Young Offender Institutions 8

2.7.1. Education provision in Young Offender Institutions 9

2.7.2. Healthcare provision in Young Offender Institutions 10

2.7.3. Speech, language and communication needs in Young Offender Institutions 11

2.7.4. Education and SEN 11

2.8. Conclusion 11

3. The development of speech and language therapy services for people in contact with the criminal justice system in the United Kingdom (UK) 13

3.1. Introduction 13

3.2. Process for Informal Data Collection 13

3.3. When did speech and language therapists begin working with young people in contact with the criminal justice system? 14

3.4. How did speech and language therapists come to be working with young people in contact with the criminal justice system? 15

3.5. Who were the instigators of the development of services in the UK? 17

3.5.1. Lord Ramsbotham 17

3.5.2. Jane Mackenzie, Claire Moser & Kim Hartley-Keane 17

3.5.3. Professor Karen Bryan 17

3.5.4. John Bercow MP 17

3.6. Summary 17

4. A Review of the Literature on Speech, Language and Communication Profiles in the Offender Population 19

4.1. Introduction 19

4.2. Prevalence of speech, language and communication needs in the offender population 27
4.3. Language profiles of young people in contact with the criminal justice system 28
4.4. Speech Language and Communication Needs (SLCN) as a risk factor 29
4.5. Legal Systems 30
4.6. Gender 32
4.7. Ethnicity and Socioeconomic status 33
4.8. Assessment Tools 33
4.9. Age 34
4.10. Definition of language impairment/disorder 34
4.11. Research design 36
4.12. Other relevant research 38
4.13. Theoretical underpinnings 41
4.14. Conclusion 42
5. Service delivery frameworks for speech and language therapy services 43
5.1. Introduction 43
5.2. Overarching frameworks 43
5.3. Communication frameworks 44
5.4. Education frameworks 45
5.5. SLT service delivery models for children and young people 46
5.6. SLT youth justice frameworks 48
5.7. Response to Intervention Framework 51
5.7.1. Background 51
5.7.2. Youth Justice 52
5.7.3. SLT in Youth Justice 53
5.8. Conclusion 57
6. Purpose and aims of the current study 59
6.1. Purpose of Phase 1 - Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England 59
6.2. Purpose of Phase 2 – Investigating the provision of speech and language therapy services to young people in YOIs in England 61
6.3. Methodological Approaches 62
6.3.1. Phase 1 Methodological Approach 62
6.3.2. Phase 2 Methodological Approach 63
6.4. Ethics 64

6.5. Summary 65

SECTION 2: RE-EVALUATING THE PROFILE OF SLCN AMONGST YOUNG PEOPLE IN YOIS IN ENGLAND (PHASE 1)

7. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Methodology 66

7.1. Introduction 66

7.2. Research Design 67

7.2.1. London Region YOI SLT Service 67

7.3. Participants 68

7.4. Sample Size 68

7.5. Assessment Tools 68

7.5.1. Speech Assessment 69

7.5.2. Clinical Evaluation of Language Fundamentals (CELF-4 UK) 69

7.5.3. Talkabout Social Skills Student Self-Assessment 71

7.5.4. Comprehensive Health Assessment Tool – Part 5: Neurodisability 72

7.6. Demographic Data 74

7.6.1. Ethnicity 74

7.6.2. Socioeconomic status 75

7.6.3. Type and Length of Offence 76

7.6.4. Education History 77

7.6.5. Substance Misuse 77

7.6.6. Mental Health 77

7.6.7. Other health conditions 77

7.6.8. Other 78

7.7. Procedure 78

7.8. Access and Consent 80

7.9. Ethics and Ethical Considerations 80

7.9.1. Ethics process for Phase 1 82

7.10. Data Analysis 87

8. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Results 88

8.1. Profiling speech, language and communication needs 88

8.2. Clinical Evaluation of Language Fundamentals 4th Edition UK – Core Language Subtests 92

8.3. Recalling sentences 92

8.4. Formulated Sentences 92
8.5. Word Classes 92
8.6. Word Definitions 93
8.7. Core Language Score (CLS) 93
8.8. Social Skills Assessment 94
8.9. Speech 94
8.10. Comprehensive Health Assessment Tool (CHAT) - Speech, language and communication needs 94
8.11. Narrative Section 95
8.12. Question Section 95
8.12.1. History of Speech and Language Difficulties or History of contact with Speech and Language Therapy Services 95
8.12.2. Speech Difficulties 96
8.12.3. Comprehension 96
8.12.4. Minimal Response 96
8.12.5. Referral Recommended and Referral Made 96
8.13. CHAT - Speech, language and communication needs score 96
8.14. Exploring relationships between performance on speech, language and communication assessments 97
8.14.1. CELF Core Language Subtests 97
8.15. Relationship between language battery scores and CHAT screen 98
8.15.1. CELF Core Language Score 98
8.15.2. Speech difficulties 99
8.15.3. Social Skills 99
8.16. Referral to SLT 99
8.17. Referral Source 100
8.18. Demographic Factors 101
8.18.1. Age 101
8.19. Education 101
8.19.1. School leaving age 101
8.19.2. School Exclusion 102
8.19.3. Examination Attainment 102
8.19.4. Special Educational Needs (SEN) 103
8.19.5. Statement of SEN/Education and Healthcare Plan 103
8.20. Mental Health 103

8.20.1. Attention Deficit Hyperactivity Disorder (ADHD) 103
8.20.2. Autistic Spectrum Disorders (ASD) 103
8.20.3. Learning Disability (LD) 103
8.20.4. Risk to Self 103
8.20.5. Other mental health diagnoses 103
8.20.6. Contact with Mental Health Services 104
8.21. Physical Health 104
8.21.1. Hearing 104
8.21.2. Traumatic Brain Injury (TBI) 104
8.22. Substance Misuse 104
8.22.1. Alcohol 104
8.22.2. Cannabis 105
8.22.3. Other Substances 105
8.23. Family & Societal Factors 105
8.23.1. Looked after child (LAC) 105
8.24. Ethnicity 105
8.24.1. English as a Second Language (ESL) 107
8.24.2. Similar Peers 107
8.25. Indices of Multiple Deprivation (IMD) 107
8.25.1. Overall IMD Rank and Decile 107
8.25.2. Education Rank and Decile 108
8.25.3. Crime Rank and Decile 108
8.25.4. IDACI Rank and Decile 109
8.26. Offending 109
8.26.1. Sentence Status 109
8.26.2. Length of stay 110
8.26.3. Index Offence 110
8.26.4. Violence 111
8.27. Relationship between language and demographic characteristics 111
8.27.1. Correlations between assessment scores and socioeconomic status 114
8.27.2. Correlations between assessment scores and CHAT scores 114
8.27.3. Other correlations 114
8.27.4. CELF core language score in relation to length of stay 114
8.28. Outliers 115

8.28.1. Participant 11 115
8.28.2. Participant 19 115
8.28.3. Participant 36 116
8.28.4. Participant 42 116
8.28.5. Summary of outliers 117
9. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Discussion 118
9.1. Introduction 118
9.2. Phase 1 Summary 119
9.3. Language Profiles 119
9.4. Additional Factors 122
9.5. Links between language profiles and additional factors 125
9.6. Methodological Limitations 126
9.6.1. Data access 126
9.6.2. Data Collection 127
9.6.3. Limited data sample 127
9.6.4. Secondary data analysis 128
9.6.5. Dual Roles 129
9.6.6. Assessment Tools 130
9.7. Clinical Implications and Directions for future research 131
9.8. Conclusions 132
SECTION 3: INVESTIGATING THE PROVISION OF SLT SERVICES TO YOUNG PEOPLE IN YOIS IN ENGLAND (PHASE 2)
10. Investigating the provision of speech and language therapy (SLT) services to young people in Young Offender Institutions (YOIs) in England – Methodology 134
10.1. Introduction 134
10.2. Research Design 134
10.3. Services 135
10.3.1. Service 1 135
10.3.2. Service 2 135
10.3.3. Service 3 135
10.4. Participants 136
10.5. Phase 2 materials 136
10.5.1. Survey materials 136
10.5.2. Semi-structured interview materials 137

10.5.3. Audit material 140
10.5.4. Case studies materials 142
10.6. Procedure 143
10.6.1. Survey procedure 145
10.6.2. Semi-structured Interview procedure 146
10.6.3. Audit procedure 147
10.6.4. Single case studies procedure 148
10.7. Access and Consent 148
10.8. Ethics and Ethical Considerations 149
10.8.1. Ethics process for Phase 2 150
10.8.2. Ethics Summary 152
10.9. Data Analysis 152
10.9.1. Survey analysis 152
10.9.2. Semi-structured Interview analysis 152
10.9.3. Audit analysis 159
10.9.4. Single case study analysis 159
11. Investigating the provision of SLT services to young people in YOIs in England – Results 160
11.1. Introduction 160
11.2. Section 1: Survey Data 160
11.3. Section 2: Interview data 170
11.3.1. Theme Definitions 170
11.3.2. Theme 1: Understanding 171
11.3.3. Theme 2: Collaboration is key 177
11.3.4. Theme 3: Under pressure 178
11.3.5. Theme 4: Constant change 181
11.3.6. Summary of Interview Data 183
11.4. Section 3: Audit data 183
11.4.1. Contacts 183
11.4.2. Referrals 185
11.4.3. Session Type 187
11.5. Section 4: Case Studies 192
11.5.1. Case Study 1 193
11.5.2. Case Study 2 201
11.5.3. Case Study 3 205

11.5.4. Case Study 4 214
11.5.5. Case Study 5 217
11.5.6. Case Study 6 219
11.5.7. Summary of case studies 221
12. Investigating the provision of SLT services to young people in YOIs in England - Discussion 222
12.1. Introduction 222
12.2. Phase 2 Summary 222
12.3. Examining the purpose, structure and function of speech and language therapy services in English YOIs 223
12.4. What are the similarities and differences between SLT services in English YOIs ? 223
12.5. Is there an evidence base underpinning the interventions offered in these SLT services? 225
12.6. Is there a role for community based service models in YOI SLT services? 226
12.7. Could the theoretical framework laid out by Snow, Sanger, Caire, Eadie and Dinslage (2015a) be applied in English YOIs? 227
12.8. Methodological Limitations 227
12.8.1. Survey 227
12.8.2. Interview 228
12.8.3. Audit 234
12.8.4. Case studies 237
12.9. Clinical Implications and Directions for future research 239
12.10. Conclusion 241
SECTION 4: CONCLUSIONS
13. Further Implications for Clinical Practice and Directions for Research: A proposed service delivery model for English Young Offender Institutions (YOIs) 242
13.1. Phase 1 Summary 242
13.2. Phase 2 Summary 242
13.3. Service delivery models 243
13.4. A proposed tiered model for English YOIs 245
13.4.1. Tier 1 246
13.4.2. Tier 2 248
13.4.3. Tier 3 249
13.4.4. A proposed tiered model for English YOIs - A Summary 249
13.5. Service Recommendations (Bryan & Mackenzie, 2008) 249

13.6. Current recommendations 250
13.6.1. Screening & Assessment 250
13.6.2. Provision 251
13.6.3. Tier 1 251
13.6.4. Tier 2 251
13.6.5. Tier 3 252
13.7. Summary 252
14. Conclusion 253
15. References 255
16. Appendices 270
16.1. Appendix 1 - Phase 1 Consent Form 270
16.2. Appendix 2 - Phase 1 Assessment Guidelines 271
16.3. Appendix 3 - Phase 1 Ethics Approval 273
16.3.1. NHS REC Letter 273
16.3.2. Caldicott Guardian Letter 274
16.3.3. NOCLOR Approval Letter 275
16.4. Appendix 4 - Additional Phase 1 Results 276
16.5. Appendix 5 - Survey template 280
16.6. Appendix 6 - Interview Template 284
16.7. Appendix 7 - Audit Template 285
16.8. Appendix 8 - Case Study template 288
16.9. Appendix 9 - Phase 2 Participant Information Leaflet 290
16.10. Appendix 10 - Phase 2 Ethics Approval 296
16.11. Appendix 11 - Phase 2 Ethics Approval 298
16.11.1. University Approval Letter 298
16.11.2. HRA Letter 299
16.11.3. LCH NHS Trust Capacity Letter 300
16.11.4. NOCLOR Capacity Email 301

List of Tables

Table 1 - Chronology of Youth Justice Acts 3
Table 2 – Criminal Justice System SLT Questionnaire 14
Table 3 – Timeline of the first SLT services in each area of the Criminal Justice System 15
Table 4 - Chronological summary of research literature on prevalence of SLCN in the criminal justice system 20
Table 5 - Detention rates by country 32
Table 6 - NHS Principles 43
Table 7 - Snow et al (2015a) RTI framework and responses 55
Table 8 - Sample Size Calculation 68
Table 9 - Ethnicity Codes 75
Table 10 - Offending Categories 76
Table 11 - Education Data 85
Table 12 - Mental health data 86
Table 13 - Family and society data 86
Table 14 - Offending data 86
Table 15 - Physical health data 86
Table 16 - Missing Data Overview 90
Table 17 - Core Language Subtests: scaled score summary 93
Table 18 - CHAT Summary of Scores 97
Table 19 - Reporting of Speech Difficulties 99
Table 20 - Social skills correlations 99
Table 21 - Referrals to SLT by Type 100
Table 22 - Number of Exams Passed 103
Table 23 - Ethnicity of participants 106
Table 24 - IMD Rankings 107
Table 25 - Education Rank 108
Table 26 - Crime Rank 108
Table 27 - IDACI Rank 109
Table 28 - Length of Stay Details 110
Table 29 - Offence Type 111
Table 30 - Correlation Table 112
Table 31 – CELF core language score mean by length of stay 114
Table 32 - Participant 11: CELF and Social Skills Scores 115
Table 33 - Participant 19: CELF and Social Skills Scores 116
Table 34 - Participant 36: CELF and Social Skills Scores 116
Table 35 - Participant 42: CELF and Social Skills Scores 117
Table 36 - Interview guide 138
Table 37 - Referral source options 141
Table 38 - Referral type options 141
Table 39 - Assessment type options 141
Table 40 – Non-attendance options 142
Table 41 - Other work options 142
Table 42 - Case Study overview 143

Table 43 - Thematic Analysis Process 153
Table 44 - Initial Node List 154
Table 45 - Service Overview 161
Table 46 - Referral routes 163
Table 47 - Referral sources 164
Table 48 - SLCN Screening 165
Table 49 - Assessment Tools 165
Table 50 - Intervention delivery 166
Table 51 - Intervention Focus 167
Table 52 - Services Provided 168
Table 53 - Contacts per day (for 1 WTE) 184
Table 54 - Service 2* Monthly Averages 184
Table 55 - Service 3 Monthly Averages 184
Table 56 - Contact time per month in minutes 185
Table 57 - Referrals 185
Table 58 - Referral source by service 186
Table 59 - Percentage of sessions attended by type 188
Table 60 - Attendance rates by un/planned sessions 188
Table 61 - Session type offered 189
Table 62 - Planned v actual sessions by type 189
Table 63 - Sessions by type in each service 190
Table 64 - Reasons for cancellations by month 190
Table 65 - Reasons for cancellation by service 191
Table 66 - Sessions by clinician 191
Table 67 - Cancellations by 0.2 clinician 191
Table 68 - Case Study overview 192
Table 69 - Demographic Data 193
Table 70 - Overview of therapy sessions 204
Table 71 - ADOS Scores 208
Table 72 - AQ 50 (Adult) Scores 209
Table 73 - Comparison of YOIs 224
Table 74 - Percentage of admissions referred to SLT 234
Table 75 - Case Study comparison 239

List of Figures

Figure 1 - Middlesex Industrial School, 1858 7
Figure 2 - HM YOI Feltham entrance 9
Figure 3 - HM YOI Feltham unit 9
Figure 4 - Bryan's Compounding Risk Model 30
Figure 5 - Tiered Model of Service Delivery (Gascoigne, 2006) 47
Figure 6 - Sanger et al. (2002) Framework to support intervention with communication impaired adolescents involved in violence 49
Figure 7 - RTI Tiers 51
Figure 8 - RTI Tiers McDaniel et al. (2011) 52
Figure 9 - RTI Tiers Snow et al. (2015a) 53
Figure 10 - Phase 1 Data Collection Procedure 79
Figure 11 - Phase 1 Ethics Process 81
Figure 12 - University Sponsor Guidance 83
Figure 13 - Box plot of raw scores for word classes subtest 93
Figure 14 - Histogram of CHAT Narrative Scores 95
Figure 15 - CHAT SLCN Total Score 97
Figure 16 - Box plots of scaled scores on core language subtests 98
Figure 17 - Relationship between CELF and CHAT scores 98
Figure 18 - Referrals to SLT by source 101
Figure 19 – School leaving age 102
Figure 20 - School exclusion 102
Figure 21 - Other mental health diagnoses 104
Figure 22 - Other substances 105
Figure 23 - Ethnicity by broader groupings 107
Figure 24 - IMD Deciles 108
Figure 25 - Crime Decile 109
Figure 26 - Sentence Status 110
Figure 27 - Distribution of Core Language Scores (n = 36) 128
Figure 28 - Procedure for Phase 2 145
Figure 29 - Phase 2 Ethics Process 150
Figure 30 - Initial Thematic Diagram 155
Figure 31 - Final thematic diagram 158
Figure 32 - Reason for referral to SLT 187
Figure 33 - Clinic Room Layout, Case Study 1 196
Figure 34- Clinic Room Layout, Case Study 2 203
Figure 35 - Clinic Room 1 Layout, Case Study 3 210
Figure 36 - Clinic Room 2 Layout, Case Study 3 211
Figure 37 - Unit Meeting Room Layout, Case Study 3 213
Figure 38 - Group Room Layout, Case Study 4 216
Figure 39 - Spur Layout, Case Study 6 220
Figure 40 - Systems Levels 231
Figure 41 - Tiers of provision 246

1. Introduction

Since the turn of the millennium there has been a growing interest in neurodisability in the offender population (Chitsabesan et al., 2007; Loucks, 2007; Slaughter, Fann, & Ehde, 2003). This has led to an increased focus on the speech, language and communication needs (SLCN) of young people within the criminal justice system (CJS) both in the UK and internationally. Language skills are important at all stages of the CJS. Police interviews, court processes and rehabilitation programmes are all heavily verbally mediated processes (Snow, Powell, & Sanger, 2012).

Global research (Anderson, Hawes, & Snow, 2016) has found the prevalence of SLCN of people coming in to contact with the youth justice system are far higher than in the general population. Speech, language, communication and hearing have all been found to be impacted.

This increasing interest was reflected in the Bradley report (2009) which advocated diversion away from the CJS for those with neurodisability. Since this time there have been significant changes within the custodial youth estate, the population has reduced by two thirds in one decade (*Youth Justice Statistics 2016/17*, 2018). This study aims to re-examine the prevalence of SLCN in light of these changes. The study will then provide the first analysis of speech and language therapy (SLT) service provision, in youth custody, in England.

This thesis is made up of four main sections. The first section consists of a review of the literature, including the history of youth justice in England and how SLCN have featured in this history. The review then goes on to examine how speech, language and communication services are delivered and how it has been proposed to deliver these services in the custodial youth justice estate. The second section reviews the SLCN of young people in custody at one of the young offender institutions (YOI) in England. Section three describes how speech, language and communication services are being provided to young people in custody across all of the YOIs in England. The final section proposes how future speech, language and communication services could be configured and suggests further areas for investigation.

2. The history of the custodial youth justice estate in England

2.1. Introduction

This chapter details the history and development of the custodial youth justice estate in England. This background information is provided to situate the current study.

This chapter aims to:

- Give an overview of the legal acts that shaped the development of youth justice
- Present a brief history of the development of the custodial youth justice estate
- Cover the background of one of the YOIs central to this study
- Explore the development of healthcare services and SLT services within the custodial youth justice estate

2.2. The Beginnings of the Juvenile Secure Estate

There has not always been a separate custodial system for young people and it was not until 1998 that a separate body (the Youth Justice Board) was formed to have oversight of the juvenile estate. Prior to 1792 young people were housed with adult offenders, both male and female. Gaols, as they were then known, were said to have changed very little since medieval times with overcrowding leading to the spread of disease. Gaols were regionally controlled which led to wide variation and bribery was rife (Kane, 1996). It is reported in 1814, five minors under the age of 14 years were hanged at the Old Bailey, the youngest of these being 8 years old, William Potter, for 'cutting down an orchard'[1]. The youth justice system has been through many changes since its inception in 1792, the key government acts and their relevance are captured in Table 1. Key points of reform for this study are the 1988 Criminal Justice Act that led to the creation of YOIs and the 1998 Crime and Disorder Act which introduced rehabilitation and the prevention of offending as the principal aim of youth justice.

[1] http://www.jubileecampaign.co.uk/child-prisoners-in-victorian-times-and-the-heroes-of-change

Table 1 - Chronology of Youth Justice Acts

Year	Name of Government Act	Implications
1799	Penitentiary Act	New prisons to be built for the separate system - one inmate per cell and silent work
1823	Gaols Act	Remand and sentenced prisoners separated
1847	Juvenile Offenders Act	First act to distinguish between adults and children, applied to children under 14 years of age
1854	Reformatory School Act	Charitable reformatories can be approved by the Inspector of Prisons
1854	Youthful Offenders Act	Children under 16 years of age may be sentenced to a reformatory instead of prison – after two weeks in prison
1893	Reformatory Schools Act	Removes the requirement to send children to prison initially
1899	Reformatory Schools Act	Removes the ability to send children to prison initially
1901	Youthful Offenders Act	Children may be remanded to remand homes or workhouses rather than going to adult prisons
1906	First Offenders Act	Intended to give every child, or their parents, a second chance
1907	Probation of Offenders Act	Offenders may be supervised in the community
1908	Children Act	Separate juvenile court established. Custody abolished for children under 14 years of age
1908	Prevention of Crime Act	Borstals rolled out for males aged 16-20 years old on indeterminate sentences of one-three years
1933	Children and Young Persons Act	Age of criminal responsibility raised to eight years old. Death sentence abolished for those under 18 years of age
1948	Criminal Justice Act	Children under 17 years of age can no longer be sent to adult prisons. Detention centres, with sentences of up to three months, introduced as a 'short, sharp shock' for 14 to 20 year olds
1963	Children and Young Persons Act	Age of criminal responsibility raised to 10 years old. Local authorities must undertake preventative

		work
1969	Children and Young Persons Act	Introduction of supervision and care orders
1982	Criminal Justice Act	Youth imprisonment and borstals merge into youth custody centres for young people under 21 years of age
1988	**Criminal Justice Act**	**Youth custody and detention centres merge to form young offender institutions**
1989	Children Act	Supervision and care orders are abolished for criminal proceedings
1989	UN Convention on the Rights of the Child	Children's best interests should always be a primary consideration. Custody should be for the shortest possible period
1991	Criminal Justice Act	Youth courts replace juvenile courts and now include 17 year olds. Minimum custodial sentencing age raised to 15 years old
1993	Criminal Justice Act	Allows courts to impose tougher sentences by taking account of previous offending history
1994	Criminal Justice and Public Order Act	Doubles the length of detention period available. New custodial sentences for 12-14 year olds
1998	**Crime and Disorder Act**	**Introduces the principal aim of youth justice as the prevention of offending. *Doli incapax* abolished for children less than 14 years of age. Youth justice board and offending teams established**
2003	Criminal Justice Act	Introduction of indeterminate and extended custodial sentences for public protection
2008	Criminal Justice and Immigration Act	Statutory alternatives to custody are introduced
2012	Legal Aid, Sentencing and Punishment of Offenders Act	Allows court to conditionally discharge children

Note. UN = United Nations.

2.3. The introduction of the separate system

In the late 18th and early 19th centuries there was an increasing call for reform of the prison system and the introduction of a 'separate system'. The transportation of prisoners to America had collapsed with the end of the civil war and this had led to overcrowding and hardened criminals mixing with petty offenders (McLynn & McLynn, 1989). The separate system, each prisoner being housed in their own cell, was seen initially as a way to limit the spread of disease and protect the more vulnerable from being corrupted by more hardened criminals (Stack, 1979). John Howard, after whom the Howard League for Penal Reform is named, had travelled to Italy in the 1770s and visited a special institution for juveniles in Florence run by the church. Here, boys were kept in separate cells and wore large hoods when moving around the establishment to stop interaction with peers (Johnston, 2009). The introduction of the separate system led to the building of the first prison for young people, Parkhurst Prison, on the Isle of Wight. William Crawford, Secretary of the Society for the Improvement of Prison Discipline and for the Reformation of Juvenile Offenders, believed this new institution would produce the 'benevolent object'(Crawford, 1835, p. 50). Crawford believed young boys' moral compass could be redirected if they were surrounded by the right people in the right environment and not forced to associate with hardened adult criminals. Parkhurst prison was the first centrally run and funded institution for young people in contact with the CJS.

2.4. Parkhurst Prison

In the early 19th century, after the establishment of Parkhurst as the first young people's prison, two other disposal options became available to judges and magistrates. In addition to Parkhurst, young people could be sent to local adult prisons or to charitable institutions. The charitable institution which covered the catchment area for Feltham (one of the current YOIs) was the Royal Philanthropic School. The Royal Philanthropic School was opened in 1788 and took children who had committed crimes as well as those who were homeless and considered 'at risk'. These voluntary institutions were considered to offer a more 'reformative regime' as opposed to the more 'punitive regime' of local prisons and Parkhurst (Shore, 2002).

The first report (House of Commons, 1839) published on Parkhurst declared:

> There is no branch of Prison discipline which is attended with so many difficulties, and upon which so little is practically known, as the proper treatment and management of criminal youth.
>
> The objects sought to be attained at the Parkhurst Prison are two-fold, viz.,
> – the penal correction of the boy with a view to deter, not only himself, but

> juvenile offenders generally, from the commission of crime, -and the moral reformation of the offender. (House of Commons, 1839, p. 34)

These two goals were to be achieved at Parkhurst by imposing a ban on communication with peers for the first four months. Constant supervision was required to make sure there was no non-verbal interaction and the young people were placed in leg irons. It was believed this quiet time would allow time to reflect on their immoral behaviours, recalibrate their internal compass to then take on a moral path (Stack, 1979). This strict induction was gradually relaxed and later became a month period without leg irons. Whilst early reformers believed in the rehabilitative powers of communication there were some concerns at the time that the lack of communication may have an adverse effect on the mental health of offenders. Samuel Gridley Howe, American prison reformer and member of the Boston Prison Discipline Society, concluded "we have seen that there is nothing in the separate system which prevents the prisoners from having as much social communication with virtuous persons as is necessary for their mental health" (Howe, 1847, p. 10). Positive social interactions with moral individuals were introduced to support the goals of reformation however this became abused and turned towards punitive silence. Language and communication were then not discussed in relation to youth justice for many decades.

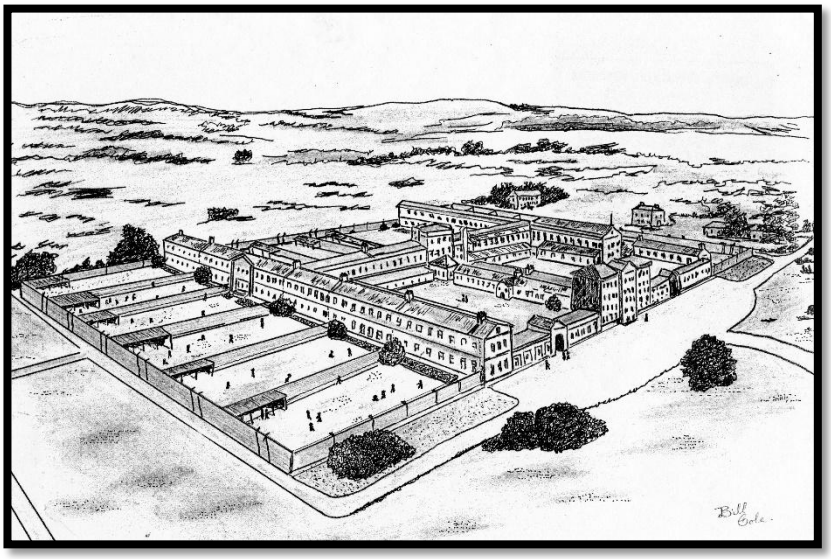
Transportation to the Americas had collapsed, with the end of the American Civil War, but transportation to the new world then began, prison reformers argued transportation was a positive opportunity. In the UK, there were few employment opportunities for young people and even less for those who had been incarcerated. Juveniles were equipped with the skills for a particular trade and then transported, 75% of residents at Parkhurst were sent to the new world between 1842 and 1852. There was little success with the goals of deterring crime and moral reformation with colonies in New Zealand and Tasmania complaining about the behaviour of the Parkhurst boys (Stack, 1979).

2.5. Industrial Schools

In the late 1840s and early 1850s, there was an increasing reaction against the culture of punishment and the rising number of young people being sent to prison. Petitions were delivered to government to extend the use of voluntary institutions and for these to come under government control. Palmerston had said he would submit the legislation but continued to delay which encouraged Middlesex MPs to bring a local bill; this then led to Palmerston to submit the Youthful Offenders' Act, 1854 paving the way for Feltham to be established. The Justices of the County of Middlesex proposed the building of a reformatory school in Feltham,

the Industrial Schools Act of 1857 was then passed and it became Middlesex Industrial School (see Figure 1).

Figure 1 - Middlesex Industrial School, 1858



Children between the ages of 7 and 14 years were sent to industrial schools by magistrates if their behaviour indicated they would benefit from training for employment (London Metropolitan Archives, 2011). An article from the Builders Magazine (1859)[2] showed consideration was given to health and education in the construction of the school; there was an infirmary built, workshops and the classrooms were designed to have natural light from both sides to allow for ventilation, in addition two swimming pools were constructed. There was a move away from the separate system of Parkhurst and boys were housed in dormitories of 50 seen over by a 'master'. Sam Shaw was sent to Middlesex Industrial School aged 8 years and later published a book based on his experiences (Guttersnipe, S. Shaw, 1946).

Unlike Parkhurst, communication was permitted between boys and with staff although it was impersonal; "inside those gates I lost my name and being the 4785th juvenile delinquent to enter, they gave me that number (which I was known by throughout my years there)." (S. Shaw, 1946, Part II, Chapter VI)

Like Parkhurst the goal was to develop skills to ensure the young person was employable. Young children attended education full time and older children spent half their day in the classroom and half their day developing a trade; "the fact that freedom could be gained at fourteen…was a great incentive to the boys to go away, away anywhere from the heart-

[2] http://www.workhouses.org.uk/IS-Feltham/

breaking, soulless captivity of…slavery and semi-starvation of that prison." (S. Shaw, 1946, Part II, Chapter XII)

In 1906, the First Offenders Act was passed which meant every child was given a second chance and was not necessarily sent to custody for a first offence. This meant numbers at Middlesex Industrial School fell and it closed in 1909, in that guise.

2.6. Borstals

The head of English prisons, Sir Evelyn Ruggles Brice, visited American establishments in the 1890s and on his return he introduced the concept of Borstals. The 1908 Prevention of Crime Act[3] introduced a separate system of prison establishments for offenders under the age of 21 years (Johnston, 2009). The borstals were designed to be based on hard physical work but also training and education to prepare them for their release. At the same time a separate juvenile court system was also established.

Feltham borstal opened in 1910 in the same buildings as Middlesex Industrial School. Feltham housed young men between the ages of 16 and 21 years, these young men were considered too old for reformatories or industrial schools but liable to corruption from hardened criminals in adult prisons. Dr Teeters, a Professor of Criminology at Temple University, Pennsylvania USA, visited the borstals in 1949. In an article written on this visit he damned adult prisons but stated he found the borstal a 'pleasant and relaxed institution'. Teeters warned there was 'too much benevolent despotism present', another caution was issued over the fact there was little research conducted into the rehabilitative benefits of the system and this was rather simply assumed (Teeters, 1951, p. 558). During the first and second world wars Feltham was closed to young men in order to accommodate prisoners of war. A borstal sentence was an indeterminate one (minimum 9 months, maximum 3 years); release was based on an improvement in behaviour. Feltham borstal was closed in 1983 following the withdrawal of this sentencing option.

2.7. Young Offender Institutions

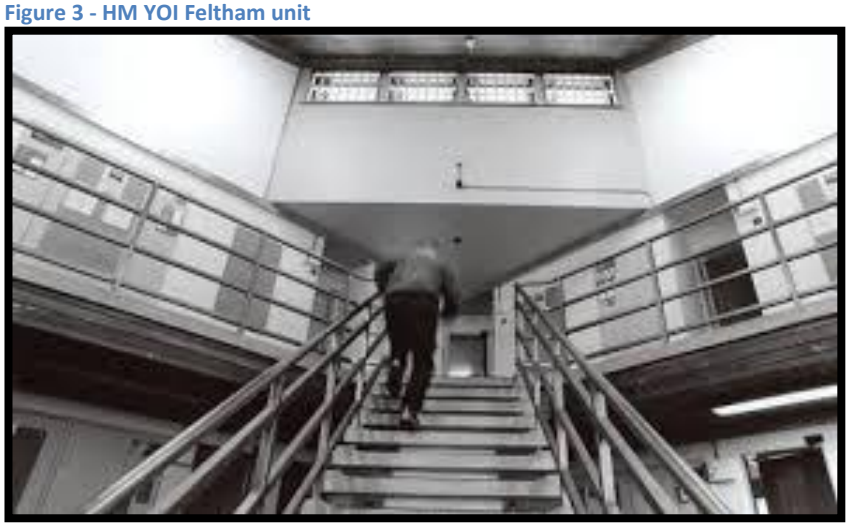
At this point, work began to rebuild the Victorian buildings at Feltham, the new building was based on a Californian college model. Allan Brodie wrote "it's an attempt to create a university campus feel. The units aren't homely, but they do feel reasonable small-scale…reminiscent of a community village." (Brodie, 1999, p. 223) The design was meant to reduce bullying and promote a sense of belonging and community. The design was meant to allow the units be

[3] http://www.legislation.gov.uk/ukpga/1908/59/part/I/enacted

supervised in a paternal manner, much like the 'master' system envisaged for the earlier borstals.

Figure 2 - HM YOI Feltham entrance

Figure 3 - HM YOI Feltham unit



Her Majesty's Young Offender Institution (HM YOI) Feltham was opened in 1991 housing under 18s and over 18s separately, pictures of the external facade and the interior of one of the units are shown in Figure 2 and 3 respectively.

2.7.1.Education provision in Young Offender Institutions

Both under and over 18s had access to Education and this was compulsory for under 18s. Although compulsory for under 18s it was not subject to the same regulations as public schools. The Education (Schools) Act (Department of Education, 1992) did not necessitate prison education facilities to be inspected and statements of Special Educational Needs (SEN) did not need to be followed under the SEN Code of Practice (2001) in the secure estate.

2.7.2.Healthcare provision in Young Offender Institutions

Healthcare was provided by private providers and was funded by the prison. In 1996, Lord Ramsbotham, Chief Inspector of Prisons, completed his annual report in prisons in which he made several recommendations; the extension of specific training on adolescence for prison staff working with juveniles, a core curriculum to be introduced including social skills, a needs assessment to be conducted on induction, and a move towards National Health Service (NHS) provided healthcare (Ramsbotham, 1996).

Following this report, the Youth Justice Board was established from the Crime and Disorder Act, 1998, this was the first time there was a public body with specific oversight for the juvenile estate. During his time as Chief Inspector of Prisons, Lord Ramsbotham had raised awareness of the level of difficulties experienced by offenders in their early life; being placed in care, excluded from school, mental health and substance misuse issues.

In 2006, the NHS became responsible for the provision of healthcare in the prison system. In 2010, Feltham healthcare was provided for the first time by the NHS. Part of this new service provision included, for the first time, provision of an SLT service. There was a growing awareness of health inequalities for those involved in the CJS and a need to provide equity of access: “Health inequalities experienced by people in contact with the CJS are well above the average experienced by the general population” (Revolving Doors Agency, 2012, p. 3).

Increasing concern about the levels of reoffending and the costs of providing the current system led to the Government publishing the paper Transforming Rehabilitation - A revolution in the way we manage offenders (Grayling, 2013)

> We need a tough but intelligent Criminal Justice System that both punishes people properly when they break the law – and also supports them to get their lives back on track, so they don’t commit crime again in the future.
>
> Offenders often lead chaotic lives: Broken homes, drug and alcohol misuse, generational worklessness, abusive relationships, childhoods spent in care, mental illness, and educational failure are all elements so very common in the backgrounds of so many of our offenders. (p. 5)

In April 2013, there was another change in healthcare commissioning with NHS England becoming responsible for the commissioning of offender healthcare, separate from local healthcare provision. With this also came the opportunity to subcontract to private providers,

although these health providers are still required to meet the NHS criteria and undergo assessment by the Care Quality Commission.

2.7.3.Speech, language and communication needs in Young Offender Institutions

There has been an increasing awareness of the SLCN of this population in the last decade. This growing awareness is explored further in the following chapter. Evidence of addressing SLCN now forms part of the Her Majesty's Inspectorate of Prisons (HMIP) inspection framework and the assessment of SLCN is now a core part of the assessment framework (Comprehensive Health Assessment Tool – Part 5 Neurodevelopmental Disorders) (Shaw, Bailey, Tarbuck, Chitsabean, Theodosiou, & Lennox, 2014).

2.7.4.Education and SEN

In 2014, the current government announced a plan to end the era of young offenders institutions (YOIs) with the publication of Transforming Youth Custody (*Transforming Youth Custody*, 2014). In this paper, the government laid out plans to replace YOIs with the creation of secure colleges. The institution would no longer be run by a prison governor but rather a head teacher, placing education at the heart rather than as an adjunct. The first secure college was due to open in 2017; however this policy was overturned by the new Minister for Justice in 2015, Michael Gove. The plans have subsequently been re-introduced and the first secure school is due to open on the grounds of Medway Secure Training Centre in autumn 2020[4].

In 2015, following the implementation of Transforming Youth Custody, the number of hours of Education required for under 18s was doubled (to 30 hours). SLT was specifically mentioned as contributing towards the educational hours. Also, the replacement of statements of special education needs with Education and Health Care Plans (EHCP) saw these now required to continue whilst young people are in custody.

2.8. Conclusion

Since the initial creation of separate detention arrangements for young people at the end of the 18th century there has been an emphasis placed on education and future employment for young people in custodial settings. There have been a variety of methods used in order to achieve these aims. There also appears to have been a cyclical nature to the system with periods of time focussing on benevolence and rehabilitation followed by a periods of more restrictive, punitive measures.

[4] https://www.gov.uk/government/news/applications-open-to-run-countrys-first-secure-school

The relatively recent creation of the Youth Justice Board has permitted a greater focus on the youth estate and the specific challenges and difficulties experienced in this area. There is now greater focus on the underlying difficulties with a view to moving forward to gainful employment. Speech, language and communication skills are beginning to be recognised as important in this process.

3. The development of speech and language therapy services for people in contact with the criminal justice system in the United Kingdom (UK)

3.1. Introduction

SLT with young people in contact with the CJS is a relatively new field and little has been written about how the services have evolved, this chapter aims to provide a background to this evolution to situate the current study. The one report sourced was written in the United States (US) in 1973 (Weaver Jones & Healey). In this report it states the first speech and language therapist (SLT) employed in the prison service in the US was recruited to Lebanon Correctional Institution, Ohio, a male adult facility, in 1964. No papers or reports were found on the development of SLT services in the UK. As there were no published papers available the researcher made use of her clinical background and network to collate some of this information that was available but unpublished. Since 2012 a mapping exercise has been conducted annually, by the Criminal Justice and Secure Settings Clinical Excellence Network (CEN) in conjunction with the Royal College of Speech and Language Therapists (RCSLT). This mapping process has been carried out to look at the number of SLTs working in this area and how these services are developing. However this mapping exercise had not looked at how or when services developed, therefore the decision was made, by the CEN, to interview subject matter experts in order to investigate the development of these services in the UK. The CEN decided that it was imperative to collect the information from key therapists in 2015 as a number of therapists who were key in developing this area of practice were coming up for retirement and therefore this information was at risk of being lost.

This chapter aims to:

- Describe how information was gathered
- Investigate how these services were created
- Provide background on how SLT services have developed and the key individuals involved
- List the first justice services in the UK

3.2. Process for Informal Data Collection

In the author's role as a committee member for the RCSLT CEN in this area, information was collected on the development of SLT Services in this field. This information was collected in 2015. The key individuals in this area were known to the author through clinical practice and

the CEN. Once the relevant SLTs were identified they were contacted by email to gain their responses. Questionnaires were sent out to 19 SLTs who have/had worked in this field for a number of years. Two emails did not reach the intended recipient and an alternative email address was not found. Ten responses were received, a response rate of 59%. The questionnaire consisted of seven questions (see Table 2).

Table 2 – Criminal Justice System SLT Questionnaire

	Questions
1.	How did you come to be working with offenders?
2.	When and where have you worked with offenders?
3.	Were you aware of any services that predated your own?
4.	Do you know which was the first speech and language therapy (SLT) service, for young offenders, in the UK?
5.	Do you know how your service came to be developed?
6.	Are there other people you think I should be asking these questions to?
7.	Is there anything else you feel I should know?

Note. SLT = Speech and Language Therapy; UK = United Kingdom.

The questions were divided in to three themes; when the services began, how the services began and who was involved. The responses were collated by the author and are described below.

3.3. When did speech and language therapists begin working with young people in contact with the criminal justice system?

SLTs work with young people in contact with the CJS in either custodial or community settings. It appears services developed first in the custodial settings and later developed in the community. Currently there are more SLTs employed in the community than in custodial settings, this reflects the fact far less young people are held in custody (approximately 900) than are seen in the community (approximately 17,500) (*Youth Justice Statistics 2016/17*, 2018). Polmont in Scotland was the first custodial setting to develop a service in 1973. It was a further thirty years before an equivalent service was developed in England. In England the first services to develop with offenders were working with adults, later services spread to juvenile custodial settings before community services were started in 2001. The first services known in their respective areas are listed in Table 3 below.

Table 3 – Timeline of the first SLT services in each area of the Criminal Justice System

When	Where	Remit
1973	Polmont Borstal	Scotland, custodial, juvenile, male
1983	Rampton High Secure Hospital	England, custodial, adult, male & female
2000	Red Bank Secure Children's Home St Catherine's Secure Centre for Girls Gladstone House Community Home	England, custodial, juvenile, male & female
2001	Salford Youth Offending Service (YOS)	England, community, juvenile, male & female
2003	HM YOI Werrington & Brinsford (research projects only)	England, custodial, juvenile, male
2007	HM YOI Hindley	England, custodial, juvenile, male
2010	**HM YOI Feltham**	England, custodial, juvenile, male
2015	Medway Secure Training Centre	England, custodial, juvenile, male

Note. HM YOI = Her Majesty's Young Offender Institution.

3.4. How did speech and language therapists come to be working with young people in contact with the criminal justice system?

From the responses there does not appear to be a uniform manner in which services were reported to develop. The most common themes were from research projects and learning disability services.

Several services (Polmont, Broadmoor, Northgate) came about as SLT were a part of the community learning disability services that also provided forensic services. Respondents said they were asked to do an individual assessment and then services grew from this initial contact. The opportunity to make actual contact with the service and make them aware of the benefits of SLT appears to be an important factor. The service at Feltham was also developed in this way; a community SLT was asked to do an assessment for a young person with a stammer. From this contact point the local SLT manager and the local commissioner built the case for a dedicated SLT service.

There is also evidence a number of youth justice SLT services (Milton Keynes YOS, Leeds YOS) started as the result of research projects, although not all of these services have continued after the completion of the research (Brinsford YOI, Ealing YOS). The first research project in a custodial youth justice setting in the UK was conducted by Professor Karen Bryan, Jackie Freer & Cheryl Furlong (2007). It came about as Lord Ramsbotham had visited HM YOI Polmont and seen the beneficial effects of providing SLT. Some time later Lady Helen Hamlyn asked Lord Ramsbotham his opinion as to what intervention may improve the outcomes for young people in custody, he recounted his experience of visiting Polmont and this led to the funding of the project.

> Fortunately, in 2002, Lady Helen Hamlyn, who had been left a trust by her husband, asked me to advise her on helping with young offenders and whether anything made a particularly significant difference. I told her that the only thing that I had come across in the whole of my experience which affected 100 per cent of an establishment was speech and language therapists. To cut a long story short, we went to the Home Secretary, Mr Blunkett, the prisons Minister, Mr Benn, and the Commissioner for Correctional Services, Mr Narey, and agreed that Lady Hamlyn would fund a two-year trial of two speech and language therapists in young offender establishments. It would be overseen by Professor Bryan and therefore evaluated academically. We chose Staffordshire as a location because of the excellence of its director of social services, under whom speech and language therapists came. The two therapists were appointed to Brinsford and Werrington young offender establishments in July 2003, at a cost of £150,000, which Lady Hamlyn had made available.
>
> Citation: HL Deb, 27 October 2006, c1448

Later research projects and new posts came about as a result of the papers (Bryan, 2004; Bryan et al., 2007) produced by this initial research project, along with the campaign by the RCSLT to increase awareness of the level of speech, language and communication needs in the young offender population and The Bercow Report. The Bercow report (2008) advocated for the provision of SLT services to all young people in contact with the youth justice system.

Red Bank Secure Children's Home is the only service reported to have developed from an investigation into a serious incident. The investigation into the incident flagged mental health concerns were not being addressed. This initial report led to a multidisciplinary team going in to assess the mental health needs of the population, this team included an SLT. The reports produced demonstrated high levels of SLCN. At the same time, the team was also successful in securing funding to provide mental health services including the provision of SLT services, to Red Bank. The service later developed to include provision of community youth justice services and also the first permanent service provision to a YOI in England.

Whilst SLT services have gradually increased in the youth justice system over the last decade this does not appear to have happened in a coordinated manner, or as a result of an individual factor. Services have developed due to a number of different factors; from the respondents it appears the influence of an individual at a local level has been as important as research developments and policy drivers.

3.5. Who were the instigators of the development of services in the UK?

As discussed, locally there have been individuals who have been responsible for the growth of their services. There are a number of individuals mentioned by respondents who have also had a broader influence as follows;

3.5.1.Lord Ramsbotham

Lord Ramsbotham worked as Chief Inspector to Her Majesty's Prison Service between 1995 and 2001. During this time he led a report on the quality of health care provision in the prison service, advocating this should fall under the jurisdiction of the NHS. Lord Ramsbotham is also Vice President of the RCSLT and an advisor to the Helen Hamlyn Trust which funded the first SLT research project in this area.

3.5.2.Jane Mackenzie, Claire Moser & Kim Hartley-Keane

Jane and Claire have both worked in the role of England Policy Officer at the RCSLT and Kim Hartley-Keane has taken this role in Scotland. In this role they have lobbied parliamentarians, created evidence dossiers and promoted the role of SLTs in this field. Jane Mackenzie has now been succeeded by Peter Just who continues this work.

3.5.3.Professor Karen Bryan

Karen is a highly specialist SLT and researcher who has both worked and conducted research in the forensic field. Karen has written both research articles and clinical textbooks on the work in this field. Karen is often called upon to provide evidence on the level of SLCN in this field to the government, professionals and other bodies.

3.5.4.John Bercow MP

Before taking the role of speaker of the House of Commons, John Bercow led on a report to review the provision of services to children (0-19) with speech, language and communication needs (Bercow, 2008). In the report Mr Bercow advocates all children within the CJS should have access to SLT services. This report is often quoted to support the development of services. Subsequently the Bercow 10 report (*Bercow: 10 Years On*, 2018) has been launched which includes a tailored briefing for youth justice[5], this report was launched at Speaker's House in March 2018.

3.6. Summary

SLT services have been provided to young people in contact with the CJS, in a piecemeal fashion since their inception in 1973. There continues to be inequity of service provision across the UK although service provision is continuing to increase despite cuts to services in other

[5] https://www.bercow10yearson.com/resources/

areas. Since this study began there has been an increase in SLT posts with youth offending services, adult prisons and the first posts recently established in the CJS in Northern Ireland.

4. A Review of the Literature on Speech, Language and Communication Profiles in the Offender Population

4.1. Introduction

This chapter presents a review of the research literature around the prevalence of speech, language, communication and hearing disorders amongst the offender population. This is followed by a broader discussion of issues raised in reviewing the evidence. The review consists of; a chronological summary table (see Table 4) of the prevalence research literature reviewed, followed by a summary of the key themes raised, a summary of other relevant literature and a discussion on the theoretical underpinnings. As these papers come from different countries and different time periods they contain different vocabulary to describe the people who have had contact with the CJS and the settings in which they were seen. As altering the vocabulary could affect who was actually being referred to it was decided the terminology used in the original paper should be used.

This chapter aims to:

- Review and critically appraise existing literature in this area
- Assess what we know about the language profiles of young people in contact with the CJS
- Consider the reasons for the higher prevalence of SLCN
- Explore limitations of the current research
- Inform the theoretical approach to this study

Table 4 - Chronological summary of research literature on prevalence of SLCN in the criminal justice system[6]

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
Weaver Jones	Taskforce on Speech Pathology and Audiology Service Needs in Prison	1973	USA	Custodial	10-80	Male/ Female	25-4858	N	Not stipulated	Some	Incidence of speech, language and hearing disorders higher than the general population.
Wagner	Communicative disorders in a group of adult female offenders	1983	USA	Custodial	18-44	Female	50	N	PAT, My Grandfather passage, Token Test	Y	44% communication impairment - Greatest articulation, then hearing, rhythm and voice to least for language.
Davis	Language skills of delinquent and non-delinquent adolescent males	1991	USA	Custodial	14-17	Male	24	Y	TOAL 2, Clinical Discourse Analysis	Y	38% of delinquent adolescents eligible for SLT v 4% non-delinquent. P= <.01 on speech errors and TOAL scores between groups.
Stattin	Early Language and Intelligence Development and Their Relationship to Future Criminal Behavior	1993	Sweden	Community Longitudinal	3-17	Male	122	N	Brunet-Lezine psychomotor developmental test, Terman-Merril Intelligence Test, WIT 3, maternal and psychologist report	N	IQ at age 3 p=<.01 link to offending. Language at 18months p=<.05 link to offending. At age 5 stronger relationships for language than IQ with offending. Language link to offending remains significant even if control for SES.

[6] An earlier version of this table appears in the RCSLT Justice Evidence Base Dossier (Coles, Gillett, Murray, Turner, 2017).

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
Sanger	Prevalence of Language Problems Among Adolescent Delinquents: A Closer Look	2001	USA	Custodial	13-17	Female	67	N	CELF 3, Adolescent WORD Test, WISC 3	Y	CELF 3 mean for group within normal limits. 19.4% scored -1.3SD plus on the CELF, making them eligible for local SLT services.
Humber	The oral language skills of young offenders: A pilot investigation	2001	Australia	Community	13-21	Male	15	Y	SCOLP, TLC-E, Flowerpot Incident	N	P = <.01 on SCOLP, TLC and narrative between groups. Offending group performing worse.
Bryan	Preliminary study of the prevalence of speech and language difficulties in young offenders	2004	UK	Custodial	18-21	Male	30	N	Boston, Fullerton, Cookie Theft +++	N	Scores - 73% low grammar, 47% low narrative, 43% low naming and 23% low comprehension.
Linares-Orama	Language-learning disorders and youth incarceration	2005	Puerto Rico	Custodial	?	Male	17	Y	'standardised tests'	N	70% have language learning difficulties - no definition of what this means.
Bryan	Language and communication difficulties in juvenile offenders	2007	UK	Custodial	15-18	Male	58	N	TOAL 3, BPVS 2, TROG 2	Y	62% not at Level 1 literacy. BPVS age equivalent 11;5. TOAL 3 46%-67% performed Poor/V Poor. Vocabulary scores the worst both expressive and receptive.
Blanton	Comparison of	2007	USA	Undefined	13-	Male/	32	Y	KBIT, CELF 3	Y	On IQ assessment, no

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
	Language Skills of Adjudicated and Non-adjudicated Adolescent Males and Females				17	Female					difference between adjudicated and non-adjudicated groups. Difference on CELF-3. All means within norms. No gender difference. Five adjudicated (31%) would qualify for SLT services but no non-adjudicated.
Munoz	Verbal ability and delinquency: testing the moderating role of psychopathic traits	2008	USA	Custodial	13-18	Male	100	N	Peabody Picture Vocabulary Test 3, APSD, ICU, Self-report of delinquency	N	High Callous and Unemotional traits + High verbal ability = Higher violent delinquency. High verbal ability + Low Callous and Unemotional traits = Reduced violent delinquency
Snow	Oral language competence, social skills and high-risk boys: What are juvenile offenders trying to tell us?	2008	Australia	Community	mean 15.8	Male	50	Y	TLC-E, CELF, Flowerpot Incident, KBIT	N	Offenders worse on all language tests than controls but not on verbal IQ. 52% were considered language impaired (-1SD). Significant difference in narrative skills of language impaired (LI) and non LI offenders.
Mouridsen	A long-term study of offending in individuals diagnosed with a developmental language disorder as children	2009	Denmark	Community Longitudinal	29-48	Male/ Female	469	Y	Not stated	N	DLD 3% lower in offending population. 4.6 x higher level of sex offending by DLD males - link to severe expressive disorder BUT very small numbers.
Snow	Oral language competence in	2011	Australia	Custodial	17-21	Male	100	N	TLC-E, CELF 4, DASS, KBIT,	N	50% = Language Impaired (-2SD) on CELF. 59% = LI on TLC

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
	incarcerated young offenders: Links with offending severity								CLCI		= -2SD on 2 or more subtests. 46% = LI on both.
Gregory	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	2011	UK	Community	11-18	Male/ Female	73	N	CELF 4, Canterbury & Thanet	Y	CELF Understanding Spoken Paragraphs 20% = -2SD+, Formulated Sentences 14%. Word Associations 18% did not meet age equivalence. Canterbury & Thanet Deduction task 20% did not reach 14 year level.
Games	A small-scale pilot study into language difficulties in children who offend	2012	UK	Community	11-16	Male/ Female	11	N	CELF 4, WISC 4	N	CELF results 36.4% = -3SD. 27.3% = -2SD. 27.3% = -1SD. 9.1% = WNL. Difference between mainstream and SEBD groups, SEBD lower.
McNulty	Neighborhood Disadvantage and Verbal Ability as Explanations of the Black–White Difference in Adolescent Violence	2013	USA	Community Longitudinal	12-30	Male	5322	N	Armed Services Vocational Aptitude Armed Services Vocational Assessment	Y	Low verbal ability was a predictor of adolescent violence. Verbal ability negates the over representation of black youths. Low verbal ability and low school attainment are seen as criminogenic risk

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
									Battery		factors.
Bellair	Verbal Ability and Persistent Offending: A Race-specific Test of Moffitt's Theory	2014	USA	Community Longitudinal	12-30	Male	8984	N	CAT-ASVAB	Y	Low verbal ability, low SES and high peer drug use more likely to be repeat offender (p.<.05)
Bryan	Language difficulties and criminal justice: the need for earlier identification	2015	UK	Custodial	11-17	Male	118	N	CELF 4, BPVS	N	57% = -1.5 SD plus on at least one subtest. Low scores on Word Classes Expressive (p=0.015) and Understanding Spoken Paragraphs (p=0.05) = lower incidence of challenging behaviour.
Snow	Language functioning, mental health and alexithymia in incarcerated young offenders	2015	Australia	Custodial	15-20	Male/ Female	100	N	CELF 4, TLC-E, Flowerpot Incident, DASS, TAS-20, KBIT 2	Y	40% very low/severe on CELF, 37% meet criteria Snow & Powell 2011 (44% male ATSI). 31% depression, 26% anxiety, 40% stress, 59% possible alexithymia. Significant correlation between depression and alexithymia.
Anderson	**Language impairments among youth offenders: A systematic review**	**2016**	**Worldwide**	**Custodial and community**		**Male/ Female**					**Average of 60% with speech, language and communication needs**
Lount	Hearing, Auditory Processing, and Language Skills of Male Youth Offenders and	2017	New Zealand	Custodial	14-18	Male	33	Y	Auditory processing test, CELF-4, TNL, TONI-3	Y	Significant difference between CELF core language and IQ scores for YOs and controls. Controls CELF and IQ score mean the same. YOs

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
	Remandees in Youth Justice Residences in New Zealand										CELF score lower than IQ score. Similar levels of APD in both groups but more APD + LI in the YO group.
Hughes	Language impairment and comorbid vulnerabilities among young people in custody	2017	UK	Custodial	15-18	Male	93	N	TOWK, CHAT, KBIT 2, SRS, Rivermead	Y	28% = -1.5 SD plus on at least one TOWK standard score. Highest % impaired in receptive language. Lowest % for expressive language. Higher levels of self-harm, ID and alcohol use in impaired group.
Hopkins	Examining the association between language, expository discourse and offending behaviour: an investigation of direction, strength and independence	2018	UK	Community	13-18	Male/ Female	77	Y	SALT, CELF-4, WASI	Y	Overall mean percentage for DLD in the YO group 44% at -2 SD. Significantly lower in non-offender group. Total number of words, different words, MLU and SI strongest predictors of offender group.
Swain	Speech-language pathology intervention for young offenders	2017	Australia	Custodial	13-18	Male	27	N	CELF-4, TASIT-R, CNT, RCF, TAS-20, LCQ, DEX, DASS	Y	52% -1 SD, 10% -2 SD on CELF core language. Teachers rated 85% as having a communication impairment. Around one third had difficulties perceiving emotions on TASIT-R and/or TAS-20.
Winstanley	More or less likely to offend? Young adults with a	2018	UK	Community	23-25	Male/ Female	84	Y	CELF-4, WASI		All individuals had a previous diagnosis of DLD. Individuals with diagnosed DLD had less

First Author	Title	Year	Country	Location	Age	Gender	Sample Size	Controls	Ax Used	BAME Data	Results Summary
	history of identified developmental language disorders										contact with Police than age matched peers.
Knott	Speech and language therapy in prison health	2018	Northern Ireland	Custodial	18+	Male/ Female	15	N	CELF-5, Mt Wilga, interview, informal vocabulary assessment		14/15 1 SD or more below on CELF core language. Receptive scores lower than expressive. High levels of self-awareness of communication difficulties

Note. Ax Used = assessment used; BAME Data = Black; Asian and Minority Ethnic group data; USA = United States of America; N = No; Y = Yes; PAT = Phonological Awareness Test; TOAL = Test of Adolescent and Adult Language; SLT = Speech and Language Therapy; WIT = Word Intelligence Test; IQ = Intelligence Quotient; SES = Socioeconomic status; CELF = Clinical Evaluation of Language Fundamentals; WORD Test = The adolescent WORD test; WISC = The Wechsler Intelligence Scale for Children; SCOLP = Speed and Capacity Of Language Processing; TLC-E = Test of Language Competence Extended edition; UK = United Kingdom; BPVS = British Picture Vocabulary Scales; TROG = Test for Reception Of Grammar; V poor = Very poor; KBIT = Kaufman Brief Intelligence Test; APSD = Antisocial Process Screening Device; ICU = The Inventory of Callous-Unemotional Traits; SD = Standard Deviation; DLD = Developmental Language Disorder; DASS = The Depression, Anxiety and Stress Scale; CLCI = The Cormier-Lang Crime Index; LI = Language Impairment; WNL = Within Normal Limits; SEBD = Social Emotional and Behavioural Difficulties; CAT-ASVAB = Computerised version of the Armed Services Vocational Aptitude Battery; TAS = Toronto Alexithymia Scale; ATSI = Aboriginal and Torres Strait Islander; TNL = Test of Narrative Language; TONI = Test of Non-verbal Intelligence; YO = Young Offender; APD = Auditory Processing Disorder; TOWK = Test of Word Knowledge; CHAT = Comprehensive Healthcare Assessment Tool; SRS = Social Responsiveness Scale; SALT = Systematic Analysis of Language Transcripts; MLU = Mean Length of Utterance; SI = Subordination Index; TASIT = The Awareness of Social Inference Test; CNT = Contingency Naming Test; RCF = Rey Complex Figure; LCQ = La Trobe Communication Questionnaire; DEX = Dys-Executive Questionnaire.

Recurrent themes emerging from the papers presented in Table 4 are explored in more detail below.

4.2. Prevalence of speech, language and communication needs in the offender population

These studies found prevalence rates of SLCN between 19% (Sanger, Moore-Brown, Magnuson, & Svoboda, 2001) and 70% (Linares-Orama, 2005) in their offender populations. Sanger et al. (2001) found the lowest prevalence rate of all the studies examined. Sanger et al. (2001) assessed female, custodial, young offenders in the United States and found 19.4% of participants met the criteria (Equal to or lower than -1.3 standard deviation (SD) on the Clinical Evaluation of Language Fundamentals (CELF)) for eligibility for local SLT services. Linares-Orama (2005) found the highest prevalence. This study was completed in Puerto Rico with male, custodial, young offenders. Linares-Orama states '70% have language learning difficulties' however neither the definition nor the method of assessment is given. Even the lowest level of language impairment found in these studies is more than double the median found in the general paediatric population (Law, Boyle, Harris, Harkness, & Nye, 1998). Law et al. (1998) completed a systemic review of prevalence papers in the general paediatric population, finding a range from 1-19% with a median estimate of 5.9% across the papers reviewed. Language difficulties are often found to be overrepresented in males (Petheram & Enderby, 2001) therefore it should not come as a surprise that the study (Sanger et al., 2001) with the lowest prevalence rates is one assessing female's language skills. However, it is interesting to note that other research including females (Bryan, 2004; Snow & Powell, 2011) have a more stringent cut off on the CELF (-1.5 and 2 SD) and still have far higher levels of language impairment than Law et al.'s (1998) median estimate for the general population.

All studies with a comparison or control group (Blanton & Dagenais, 2007; Davis, Sanger, & Morris-Friehe, 1991; Snow & Powell, 2008) found a higher prevalence of SLCN in the offender group. Blanton and Dagenais (2007) found no difference on the IQ assessment between the adjudicated (contact with the CJS) and non-adjudicated (no contact with the CJS) participants, but did find a difference on the language assessment. Blanton and Dagenais (2007) found 3% (n=1) of the non-adjudicated group would qualify as language impaired whereas 22% (n=8) of the adjudicated group were language impaired. Interestingly Blanton and Dagenais (2007) found no difference between males (n=4) and females (n=4) on rates of language impairment, but they did find differences in the profile of language impairment. For all of the adjudicated group receptive language scores were lower than expressive scores, but the receptive scores

were further depressed in the adjudicated females group. However, sample sizes were small with only 16 individuals of each gender so these differences should be interpreted with caution.

Despite significant differences in the prevalence levels reported in the research, all showed higher levels of SLCN than the general population and matched controls. There is less evidence, specifically, on the prevalence of SLCN amongst female offenders and this could benefit from further investigation. As there are significantly more males than females in contact with the CJS this apparent imbalance in the research may actually accurately reflect the population.

4.3. Language profiles of young people in contact with the criminal justice system

There is no clear consensus in the literature regarding which area of language was most impaired with different studies finding the greatest impairment in different areas; Wagner et al. (1983) found the largest percentage with articulation difficulties, Bryan found grammar to be most impaired (2004) in her first study but then vocabulary to be most impaired in her 2007 follow-up study. However, it is not a direct comparison as Wagner et al. did not assess language skills and Bryan did not assess speech. Also, Bryan assessed different age groups in each of her studies. The majority of studies have focussed on the language skills of the individuals. Two of the studies assessed speech (Davis et al., 1991; Wagner, Gray, & Potter, 1983) and two of the studies assessed social communication or pragmatic skills (Sanger, Coufal, Scheffler, & Searcey, 2003; Sanger, Hux, & Ritzman, 1999). Both studies that assessed speech found high levels of impairment and this may be an avenue that requires further investigation, it is unclear why this featured in early studies but has not been addressed since 1991 despite speech difficulties being found to be overrepresented in this population. Sanger et al.'s studies in to the social communication skills of young people in contact with the CJS found they understood the need for these skills and demonstrated an ability to use them but did not use them consistently in daily communication. With regard to the language studies, several gave an overall assessment score whilst some gave a breakdown of results by subtest. Reporting individual subset results permits us to construct a fuller picture of the SLCN experienced by this population and begin to think about how these needs may be addressed. Research that has looked at language skills and have broken down the areas appear to suggest vocabulary, narrative skills and expressive language skills are particularly impaired (Bryan, 2004; Bryan, Garvani, Gregory, & Kilner, 2015; Snow & Powell, 2008) although these findings are not replicated in all studies (Hughes et al., 2017; Knott, 2018). The use of assessment tools

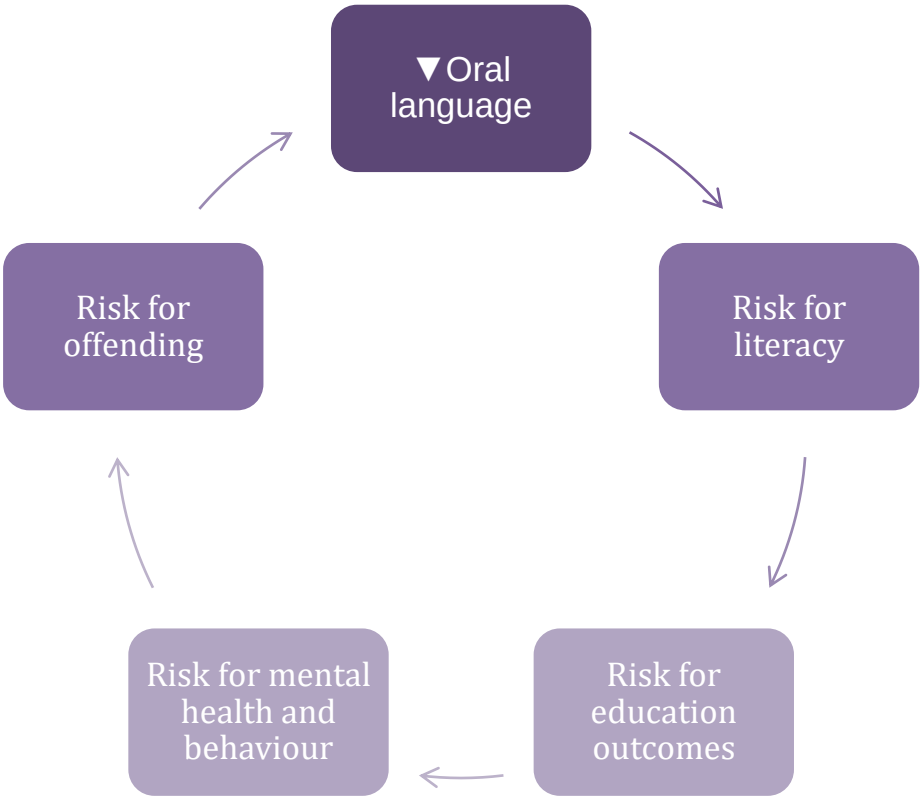
must also be considered. In the literature reviewed, more than twenty different language assessment tools have been employed. Although a lot of these state they assess expressive and/or receptive language skills, they focus on different elements within these broader groups and therefore may not be directly comparable. Further research with matched assessment tools, recruiting larger cohorts would be helpful to build a clearer picture of any possible language profiles.

4.4. Speech Language and Communication Needs (SLCN) as a risk factor

Longitudinal studies found conflicting results as to whether SLCN in childhood were a risk factor for future offending. Mouridsen and Hauschild (2009) found those with a developmental language disorder had lower future offending rates than controls whereas Stattin and Klackenberg-Larsson (1993) and Bellair et al. (2014) found a link between poor language skills and an increased risk of offending. Mouridsen and Hauschild (2009) did find a link between developmental language disorder and an increased risk of committing sexual offences, but warned against over stating this link due to the small numbers (n=9). Stattin and Klackenberg-Larsson (1993) and Bellair et al. (2014) both looked at the impact of socioeconomic status (SES) and found there was a correlation between SES and an increased risk of offending. Stattin and Klackenberg-Larsson (1993) found when controlling for SES a link between low verbal ability and an increased risk of offending still remained. These findings are supported by earlier research by Moffitt who found the link between low IQ and offending was cancelled out when controlling for SES, however a link remained between low verbal IQ and offending even after controlling for SES (Moffitt, Lynam, & Silva, 1994).

Bryan et al. (2015) developed the compounding risk model, shown in Figure 4, to attempt to explain the links between SLCN and offending behaviour. There exists research evidence for each link in the cycle. However, as yet evidence does not exist that poor oral language skills lead directly to a risk of offending. It is plausible given the links between each element a causal link between early poor oral language skills and risk of offending may be found in the future.

Figure 4 - Bryan's Compounding Risk Model



There has been much discussion as to whether poor oral language skills affect the development of behaviour problems, or whether behaviour problems affect the acquisition of language skills (Clegg, Hollis, Mawhood, & Rutter, 2005; Lindsay, Dockrell, & Strand, 2007; Mackie & Law, 2010; Ripley & Yuill, 2005). Petersen and colleagues conducted two longitudinal studies and concluded from these that language skills had a greater impact on the development of behavioural difficulties than the reverse (Petersen et al., 2013). The compounding risk model indicates it is important to address language difficulties as early as possible so the impact can be reduced, a focus on developing language skills in the early years was seen with the Sure Start initiative and again with the all-party manifesto 'The 1001 Critical Days' (Leadsom, Field, Burstow, & Lucas, 2013). There has been evidence to suggest targeting language skills at a young age is successful (Chambers, Cheung, & Slavin, 2015).

4.5. Legal Systems

There are many issues that make it difficult to compare these prevalence studies; the legal system in each country, percentage of young people subject to criminal proceedings in each country, where the young person resides (community or custodial), gender, ethnicity, assessments used, reporting of results, age of participants and the definition of SLCN. In addition to issues with comparing one study to another, there are also issues of rigour within

each study; size of the sample, has a comparison group been used, recruitment of sample and methodology.

The majority of the studies have been conducted in the UK, Australia and the USA all of which have differing legal systems which makes it problematic to compare populations. The overarching principles of each country's youth legal system also vary:

UK - Section 37 of the Crime and Disorder Act 1998 states 'all those working within the youth justice system to have regard to the principal aim of **preventing offending** by children and young people'. In 2008 The Criminal Justice and Immigration Act (2008) was introduced placing a specific emphasis on **rehabilitation**.

Australia – There are two main principles upon which the Australian youth justice system is based, these are that young people should be **detained** only **as a last resort** and that they should be detained for the **shortest appropriate period** (Chrzanowski & Wallis, 2011)

USA – "The United States' juvenile justice system was founded a century ago with the enlightened goal of providing individualized treatment and services to children in trouble. But in the 1990s, the boundaries between the juvenile and criminal justice systems began to erode. All but three states passed laws designed to treat youthful offenders as criminals instead of delinquents, ignoring their immaturity and **holding them accountable as adults**." (Fanton, 2005, para. 1)

The number of young people detained in each of the respective country also varies significantly, as shown in Table 5. The degree of variation between each country suggests that there are likely to be significant differences between the populations.

Table 5 - Detention rates by country

	No of young people per 100,000 detained in custody	No of young people per 100,000 detained in custody in area research studies completed
United Kingdom (2013)[7]	26	
Australia (2013)[8]	0.33	Victoria – 0.09
United States of America (2011)[9]	196	Nebraska – 337 Wisconsin – 174 Louisiana - 222

The studies with offenders have been conducted both in custodial settings (Davis et al., 1991; Muñoz, Frick, Kimonis, & Aucoin, 2008) and in community settings (Games, Curran, & Porter, 2012; Gregory & Bryan, 2011). There are a lot of similarities between these populations e.g. age range, gender, all involved in the CJS but there are likely to be a number of differences in these populations especially in countries where the percentage of young people detained is low. In the USA, where the rate of youth incarceration was highest (see Table 5) there were no papers found conducted in a community setting.

4.6. Gender

In the general population gender differences have been identified when looking at SLCN with males being overrepresented. Petheram and Enderby (2001) found 60% of referrals to services, over 8 years, were male. Males make up the majority of the criminal justice population and therefore we may expect this overrepresentation to be further emphasised in this population. The majority of studies completed in this area have concentrated on males, with few studies looking exclusively at females (Sanger et al., 2001; Wagner et al., 1983). Sanger et al. (2001) found 19.4% of her female offender cohort would qualify for community SLT services (≥-1.3SD on the CELF), whereas Snow and Powell (2011) found 50% of her male offender cohort performed at -2SD on the CELF. This appears to support the view male offenders have higher levels of SLCN than their female counterparts. However, Blanton and

[7] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/276098/youth-justice-stats-exec_summary.pdf

[8] http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129545393

[9] http://www.ojjdp.gov/ojstatbb/corrections/qa08601.asp?qaDate=2011

Dagenais (2007) found no gender difference in their study, again using the CELF assessment tool. Blanton and Dagenais' sample size was smaller (16 female, 16 male) when contrasted to the 67 females in the Sanger et al. study and 100 males in the Snow and Powell paper. Therefore, sample size may have contributed to not finding the same differences as other studies.

4.7. Ethnicity and Socioeconomic status

Black, Asian and minority ethnic (BAME) groups are overrepresented in the CJS (Lammy, 2017). Whereas 3.1% of the UK population self identifies as Black, this group represents 7.5% of the convicted population and an even higher percentage of the juvenile population (*Statistics on Race and the Criminal Justice System 2012*, 2013). It has been suggested individuals from BAME populations have a higher incidence of SLCN than the general population (Strand & Lindsay, 2012). Therefore we may expect SLCN to be higher in the CJS population. However, Qi et al. (2006) found although children from BAME backgrounds performed 1.5 SD below controls on a vocabulary assessment when SES was controlled this difference disappeared. National data is not gathered on SES in the UK for the criminal justice population therefore it is difficult to test this. It is of note, children entering school from low SES populations (Locke, Ginsborg, & Peers, 2002) have similar SLCN figures as those in the CJS. Though, Stattin and Klackenberg-Larsson (1993) found even when you controlled SES the link between poor language skills and offending remained. McNulty et al. (2013) found black youths were over-represented in the CJS in the US however when they looked at verbal ability they found this explained the over representation.

There appears to be a very complex relationship between language skills and both SES and BAME which would benefit from further exploration.

4.8. Assessment Tools

A wide variety of assessment tools have been used when conducting studies in this area which complicates comparison, in addition there are some issues with the choice of assessment. In one study, the author simply stated they had used 'standardized' assessments but did not stipulate which (Linares-Orama, 2005). Some assessments have been used outside of the age range they were designed for (Bryan et al., 2007; Humber & Snow, 2001; Wagner et al., 1983), both below and above the assigned range. Some have been used in countries were normative data does not exist (Bryan et al., 2007). Some studies have made use of unpublished or non-standardized assessments; the Canterbury and Thanet, Flowerpot incident and the Grandfather passage (Gregory & Bryan, 2011; Snow & Powell, 2008; Wagner et al., 1983).

Other assessment tools have been used which were not intended to be used with this population (Bryan, 2004; Humber & Snow, 2001; Wagner et al., 1983). For example, the Speed and Capacity Of Language Processing Test (Baddeley, Emslie, & Nimmo-Smith, 1992) was originally designed for use with people with brain damage.

It is not surprising these difficulties are encountered as there are relatively few assessments designed for use with the adolescent population. Alongside known SLT assessment tools, tools from other fields have also been used (Bellair et al., 2014; Stattin & Klackenberg-Larsson, 1993). One of these tools, the Armed Services Vocational Aptitude Battery (ASVAB, Avila, Boccanfuso, & Metcalfe, 2011), has an additional component by adding in the fact it is a timed test. This could mean a poor result is due to speed of processing rather than actual language skills.

In some of the papers results are given as overall performance on the assessment tool (Games et al., 2012; Linares-Orama, 2005) whereas other papers detail performance on each subtest (Bryan et al., 2007; Gregory & Bryan, 2011). As different assessment tools are used in the various studies it is helpful to have a full breakdown of results to facilitate some level of comparison of skills in different areas between studies.

4.9. Age

Age range is also a complicating factor when comparing these studies; ages range from 11-48 in the respective studies. Some studies breakdown the results so it is possible to pull out information on a specific age but others do not. Two of the studies do not define their age range; Linares-Orama (2005) simply states the study was completed with juveniles whereas Snow (2008) gives the mean age of participants. The age of criminal responsibility and the upper limits of the youth justice system vary between countries again causing complications in the definition of a juvenile/young offender.

4.10. Definition of language impairment/disorder

A major issue is there has been no standard definition of a speech, language or communication impairment and how this is assessed. The Diagnostic and Statistical Manual of Mental Disorders version 5 gives these diagnostic criteria for a Language Disorder (American Psychiatric Association, 2013):

> Diagnostic Criteria 315.39 (F80.9)
>
> A. Persistent difficulties in the acquisition and use of language across modalities (i.e., spoken, written, sign language, or other) due to deficits in comprehension or production that include the following:
>
> 1. Reduced vocabulary (word knowledge and use).
>
> 2. Limited sentence structure (ability to put words and word endings together to form sentences based on the rules of grammar and morphology).
>
> 3. Impairments in discourse (ability to use vocabulary and connect sentences to explain or describe a topic or series of events or have a conversation).
>
> B. Language abilities are substantially and quantifiably below those expected for age, resulting in functional limitations in effective communication, social participation, academic achievement, or occupational performance, individually or in any combination.
>
> C. Onset of symptoms is in the early developmental period.
>
> D. The difficulties are not attributable to hearing or other sensory impairment, motor dysfunction, or another medical or neurological condition and are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. (American Psychiatric Association, 2013)

Whereas the International Classification of Diseases 10, Classification of Mental and Behavioural Disorders uses a different diagnostic term and has different diagnostic criteria (World Health Organisation, 1994):

> F80 Specific developmental disorders of speech and language
>
> These are disorders in which normal patterns of language acquisition are disturbed from the early stages of development. The conditions are not directly attributable to neurological or speech mechanism abnormalities, sensory impairments, mental retardation, or environmental factors. The child may be better able to communicate or understand in certain very familiar situations than in others, but language ability in every setting is impaired. […]There is no clear-cut demarcation from the extremes of normal variation, but four main criteria are useful in suggesting the occurrence of a

> clinically significant disorder: severity, course, pattern, and associated problems. As a general rule, a language delay that is sufficiently severe to fall outside the limits of 2 standard deviations may be regarded as abnormal. Most cases of this severity have associated problems. The level of severity in statistical terms is of less diagnostic use in older children, however, because there is a natural tendency towards progressive improvement. In this situation the course provides a useful indicator. (World Health Organisation, 1994)

The lack of clarity in the profession about terms and diagnostic criteria mean it is often difficult to compare seemingly similar groups. There has been much argument in the SLT profession about how to define a speech, language and communication impairment (Ebbels, 2014b) and whether the cut off should be at 1, 1.5 or 2SD below the norm or defined by another parameter. Different studies cited in this review have cut offs; at -1, -1.3, -1.5 and -2 SD, a specified number of years below their chronological age, or below age equivalence. One of the leading researchers in this field, Professor Snow has herself moved her threshold from one SD below the norm in her 2008 paper to two standard deviations below in her 2011 paper. Other papers (Blanton & Dagenais, 2007; Davis et al., 1991) make reference to how many of the participants would qualify for local SLT services. Again there is significant local variation in these criteria. Given the lack of clarity the methodology should indicate which definition of language impairment is being used and raw scores should be given to allow for comparison between studies.

Subsequently the SLT community has recognised these difficulties and in 2017 an international consensus was reached on terminology and diagnostic criteria (Bishop, 2017). The advent of developmental language disorder (DLD), as an internationally agreed term, should make future research more easily comparable, if researchers employ the given terminology. However, some researchers in this field come from other backgrounds, such as criminology and sociology, and may be unaware of these changes.

4.11. Research design

Sample size in the various studies varies widely, between 11 and 8984 participants. The longitudinal studies have between 122 and 8984 participants, whereas the assessment studies have between 11 and 100 participants. There are 4 custodial studies with a sample size of 100 and above; one conducted in the USA (Muñoz et al., 2008), two conducted in Australia (Snow & Powell, 2011; Snow, Woodward, Mathis, & Powell, 2015b), and one in the UK (Bryan et al., 2015). The studies conducted in Australia have a higher likelihood of being representative of

the Australian, youth, custodial population both due to the number of people in the general population and the percentage of young people detained in custody in Australia. A sample size of 100 equates to over 10% of the custodial population in Australia as opposed to 0.16% of the same population in the United States of America. However, in Australia each state has a different judicial system and therefore may only be representative of the given state.

Less than half of the studies in this review have a comparison group, the reporting of results between those with and without a comparison group differ significantly. Whereas the studies without a comparison group generally give the SD below the mean on the assessment, the comparison group studies simply give the probability value of statistical significant difference between the groups, so we are able to assess the difference between the two groups but not compare the offender group to similar groups in other studies. It would be helpful for comparison studies to also include performance values for each group.

Another issue is how a comparison group is selected and how these are matched to the offender group. Five assessment studies had comparison groups, some of these studies give details of the recruitment process (Blanton & Dagenais, 2007; Davis et al., 1991; Snow & Powell, 2008) whereas others omit this information (Humber & Snow, 2001; Linares-Orama, 2005) . In only one study (Snow & Powell, 2008) is the rationale given for the selection of the comparison group. Three studies matched age, one study each matched race, SES, time in Education and IQ. Linares-Orama (2005) gave no details of how the groups were matched. All of the studies with a comparison group have a sample size of less than fifty.

The recruitment of the offender group differs between studies as does the detail given about the process. Muñoz, Frick, Kimonis and Aucoin (2008) give a high level of detail about the recruitment process of 126 participants approached 79% (100) ended up taking part. There is a question over whether the 21% that did not take part would have a similar profile to the group included in the assessment or whether this group would change the results of the study. Other studies have not given this level of detail and we are unable to judge whether the group is representative or not.

There are issues with replicability, in some studies as the level of detail given in the methods sections does not give sufficient detail, Linares-Orama (2005) does not give the age range of participants or details of the assessment tools used. In other studies reasoning for decisions is not given, for example; "Additionally, a number of the children were assessed using the Wechsler Intelligence Scale for Children" (Games et al., 2012, p. 131). This level of detail makes

it difficult to follow the thought processes of the author and therefore difficult to reproduce exactly.

4.12. Other relevant research

In addition to the research literature on prevalence there are a number of other criminal justice studies which have chosen to look at other aspects including; detailed analysis of particular language skills, how the SLCN impact on the individual and their levels of self-awareness, and how SLCN can affect access to the CJS. These additional studies help to build a richer picture of SLCN experienced by people in contact with the CJS and how these may impinge their abilities to access the system.

Hopkins et al. (2018) focused on expository discourse skills and then explored whether poorer expository discourse and language skills led to an increased risk of contact with the CJS. Expository discourse skills were chosen as they are skills required when in contact with the CJS and they are not reliant on the same level of familiarity and knowledge often required in standardised expressive language assessment tasks. Young people in contact with the CJS had a mean more than three standard deviations below the norm on the expository discourse task and significantly lower than the control group who were two years younger (matched on the basis of time in Education and SES). Poorer expository discourse and language skills led to a one to almost five times increased risk of contact with the CJS. Expository discourse skills are required at police interview, at court and often as part of rehabilitation programmes. Having difficulties with these skills could lead to an individual being more likely to be charged with an offence they have not committed, struggling to deliver a persuasive argument in court and unable to fully benefit from the rehabilitation programmes. Whilst Hopkins et al. (2018) found an increased risk of contact with the CJS for those with poorer language skills Winstanley at al. (2018) found the opposite. The key difference between these two studies was that in Hopkins et al. (2018) none of the individuals had previously been identified as having language difficulties, whereas Winstanley et al. (2018) was examining those who had been previously identified. This supports the need for early identification and support of SLCN as advocated by Bryan et al. (2015).

Sanger et al. (1999) conducted a qualitative analysis of pragmatic-awareness of females in custody. The females engaged in group discussions about communication with each discussion centring around a different topic (e.g. the speaker's role). Whilst the participants demonstrated a basic understanding of pragmatic rules they did not always use these skills or demonstrate an understanding of how these rules applied to them. The authors suggest

participants " have pragmatic performance deficits because of limited awareness and monitoring of their communication behaviors" (Sanger et al., 1999, p. 290).

Snow and Powell (2005) investigated the narrative skills of young males on community sentences and compared these against the performance of age and SES matched peers, not in contact with the CJS. Whilst the overall groups were matched for age the sentenced group mean was significantly higher (two years) and they had spent significantly less time in formal education. Although there was no significant difference between the groups on the number of syllables or grammatical elements included the sentenced group scored significantly lower on the overall narrative discourse score ($p < .001$). Differences between the groups were found particularly for content and structure. The sentenced group had more difficulties linking the six pictures presented into a coherent story and also incorporating the emotional reactions of the characters. Subsequent research by Snow and colleagues has found that a significant number of young people in contact with the CJS have alexithymia (Snow et al., 2015b). People in contact with the criminal justice system are often required to demonstrate remorse, to receive a more lenient court sentence or to show that they have been successfully rehabilitated. Individuals with alexithymia may struggle to both understand the terminology and demonstrate these skills.

Being aware of one's limitations enables us to manage these more effectively, for an individual with SLCN this may include knowing when they have not understood and being able to ask for help. Hopkins et al. (2016) and Lount et al. (2017) both interviewed young people in contact with the CJS about their views on their communication skills and how these affected access to the CJS. Neither study involved individuals previously identified with SLCN, however the majority of participants in Hopkins et al. (2016) reported they felt unhappy with their communication and literacy skills. Whilst those interviewed by Lount et al. (2017) stated that they had difficulties understanding in court which led to feeling they lacked control over what was happening to them. This was supported by Hopkins et al. (2016) with participants believing good communication skills could positively affect sentencing, either avoiding a conviction or reducing sentence length. Trust and a common language (use of the vernacular) were seen to facilitate effective communication (Lount et al., 2017). Although participants in Hopkins et al. (2016) felt that good communication skills were less important in some situations. It was perceived that the Police often had negative views of the young person irrespective of their communication skills.

Sanger et al. (2003) incorporated a control group in their study on personal perception of one's communication competence. Questionnaires were conducted with 23 young females in custody and 23 age matched peers. The two groups had similar responses on their communication skills and why these were important. One difference between the groups was when giving reasons for being aware of communication skills the young females talked about these skills keeping you safe, showing respect and being necessary for trust; themes not raised by the control group.

Although these studies (Hopkins et al., 2016; Lount et al., 2017; Sanger et al., 2003) on communication skills and self-awareness were not specifically with individuals identified as having SLCN, the majority identified either a lack of satisfaction with their skills and/or barriers to accessing the CJS due to their communication skills. Court was identified as a particularly difficult environment and trust was raised as an important contributor to effective communication.

Other studies have specifically addressed communication skills in the court environment (LaVigne & Van Rybroek, 2014; O'Mahony, 2012). LaVigne and Van Rybroek (2014) looked specifically at the client-attorney relationship, the client is meant to be able to effectively instruct their counsel but without an understanding of the legal system and sophisticated language skills this can be difficult. The authors interviewed 11 lawyers on their experiences of interacting with clients with SLCN. Prior to being interviewed none of the lawyers had heard of language disorder as a diagnosis or recalled language impairments being referred to in clients records. However, the majority recognised they had represented clients who had difficulties understanding and expressing themselves. Lawyers felt that when clients presented with SLCN this affected their ability to effectively respond to the needs of their client and that the process took longer. The ability to produce clear narratives in order to help develop the defence was seen as critical but lacking, these difficulties gave rise to the title of the article; 'He got in my face so I shot him' (LaVigne & Van Rybroek, 2014). With further questioning this developed into a narrative of self-defence.

O'Mahony (2012) examined the support available to individuals with SLCN in court. Legislation has been passed in England and Wales, but has yet to be enacted, that allows vulnerable defendants support from an intermediary at court (Section 104 of the Coroners and Justice Act 2009). O'Mahony (2012) presents the case of a female accused of murder with a diagnosed learning disability and an age equivalent of seven years on the British Picture Vocabulary Scale (BPVS, Dunn, Dunn, Whetton, & Burley, 1997) who he supported during the court case. The

paper presents sections of the court transcript, with multiple-part, complex questions being asked of the defendant. The judge and prosecution are both aware of the defendant's learning disability and SLCN however the language used is inaccessible. It is unclear if this transcript does represent a simplification of the language used in the courtroom or whether it was felt unnecessary to simplify language as there was an intermediary present.

These papers (LaVigne & Van Rybroek, 2014; O'Mahony, 2012) demonstrate the complexity of the CJS and how difficult it can be to navigate for an individual with SLCN and particularly so for the high percentage of individuals with undiagnosed impairments. Notably the theme of trust came through this research literature and should be considered when looking at the interplay between SLCN and access to the criminal justice system. This additional research literature demonstrates the breadth of SLCN experienced by those in contact with the CJS and how these additional needs can adversely impact their journey through the system.

4.13. Theoretical underpinnings

The compounding risk model (Figure 4, Bryan et al., 2015) provides one potential explanation for SLCN leading to later behavioural issues. Another theoretical model which supports this trajectory is the Social Adaptation Model (SAM, Redmond & Rice, 1998). This model argues that children adapt to manage their SLCN by modifying their behaviour and social interactions. This is based on the assumption that children may withdraw or become aggressive in response to their deficits. Redmond and Rice (1998) tested this model with a group of children diagnosed with specific language impairment (SLI) and a control group. They found that this model could be adopted to explain the differences between the groups. In order for this model to work the individual with SLCN must be aware, or at least subconsciously so, of their deficits. This was the case in the aforementioned study (Redmond & Rice, 1998) but the research literature shows that the majority of individuals with SLCN in the CJS were unidentified prior to contact with the system. Further research would be beneficial to ascertain whether this model applies to individuals with unidentified SLCN.

Research literature supports the trajectory from earlier SLCN to later behavioural difficulties (Clegg et al., 2005; Lindsay et al., 2007), but also the inverse (Mackie & Law, 2010; Ripley & Yuill, 2005). Redmond and Rice (1998) suggest the Social Deviance Model (SDM) for this direction. Drawing together the research literature they suggest that underlying socio-emotional traits affect socio-emotional development. These underlying deficits are seen to be either the cause or consequence of SLCN. If SDM was accepted as the causal pathway then this would suggest that primary treatment options would not be SLT but rather psychiatric or

pharmacological. Gregory and Bryan (2011) demonstrated that providing SLT to young people on community orders improved both their language skills and their behaviour. Taken alongside the fact that Redmond and Rice (1998) did not find support for the SDM model in their study suggests that the SAM is a more plausible model.

However, the SAM is very simple and suggests a unidirectional pathway for all individuals. Given that we know children with SLCN show a number of different patterns of development; resolving, emerging, persisting (Snowling, Duff, Nash, & Hulme, 2015) it is unlikely that a simple model allows for all permutations. Petersen et al. (2013) did find the trajectory of language difficulties to behavioural difficulties stronger than the inverse but did acknowledge that a lot more factors were involved. The development of further theoretical models based on the SAM may be helpful to understand the strong links between communication and behaviour.

4.14. Conclusion

There exists significant evidence that individuals in contact with the CJS, across the world, have higher levels of SLCN than those in the general population. Anderson et al.'s (2016) systematic review shows a level of agreement across studies. However, due to a wide range of methodology and assessment tool choices, across a wide range of different criminal justice systems, it is difficult to make direct comparisons. Also, as yet, it is unclear if there are specific patterns of SLCN related to different groups of offenders. In summary:

- Those in contact with the CJS have high levels of SLCN than the general population
- Young males are particularly affected
- A range of speech, language and communication skills have been shown to be impaired
- There is limited evidence of a link between developmental SLCN and an increased risk of offending in adolescence.

5. Service delivery frameworks for speech and language therapy services

5.1. Introduction

The chapter explores what models of service delivery are used, or have been proposed, specifically for individuals with SLCN in youth justice. As there is relatively little written about service delivery frameworks in this area, this chapter also presents a review of service delivery models currently used more broadly in SLT and education fields to support individuals with SLCN.

When searching for relevant articles it became clear some frameworks were purely theoretical, some were designed to be applied to individuals, whereas others applied to the service as a whole. The chapter has been divided accordingly.

This chapter aims to:

- Summarise and critically appraise literature in this area
- Assess the strengths and weaknesses of different frameworks
- Consider the applicability of these frameworks within the custodial youth justice context

5.2. Overarching frameworks

Whilst frameworks exist specifically for SLT services these are all required to work within the overarching health frameworks. Within the UK all healthcare provided to individuals in the CJS is done so with oversight from the NHS (see Section 2.7.2). The NHS has seven key principles services must adhere to as outlined in Table 6.

Table 6 - NHS Principles

Principle 1:	The NHS provides a comprehensive service available to all
Principle 2:	Access to NHS services is based on clinical need, not an individual's ability to pay
Principle 3:	The NHS aspires to the highest standards of excellence and professionalism
Principle 4:	The NHS aspires to put patients at the heart of everything it does
Principle 5:	The NHS works across organisational boundaries and in partnership with other organisations in the interest of patients, local communities and the wider population
Principle 6:	The NHS is committed to providing best value for taxpayers' money and the most effective, fair and sustainable use of finite resources
Principle 7:	The NHS is accountable to the public, communities and patients that it serves

Note. NHS = National Health Service.

The principles indicate patients should be at the heart of any service. Interestingly no mention is made of research or evidence based practice but instead the overarching principles place an emphasis on patient wishes.

The World Health Organisation (WHO) Disability Framework (1980) also places the individual at the heart. The WHO framework steps away from the medical model and takes a holistic view, addressing how the complaint affects all areas of the individual's life (Impairment, Activity and Participation). This framework is used in the Therapy Outcome Measures tool (Enderby, 2015) and has been explored by practitioners as a useful tool to support individuals with language impairment (Dempsey & Skarakis-Doyle, 2010) and to develop an international approach to communication disorders (Threats, 2006). The WHO disability framework by nature of being holistic is very broad and does not specifically address SLCN.

Whilst the NHS and WHO frameworks were developed for health as a whole, Bronfenbrenner developed the Ecological Systems Theory for child development specifically (Bronfenbrenner, 1981). Bronfenbrenner's perspective is based on the "developing person, (. . .) the environment, and especially of the evolving interaction between the two" (1981, p. 3). This theory has been adopted in both Education and SLT fields to look at supporting individuals' language and literacy development within the broader environment. The theory is helpful for understanding why language skills may be more impaired in some contexts than others. The criminal justice environment may be unfamiliar and highly stressful placing increased demands on language capabilities than home or even education environments. These additional demands (unfamiliar communication partners, new justice based language, stressful environment, and unequal power dynamics) need to be considered when developing a framework to be employed in the criminal justice context.

Whilst these overarching frameworks and principles are helpful to ensure that patients are always central to the development of services, these principles to do not directly support the development of a structured service framework for SLT services in the CJS. Overarching frameworks must be considered in conjunction with other evidence when developing a framework for this setting.

5.3. Communication frameworks

Other frameworks have been specifically designed with language and communication at their core. These include Bloom and Lahey's model of Content, Form & Use (Bloom, 1978), this model aims to show the complexity of language. Content, form and use skills must all be developed and well integrated for successful interaction to take place. This model permits

identification of the area of deficit and therefore intervention to be targeted more specifically. Although this model is over 40 years old it is still used by Education and SLT professionals to explain and explore language difficulties. Whilst this gives a framework to understand SLCN it is not a framework which informs the development and delivery of services.

Another widely employed language framework for developmental language and literacy disorders is the Psycholinguistic framework (Stackhouse, 1997). This framework breaks down spoken language in a systematic manner to its constituent parts in order to identify exactly where in the process difficulties are being experienced therefore allowing intervention to be tailored to the individual's needs. Again this framework supports the service delivery to an individual rather than a population.

Communication frameworks are helpful in considering the breadth of areas the service delivery framework must cover. However the communication frameworks are specific to an individual whilst the service framework must work for an entire population. Considering these communication frameworks when developing a service framework helps to ensure that services operate within an evidence based context.

5.4. Education frameworks

Whilst communication frameworks have frequently focused on the individual, education frameworks tend to look at the population as a whole. Frameworks have increasingly moved away from the medical model of disability and looked at how the environment and care givers can support children's language and literacy development. The Head Start Parent, Family and Community Engagement (PFCE) Framework (2011) originated in the USA in pre-school. It was from this framework the Sure Start framework developed in the UK. Sure Start aimed to support pre-school children from disadvantaged areas; to help social and emotional development, build communication and language skills and encourage imagination through play. In some areas of severe economic deprivation more than 50% of children enter school with language skills below the expected level (Lee, 2013). A high percentage of young people in contact with the CJS come from deprived environments and have SLCN (Bryan, 2004). The implementation of Sure Start has been tentatively credited for reducing the 'school-prison pipeline' (Sutherland, Disley, Cattell, & Bauchowitz, 2017). The introduction of the Sure Start initiative coincided with a significant decrease in the number of first time entrants (FTE) in to the justice system. Sutherland et al. (2017) state systematic reviews have shown the benefits of parenting programmes and family intervention programmes in reducing problematic behaviours and delinquency but are clear these programmes on their own are not responsible

for the large decline in FTEs to the justice system over the last decade. When conducting research in environments where multiple interventions are taking place and a myriad of policy changes have taken place it is almost impossible to identify how much each individual intervention has contributed.

The Head Start framework takes a broad approach targeting groups of at risk individuals. This approach is then replaced at school, in the USA, by the Response to Intervention (RTI) framework which targets the individual. The Head Start PFCE Framework is from birth to age eight, it is interesting to note that two frameworks operate with the same children with quite different ideologies and structures. The RTI framework will be explored in detail later in this chapter. The Head Start framework is an interesting framework to consider for some elements of service provision, given the high levels of SLCN in this population this type of approach allows broad coverage but this framework does not incorporate the traditional individual, specialised speech and language therapy style delivery.

5.5. SLT service delivery models for children and young people

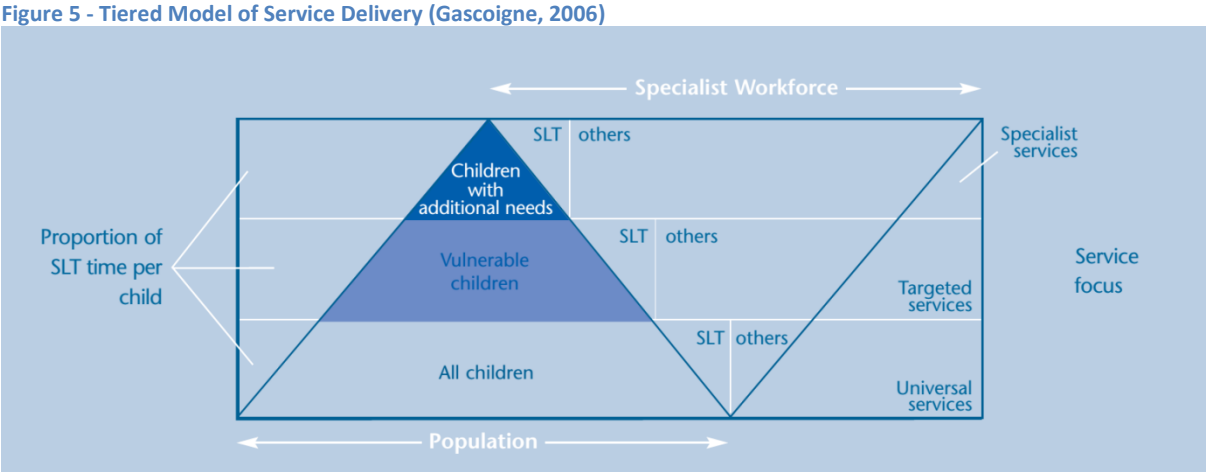
SLT service delivery models have developed in recent years (Ebbels, McCartney, Slonims, Dockrell, & Norbury, 2018), this has been supported by the developing evidence base, policy drivers and clinical experience. These incorporate some of the overarching health frameworks such as the International Classification of Functioning, Disability and Health (ICF) (World Health Organization., 2007).

A model which has been increasingly employed by SLTs working with school-aged children is the consultative model. The consultative model is predominantly an advice service with SLTs providing guidance to other professionals to be the agent of change. Law et al. (2002) conducted a review of this model as a way of working. They recognised a change in education policy over the last 20 years had been one of the main drivers for the adoption of this model. Education policy has moved towards inclusive education, delivering services to children in mainstream classrooms rather than removing the child to a different classroom or an SLT clinic. Law et al. (2002) interviewed SLTs, teachers, other education professionals and parents about their experiences of the consultative model. One of the critiques of this model was the service for those children who have not had their needs formally identified may be severely limited. Given research indicates the large majority of young people coming into the CJS have unidentified SLCN this may be a considerable barrier to employing this model in the CJS. Positively, participants considered the consultative model provided a pragmatic solution to the problem of coverage. Given the large number of young people in the CJS with communication

needs and the limited coverage of therapists this model may provide a solution to coverage. Participants recognised a prerequisite for the success of this model was the availability of co-workers in the educational setting to support the delivery of services. Training and knowledge of SLCN, and associated neurodevelopmental disorders, amongst CJS professionals has been demonstrated to be low (Bryan & Gregory, 2013; Hughes, Williams, Chitsabesan, Davies, & Mounce, 2012) and could adversely affect the implementation of the model. A final critique offered by Law and colleagues (2002) is although the model was felt to have positive aspects there was a need to explore the effectiveness of these elements.

The RCSLT published a position paper in 2006 providing guidance on the delivery of SLT services to children (Gascoigne, 2006). The paper was developed following collaboration with around 100 SLTs, making reference to governmental policy drivers. In recognition of the constantly evolving political landscape the author recommends the document is reviewed bi-annually to reflect changes. This brings in to question whether one framework could ever be viewed as a definitive model for a particular client group, solely on the basis of clinical experience and research, or whether policy drivers override these. The paper recommends rather than relying on a single model of delivery, like the consultative model, services should offer a full range of interventions and training. The preferred model being a tiered system as depicted by Gascoigne (2006) in Figure 5.

Figure 5 - Tiered Model of Service Delivery (Gascoigne, 2006)



Note. SLT = Speech and Language Therapy.

This model has been widely employed within both child and adult SLT services. As suggested by Gascoigne this model has been reviewed and refined. Gascoigne has further developed the model into the Balanced System (Gascoigne, 2013). Individual healthcare trusts have also developed the model to be specific for their population (Hertfordshire Community NHS Trust, 2014).

Due to the nature of the youth justice population the majority would meet the criteria for the top tier of the model and as Figure 5 shows this would mean a lot of SLT time would be involved. This has an impact on costing the services.

5.6. SLT youth justice frameworks

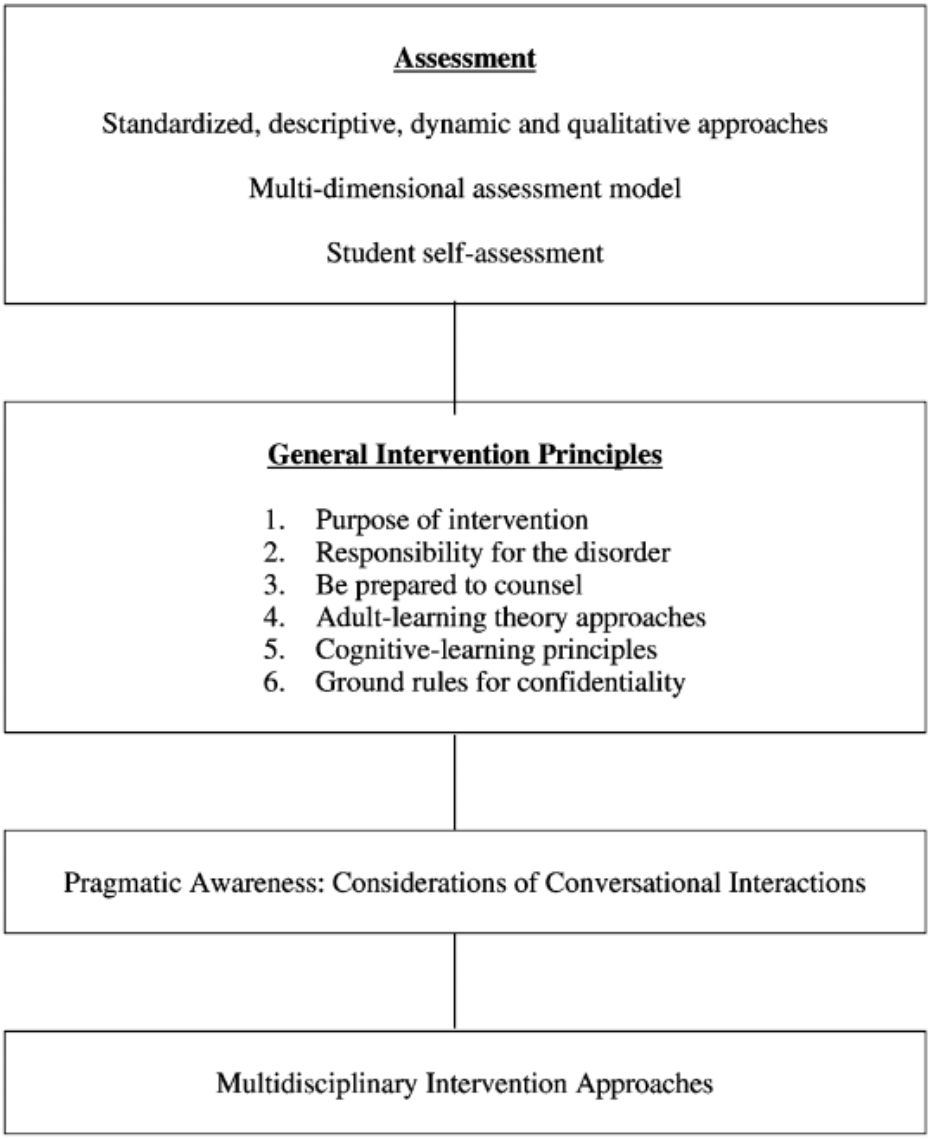
There have been a small number of research papers published in this area which have suggested a model of service delivery based on theoretical perspectives or observations on the service provision in place.

When considering a service model for the youth justice system there are additional considerations. Differing legal systems in each country mean the youth justice population are a heterogeneous group. In addition the environment varies significantly; whereas secure training centres are set up much like a boarding school, YOIs are set up with the education department as an adjunct rather than as an integral part of the model. Another consideration is the length of time the person will be in the environment and how the framework dovetails with community services.

In response to growing evidence of the level of communication needs experienced by those involved in violence, Sanger et al. (2002) developed a communication intervention framework for this population. The intervention framework is closely tied to education as the authors acknowledge the individuals may well still be engaged in or returning to an education environment following therapy. It is not stated whether this model was developed from theory, although reference is made to several theoretical papers, or if the model was developed from clinical experience, which is also referenced within the paper. The authors advocate consideration of both direct and indirect services. When considering direct services, the authors state, the SLT must consider levels of motivation, joint goal planning and the applicability of goals to the wider environment. When considering indirect services there must be careful consideration of the curriculum, the teaching environment and the teacher's individual communication style. Sanger et al. (2002) suggest a framework as shown in Figure 6, they acknowledge this is a starting point and it should dynamically evolve.

Whilst the authors acknowledge this is not a complete framework it does not appear to even encapsulate both the direct and indirect models they advocate in the paper. Another issue with this framework is that it is so closely tied to Education. In England speech and language therapy services are more closely aligned to (and financed by) healthcare. A significant percentage of young people in YOIs do not attend education regularly which may also affect the successful adoption of this framework.

Figure 6 - Sanger et al. (2002) Framework to support intervention with communication impaired adolescents involved in violence



In 2008, the RCSLT published a document entitled a Model of service delivery for those at risk of offending and re-offending (Bryan & Mackenzie, 2008). This document makes recommendations for service provision in both community and custodial settings. It is divided into three sections: prevention of offending, provision of SLT services in the CJS, promoting integration back in to community settings. They recommend there should be at least one full time SLT in each YOI and the Education department from within the YOI should provide a communication link worker to support the SLT. This echoes and extends the recommendations found in the Bercow Report (2008). Bercow (2008) also recommends the SLT should be providing 1:1 therapy sessions, training sessions for staff and supporting people with

communication difficulties to access rehabilitation programmes. Recommendations are made about staffing levels and what type of services should be offered but a specific model of service delivery is not suggested contrary to the title of the report.

Ealing Youth Offending Team received a grant from the European Commission in 2010 to develop staffs' knowledge of and skills in supporting young people with SLCN in the youth justice system. Following this study (YOSALT) they produced a report including recommendations for service delivery in this area (Burrows & Yiga, 2012). The authors suggested a model including both direct and indirect therapy. A further recommendation from the YOSALT project was the delivery of set intervention packages by an SLT assistant or trained communication worker. This would leave the SLT to focus on delivery of an individualised approach to those with greater need. This approach mimics the tiered service recommended by Gascoigne (2006). Acknowledgement was made to the fact, especially within the current economic climate, there was a need for a cost effective model. Advocating a mixed model does reflect emerging evidence those with moderately delayed language impairments respond to different interventions than those with more complex presentations (Ebbels, 2014a).

Following a study with an Intensive Supervision and Surveillance Programme (ISSP) team Bryan & Gregory (2013) reflected upon service frameworks. They described the model they had employed to be akin to the whole systems approach used in education. Whole systems approaches involve identifying all of the components (e.g. teachers, pupils, SLT, parents) of a system, evaluating how these components are linked and the relationships between them. A whole system approach acknowledges all stakeholders must be engaged in the process for real change to take place. Staff interviewed as part of this study described finding this multi-faceted approach helpful for delivering their interventions. The authors recommend research needs conducting to examine which parts of this model were effective and also which other models could be employed effectively. This study provided subjective evidence that staff found this model of service delivery helpful but does not provide any evidence from service users or objective evidence. The lack of objective evidence is acknowledged in the discussion.

Despite many differences between the papers, they all acknowledge the importance of working with and through other staff groups within the CJS. The papers all additionally recommended a framework which includes both direct and indirect service delivery. The consultative model is not discussed as a potential model in this context, perhaps reflecting an acknowledgement of the complexity of these individuals.

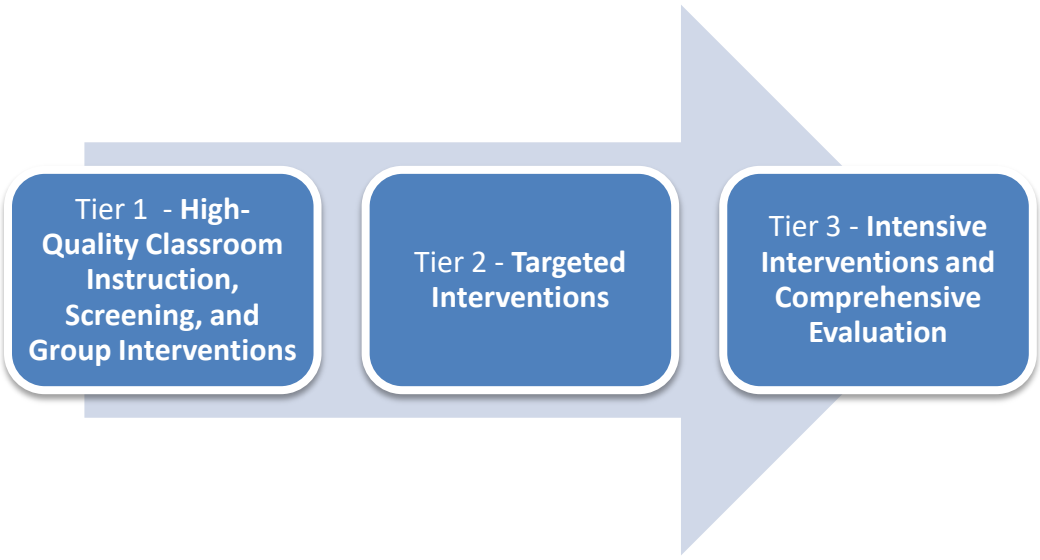
Whilst these papers provide valuable information none focus specifically on a custodial setting or provide a fully worked up framework to support service delivery in a youth justice setting. Such a framework, an adapted Response to Intervention (RTI) framework, has been offered by Snow and colleagues (2015a).

5.7. Response to Intervention Framework

5.7.1.Background

The RTI framework was developed in the United States (US) for mainstream education. The framework was designed to ensure children were identified for and received the level of support they required to achieve their educational potential. The model was designed to replace the IQ discrepancy model of identifying learning difficulties (Fuchs, Mock, Morgan, & Young, 2003). The RTI has evolved to become a three tiered model (see Figure 7) with an increase in support and a reduction in numbers of those receiving this support at each level. All children are periodically screened for any behaviour and educational needs, those identified as 'at risk' then join Tier 1 for additional support within the classroom and regular checks to monitor progress. Students not considered to be making sufficient progress at Tier 1 then move to Tier 2 where they receive additional tailored support generally in small groups outside of the classroom. Children who do not benefit from this level of support then move up to Tier 3 where they receive individualised, intensive support. Children who do not make progress at Tier 3 would then be referred on for a comprehensive assessment under the Individuals with Disabilities Education Improvement Act (2004). This tiered system shares many similarities with the tiered model proposed by Gascoigne (2006).

Figure 7 - RTI Tiers



The framework was devised for use in elementary education in the US for literacy, and has now been extended to high school, mathematics and other domains.

5.7.2.Youth Justice

This model has been adapted to meet the needs of a number of different populations including children in long-term residential juvenile justice schools in the US (McDaniel, Heil, Houchins, & Duchaine, 2011). McDaniel et al. (2011) recognised this population have higher levels of behavioural and learning difficulties than the general population and therefore appropriate support for these individuals was even more invaluable. The authors expanded the model to also include; mental health, housing, security, transition and other, as shown in Figure 8.

Figure 8 - RTI Tiers McDaniel et al. (2011)

Figure 2. Suggested RtI Assessments and Interventions

	Tier 1	Tier 2	Tier 3
Academic			
Screening/Assessment	universal, comprehensive assessment, student records from home school, assignment completion tracking sheets, permanent products	Quarterly curriculum based measurements, assignment completion tracking sheets, permanent products	Documented special education eligibility from home school, weekly curriculum based measurements, assignment completion tracking sheets, permanent products
Strategies/Interventions	Differentiated instruction, extended time, re-teaching, graphic organizers, manipulatives, cooperative learning	After school tutoring, peer tutoring, flexible grouping, supplemental instruction, technology resources for additional rehearsal	Individualized remedial instruction, shortened and modified assignments and assessments
Behavioral			
Screening/Assessment	Office discipline referral and discipline review records, student records from home school, teacher rating scales	Office discipline referral and discipline review records, weekly teacher progress reports, self-monitoring reports	Daily progress reports, function based assessment, frequency count, event recording, and anecdotal data of targeted behavior
Strategies/Interventions	Classroom management, preferential seating, proximity control, reinforcement of positive behavior, structured breaks from academic tasks	Group counseling, targeted social skills, substance abuse, problem solving lessons, behavioral contracts, school based mentoring, reinforcement of positive behavior	Individual counseling, behavior intervention plan, progress chart, token economy system, reinforcement of positive behavior

McDaniel et al. (2011) acknowledge custodial settings bring with them specific challenges in particular the requirement to work across 24 hours and with a number of different stakeholders. The authors also acknowledge the lack of evidence based interventions that currently exist to be provided at Tier 2 and 3.

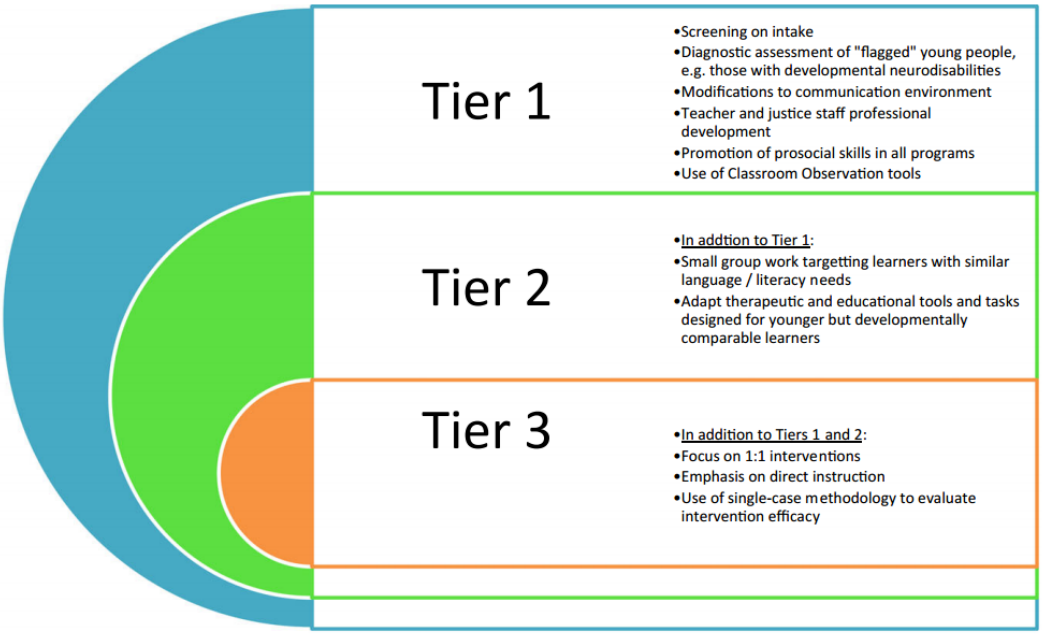
5.7.3.SLT in Youth Justice

There is currently no accepted model for the delivery of SLT services in a youth justice context. In 2015, Snow et al. proposed an adaptation of the Response To Intervention model as a starting point for thinking about service delivery in this area.

A proposed model

Snow et al.'s (2015a) adaptation incorporates McDaniel et al.'s (2011) broader view of the RTI framework and the requirement to work in an interdisciplinary manner in youth justice settings. Snow et al. (2015a) move away from the traditional triangular tiered model to a wraparound model to reflect the significantly higher levels of SLCN expected, from research findings, in this environment (see Figure 9). They acknowledge given the high levels of SLCN in this population there may be a large number of individuals requiring Tier 3 provision.

Figure 9 - RTI Tiers Snow et al. (2015a)



More detail about the type of provision required at each tier is given below.

Tier 1

At Tier 1 Snow et al. (2015a) suggest:

1. All young people should partake in communication screening delivered by an SLT.
2. Anyone with an identified neurodisability should receive a full SLT assessment.
3. Teachers should be trained and supported to recognise the verbal demands of the classroom and to modify as appropriate.
4. Social communication skills to be embedded in offending behaviour programmes.
5. Emotional awareness and coping skills groups to be developed and delivered in conjunction with SLT.
6. Staff training, delivered by SLT, to make explicit the links between oral language and literacy.
7. SLT to monitor the production of printed materials used with young people.
8. SLT to contribute to the development of behavioural support and risk management plans.

Tier 2

In addition to the provision at Tier 1 Snow et al. (2015a) suggest:

1. SLT to work with small groups of learners to address SLCN which affects participation in Education and/or offending behaviour programmes.
2. Progress monitoring of individuals to include behaviour, communication and learning domains. Using standardised measures, observation tools and self-assessment.

Tier 3

At the highest level of provision Snow et al. (2015a) suggest including:

1. Comprehensive assessment of communication skills focussing on transition to community and specifically employability.
2. Language based interventions to be provided in preparation for offending behaviour programmes and vocational training programmes.
3. Additional support in class and small groups to address oral and written language skills.

Snow et al. (2015a) argue providing a framework is essential in order for SLT to become embedded as a core profession within the youth custodial setting.

This framework offers a comprehensive approach for the delivery of SLT services in the custodial youth justice setting. Given the high percentage of individuals, acknowledged by the authors, in need of Tier 3 support this framework would require a high level of resourcing.

A response

The proposal of this model elicited a strong response from Armstrong (2015) who raised a number of issues with this model being used in the criminal justice context (see Table 7). Armstrong (2015) had a number of arguments against RTI being employed as a service delivery model in the CJS. His primary argument was the RTI is a model of prevention, which he deemed 'fundamentally incompatible' with youth justice. Snow et al. (2015c) responded to this criticism and explained although Tier 1 is a preventative tier the upper tiers focus on intervention for identified difficulties. Although the arguments in the letter were not all fully formed there were some pertinent points raised. One of these being the issue of time; the time taken to reach Tier 3 is 15 weeks and the average custodial sentence in the UK is seven months. This means some young people whose SLCN had not been previously identified would never get to Tier 3, and those that did may leave shortly after a personalised support package has been developed. This is a particular issue as research indicates the SLCN of young people in contact with the CJS have overwhelming gone previously unidentified (Anderson et al., 2016).

Table 7 - Snow et al (2015a) RTI framework and responses

	Original Article	Armstrong (2015)	Snow et al.'s (2015c) response
1	'Speech and language therapy interventions for young offenders will be better addressed at policy, practice and research levels if a framework…is employed.' p. 1	Premature to introduce any intervention framework into the CJS.	Given strong international evidence on high levels of SLCN it is not premature.
2	'Speech and language therapy interventions for young offenders will be better addressed at policy, practice and research levels if a framework…is employed.' p. 1	Simply because young offenders are the same age as secondary school pupils does not mean the RTI model can be transferred.	Should not consider young offenders as a separate population from young people in general.
3	'the RTI framework is aimed at prevention' p. 5	RTI is a model of prevention which makes it fundamentally incompatible with those already involved in the criminal justice system.	RTI is not simply a model of prevention. Tiers 2 and 3 address intervention for identified difficulties. Also prevention does not apply solely to a risk of

			reoffending.
4	'the RTI framework is aimed at prevention' p. 5	The article suggests that the authors want RTI to reduce reoffending.	Not making any claims to reduce reoffending rates, simply improving communication outcomes.
5	'the RTI framework is aimed at prevention' p. 5	McDaniel et al.'s (2011) case study shows RTI is not well suited for the UK CJS given the time it takes to reach Tier 3 against the average length of custodial sentence in the youth justice system.	One study does not mean RTI is not suitable for CJS especially when study did not consider SLCN and was based in the adult estate.
6	'improving everyday communication skills may be a means by which educational engagement is increased and recidivism is reduced (Snow & Powell, 2011)' p. 5	Authors argue if SLCN were addressed, then access to Education would improve and reoffending rates would drop.	Simply presenting empirical evidence on the level of difficulties and a theoretical framework which may offer the opportunity to investigate any impact on reoffending.
7	'it is clear that young offenders experience language deficits far more commonly than their peers in the general population.' p. 2	Some researchers would disagree with this.	Not aware of any researchers who would disagree with this.
8	'it is clear that young offenders experience language deficits far more commonly than their peers in the general population.' p. 2	Mouridsen and Hauschild (2009) found males with DLD were not more likely to offend than peers.	Agree no evidence that young people with SLCN are more likely to offend but published evidence supports an over-representation of language difficulties in the young offender population.
9	'there is currently minimal evidence about 'what works' with respect to the SLCN of this complex population' p. 2 'speech–language interventions should be derived from evidence-based principles, using systematic scientist-practitioner models of hypothesis formation and testing, as would occur in other clinical settings with complex clients.' p. 10	The RTI model stipulates evidence based interventions must be used but SLTs cannot provide these for this population.	Over-reaching to say SLTs cannot provide evidence based interventions. Agree evidence for youth justice is lacking however profession has evidence based interventions for this age group.

10	'Published evidence on the effectiveness of this approach is scarce' p. 4	Researchers from criminology and literacy backgrounds have questioned the efficacy of educational interventions with young offenders.	Although there is not any strong evidence for literacy interventions with this population, does not mean there won't be in the future.
11	'Notwithstanding resource constraints and current evidence gaps, we argue that SLT interventions in a youth justice setting lend themselves to adaptation into the RTI framework, particularly if rigorous single-case methodology is included at Tier 3.' p. 10	RTI is not appropriate for this population and it is too soon to introduce any intervention framework for SLTs working in the CJS.	Armstrong is critical of choice of RTI but does not offer an alternative.

Note. CJS = Criminal justice system; SLCN = Speech, language and communication needs; RTI = Response to intervention; UK = United Kingdom; DLD = Developmental language disorders; SLT = Speech and language therapist.

A potential issue that is not addressed by Armstrong (2015) is that Education lies at the heart of the model. Although the government stipulates all young people in custodial settings should be accessing education for 30 hours per week, the majority receive a lot less than this and a significant proportion do not attend education at all (Her Majesty's Inspectorate of Prisons, 2013). Staffing, the individual's behaviour and unforeseen events (e.g. a fight) were given as factors for the lower than required attendance rates. It is unclear how this framework would support these individuals.

A further argument presented by Armstrong (2015) is the RTI model stipulates programmes delivered must be evidence based and we do not currently have evidence based packages for this client group. It is interesting to discuss whether the model of service delivery or separate intervention packages should be prioritised first in a new clinical area. Snow et al.'s (2015c) response suggests the framework should come first. They believe having a framework in place may support in measuring the efficacy of interventions, although they do not expand on how this may work.

5.8. Conclusion

It is interesting that although frameworks for services could incorporate the theoretical models and frameworks for individuals they do not make reference to one another. There are however many similarities between the models. A variety of the models address the need to work with

the individual and the surrounding environment. There are also multiple frameworks suggesting incorporating both direct and indirect service delivery.

A detailed theoretical framework has been outlined for the custodial youth justice population (Snow, et al., 2015a) but this framework is untested in clinical practice, and has received criticism from individuals who have worked within the system in the UK.

6. Purpose and aims of the current study

This current study aimed to verify and extend previous research conducted into the SLCN of young people in custodial settings. The study was divided in to two distinct phases. Phase 1 re-evaluated the level of SLCN amongst young people in YOIs in England. This phase was also intended to build upon what was known about the profile of SLCN and associated demographic data in this cohort. Phase 2 investigated the provision of SLT services to this population. This phase was sub divided in to four distinct sections in order to provide a rich data set. These four components were; a survey, semi-structured interviews, service audit, single case studies.

This chapter aims to:

- Outline the purpose of each phase of the study
- Set out the aims of each phase
- Provide an overview of how these aims are to be met
- Introduce the ethics processes

6.1. Purpose of Phase 1 - Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England

There is a growing body of evidence agreeing over 50% of young people in contact with the CJS have SLCN (Bryan et al., 2015; Humber & Snow, 2001; Sanger et al., 2001) as opposed to just 7-10% of the general population (Enderby & Pickstone, 2004). There is though significant variability in how this has been assessed and the population studied. When this current study started there was only one previous study (Bryan et al., 2007) investigating the language profiles of young people aged from 15 to 17 years in a custodial setting in England and Wales. Since this study was published, the demographics of the young offending population have changed substantially. The number of young people held in a custodial setting has reduced from 3,000 to 1,000 and the percentage of BAME individuals has increased (*Youth Justice Statistics 2014/15 England & Wales*, 2016). This study investigates the speech, language and communication profiles of young people in a custodial setting in England (London region) to understand the nature of their speech, language and communication profiles and if and how these profiles are associated with social and cultural backgrounds and offending behaviour. Identifying these profiles could inform the development of more effective interventions, which then has the potential to impact upon reoffending rates.

This phase aims to:

- Identify if the young people in a London region YOI have a similar level of language difficulties to previously researched populations
- Profile the level and type of language difficulties these young people present with
- Ascertain whether the London region YOI population has a similar profile to previously researched populations in relation to:
    - Education
    - Mental Health
    - Family & societal factors
- Understand if and how profiles of language difficulties are associated with socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour

The research questions are:

1. Do young people in the London region YOI have similar levels of language difficulties to previously researched populations?
2. What is the profile of language difficulties in this population?
3. Does this population have similar education, mental health and societal backgrounds as previously researched populations?
4. Are language difficulties associated with
    a. socioeconomic and socio-cultural backgrounds,
    b. developmental history,
    c. educational history and attainment,
    d. mental and physical health
    e. and offending behaviour?

Assessment and demographic data was collected from the London region YOI in order to meet these aims. This data was then analysed to investigate whether the male, juvenile, custodial population in the London region has comparable language difficulties to previously researched populations and explore more closely the characteristics of the language profiles. Demographic information was collected from existing healthcare records held at the YOI. This study will extend previous studies by looking more closely at potential associations between BAME, socioeconomic and socio-cultural backgrounds, offending behaviour and individuals' speech, language and communication profiles.

6.2. Purpose of Phase 2 – Investigating the provision of speech and language therapy services to young people in YOIs in England

Whilst there is a growing body of evidence demonstrating young people in custody have high levels of SLCN (Bryan et al., 2007; Bryan et al., 2015) little is known about the SLT services they receive and whether these address their SLCN. There have been no published studies detailing the provision of SLT services to young people in YOIs in England. There have been studies conducted on SLT service provision to young people in custody in Australia (Snow & Woodward, 2016) and the US (Sanger et al., 2003) however these have consisted of researchers going in to the establishment and providing SLT services for research purposes rather than investigating an established clinical service.

There exists one report of a service evaluation carried out in community youth justice sector in England (Gregory & Bryan, 2009). The evaluation took place over a 12 month period. Over this period all referrals to the Intensive Supervision and Surveillance Plan (ISSP) were tracked, screening and assessment scores were recorded as were details of interventions, progress and feedback from staff. Over this period 72 young people were screened, 58 completed a full assessment and 49 received intervention and 20 were reassessed at the end. Following the 12 month period of data collection a questionnaire was sent to all ISSP staff and follow up telephone interviews were conducted to investigate staff awareness and understanding of SLCN and also their feelings about having an SLT within the team. Twenty three staff members were involved in this part of the evaluation. Staff were asked to rate their confidence/ability in meeting the SLCN of the young people they worked with. Rating was on a ten point scale with one as 'very low' and ten as 'very high'. Prior to the study commencing the average score was 2.9, after the 12 month study the average score was 7.8. At the start of the study the highest staff rating score was five whilst by the end of the study the lowest score was six. The questionnaire was distributed to all staff (23) via their pigeon holes. Twenty one questionnaires were returned which represents an 87% response rate. The questionnaire comprised of 14 open, free text questions. Questions relate to staff opinions and knowledge about SLCN. Eight telephone interviews took place with a range of staff members and a further interview was completed with the local commissioner on the advice of the team leader. The interviews aimed to follow up on and explore issues raised in the questionnaires. The service evaluation comprises both quantitative and qualitative data. Although reference is made to staff training and accessible information only direct intervention is reported on. This study incorporates some elements of the Gregory and Bryan (2009) service evaluation. In Phase 1,

the screening and full assessment components will be covered. In Phase 2, staff views will be captured although in this study the views of the SLT are key.

This study will investigate the provision of SLT services in the three established services in YOIs in England. Evidence based service frameworks are used to deliver SLT services to the general population with speech, language and communication difficulties (Ebbels et al., 2018). However, there is currently no research in to the design of SLT services for young people in custody, who have high levels of SLCN (Anderson et al., 2016). Understanding more about the service design for this population could lead to the development of a suitable service framework.

The principle objective of this phase is:

- To examine the purpose, structure and function of SLT services in English YOIs

The research questions are:

1. What are the similarities and differences between SLT services in English YOIs?
2. Is there an evidence base underpinning the interventions offered in these SLT services?
3. Can community based service delivery models be applied in YOI SLT services?
4. Could the theoretical service delivery model laid out by Snow et al. (2015a) be applied in English YOIs?

In order to answer these questions data was gathered from a survey, semi-structured interviews, service audit and single case studies. Data was collected from the three YOIs in England with established SLT services. The development and establishment of SLT services in YOIs in England is relatively recent. As a result, it is not known how these services are delivered or the model(s) of service delivery adopted. This is the first study to systematically describe how these SLT services are structured and how services are delivered.

6.3. Methodological Approaches

An overview of the methodological approach taken for each Phase of the study is discussed below.

6.3.1. Phase 1 Methodological Approach

Phase 1 aimed to extend existing knowledge regarding the prevalence of SLCN in young people in custody. A quantitative approach is indicated as the data to be collected is numerical or categorical, a non-experimental design is appropriate for a prevalence study (Nelson, 2016).

Only one study (Bryan et al., 2007) has been published with this group in the UK. This study design consisted of collecting assessment data from half of the young people within the establishment using random-sampling. Data collected included the use of formal, standardised language assessment tools, a self-rating assessment and collection of relevant demographic and educational data from existing records. As Phase 1 is part of a PhD study it is not possible within this timeframe to collect prospective data, therefore a service was identified where the same data components could be retrospectively collected. As this is a pragmatic approach it is not possible to match assessment tools. However, the assessment tool used within Phase 1, the CELF-4 UK (Semel, Wiig, & Secord, 2006), is the most commonly used in prevalence research with this client group (Anderson et al., 2016).

6.3.2.Phase 2 Methodological Approach

This study is the first to describe the delivery of SLT services to young people in a custodial environment. The main aim of Phase 2 is to describe service provision. A mixed methods approach is indicated as this allows both breadth and rich descriptions (Creswell, 2010). Mixed methods has been described as the third research methodology and has been used with increasing frequency in healthcare fields (Collins, 2010). Although a mixed methods methodology has been increasingly employed in healthcare research there is debate about the appropriacy of this methodology (Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005). The authors state; “Two important and persistent issues, the paradigm-method fit issue and the “best” paradigm issue, have inspired considerable debate regarding the philosophical basis of mixed methods research.” (Hanson et al., 2005, p. 225) Regarding the ‘fit’ issue, some researchers argue that certain philosophical paradigms ‘fit’ with either quantitative or qualitative methods and therefore mixed-methods is incompatible with any philosophical domain. However, others argue that this is not the case (*Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms*, 1997). The second argument regards what philosophical paradigms can fit with a mixed-methods approach. This argument has divided researchers in to three main groups; the first group who believe that the approach is not compatible with any viewpoint, the second that different paradigms are compatible with different mixed-methods approaches and the third which advocates a pragmatic paradigm with mixed-methods approaches (*SAGE Handbook of Mixed Methods in Social & Behavioral Research*, 2010).

Accepting that mixed-methods can be used with a social-constructionist[10] paradigm and that this underlying belief guides the choice of approach, the study design is described in the following sentences. Descriptive research questions are usually answered by employing qualitative methods but can be supplemented in mixed methods by quantitative elements, as in this study. This study employs a simultaneous, predominantly qualitative, supported with quantitative data (QUAL + quan) design with findings being combined in the results narrative (Morse, 2010).

The individual elements comprised within Phase 2 combine a pragmatic approach of available data/data sources and an attempt to mirror related studies. The four elements in Phase 2 are; survey, interview, service audit and case studies. Survey and interview data were collected as the lead clinicians are a primary knowledge source for how services are currently provided. These data collection methods create a rich data set. They enable both categorical information and the lived experience to be captured (Rapley, 2004). Services are required to supply monthly returns[11] to their respective Trusts and commissioners including information about contacts and attendance rates. As this data was both available and could enrich the dataset it was also gathered. Finally case studies were gathered. Case series are considered the lowest level in the hierarchy of new evidence (Murad, Asi, Alsawas, & Alahdab, 2016) and therefore the starting point in this new field of study. There is one published case series in this field (Snow & Woodward, 2016), attempts were made to match this as closely as possible to allow for comparison.

6.4. Ethics

This study was required to go through a complex ethics approval process. Ethical approval was gained on two separate occasions for the two distinct phases within the study. The study has been completed as a University project, with NHS services and clients within a prison environment. This meant there were three levels of ethical approvals to negotiate; university, healthcare and criminal justice. The Offender Health Research Network (OHRN) is a support network, funded by the Department of Health and based at the University of Manchester, which has been established to support researchers working across health and justice. OHRN provided helpful guidance on what approvals were required and in which order this should be approached. In the time between Phase 1 and Phase 2 a new regulatory body was introduced, the Health Research Authority, this meant the NHS processes for Phase 1 and 2 were different.

[10] The authors ontological and epistemological viewpoints are covered in further detail in Chapter 10
[11] https://www.england.nhs.uk/wp-content/uploads/2018/01/6-nhs-standard-contract-1718-1819-general-conditions-shorter-form-v2.pdf

Phase 2 also did not require National Offender Management services approval as there was no direct service user contact and no data requested from prison systems. As the ethics processes for this study were complex and time consuming, these are covered in detail in the methodology chapters within this thesis.

6.5. Summary

This chapter presents the aims of the current study and describes how the two phases are designed to extend our current knowledge and understanding of how SLT services are delivered in a custodial youth justice setting in England.

7. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Methodology

7.1. Introduction

This chapter describes the methodology of Phase 1 of the study. This phase aims to:

- Identify if the young people in a London region YOI have a similar level of language difficulties to previously researched populations
- Profile the level and type of language difficulties these young people present with
- Ascertain whether the London region YOI population has a similar profile to previously researched populations in relation to:
    - Education
    - Mental Health
    - Family & societal factors
- Understand if and how profiles of language difficulties are associated with socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour

The research questions are:

1. Do young people in the London region YOI have similar levels of language difficulties to previously researched populations?
2. What is the profile of language difficulties in this population?
3. Does this population have similar education, mental health and societal backgrounds as previously researched populations?
4. Are language difficulties associated with
    a. socioeconomic and socio-cultural backgrounds,
    b. developmental history,
    c. educational history and attainment,
    d. mental and physical health
    e. and offending behaviour?

7.2. Research Design

This phase involves the collection and analysis of secondary quantitative data. This study did not involve the collection of new data. Instead, the study involved secondary data analysis of speech and language assessment data completed by young people, already collected as part of the clinical speech and language therapy (SLT) service at the London region Young Offender Institution (YOI). There were five YOIs at the time of data collection, three of which had access to SLT services. The London region YOI was chosen as this SLT service was the only one conducting a speech, language and communication assessment with all new admissions at that time. This allowed for the most detailed profile of speech, language and communication needs (SLCN) of the young people to be built. It was not possible to continue data collection beyond 2015 as the service was no longer systematically completing all of the required assessment tools for all referrals.

This data was analysed to investigate whether the male, juvenile, custodial population in the London region has comparable language difficulties to previously researched populations and explore more closely the characteristics of the language profiles. Demographic information was also collected from existing healthcare records held at the YOI.

The data includes numerical scores obtained from both standardised and non-standardised language assessments and categorical data from healthcare records.

7.2.1.London Region YOI SLT Service

The London region YOI houses approximately 150 young males held on remand or sentenced of a proven offence. A fuller description of the YOI is given in Chapter 2: The history of the custodial youth justice estate in England. The SLT service had planned to complete a battery of speech, language and communication assessments with 50 consecutive admissions to the London based YOI, in 2015, in order to evaluate the efficacy of the introduction of the Comprehensive Health Assessment Tool (Shaw, Bailey, Tarbuck, Chitsabean, Theodosiou, & Lennox, 2014). As this was a change from regular service provision the young people were asked to give their consent to participate (see Appendix 1). Therapists at the London region YOI reported over 90% of young people consented to take part. Part way through the year the Education requirements changed and the YOI was required to provide 30 hours of Education for each individual as opposed to 15 hours (*Transforming Youth Custody*, 2014). This change in education provision limited access to new admissions and therefore a pragmatic decision was made to complete the battery with all new referrals rather than all admissions. The first 26

(58%) participants were recruited via the intended route and the final 19 (42%) participants were obtained from referrals to the SLT service.

7.3. Participants

Participants were 45 young males, aged 15;0 -17;11 (actual range: 16;01 – 18;02, mean: 17;02), resident at a London region YOI, who had completed the aforementioned speech, language and communication battery during 2015 as part of the core SLT provision. The language battery comprised of; a therapist judgement on the presence of speech difficulties, the core language elements of the Clinical Evaluation of Language Fundamentals assessment (CELF-4 UK) (Semel et al., 2006) and the Talkabout Social Skills questionnaire (Kelly & Sains, 2009).

7.4. Sample Size

Before the study commenced a sample size calculation (See Table 8) was conducted using the Australian National Statistical Service calculator (Australian Bureau of Statistics, 2018). The proportion (0.87) was based on the level of language difficulties found in the only other research study conducted on the prevalence of SLCN in an English YOI (Bryan et al., 2007). The population size was based on the number of young people resident at the London region YOI at the beginning of 2015.

Table 8 - Sample Size Calculation

Confidence level	95%
Population size	120
Proportion	0.87
Confidence interval	0.05
Standard error	0.02551
Sample size	**71**

As the study consists of secondary data it was not possible to stipulate the recruitment of 71 individuals, however an attempt was made to get as close to this as possible. The final cohort consisted of 45 young people.

7.5. Assessment Tools

The battery of assessments completed by the SLT service comprised of:

- Speech – Therapist judgement of Yes/No regarding the presence of speech difficulties
- Language – CELF-4 UK Core Language Subtests (Semel et al., 2006)
- Communication – Talkabout Social Skills checklist (Kelly & Sains, 2009)

Additional data was collected from the CHAT Speech, language and communication screen which was completed by the mental health team.

7.5.1.Speech Assessment

Speech was simply coded as a binary Yes/No. Therapists had been guided to score 'Yes' where intelligibility was affected and/or the young person reported speech difficulties. Type or level of impairment was not routinely recorded.

The term 'speech difficulties' is very broad, a speech difficulty could refer to; a stammer, a lisp, dysarthria and a range of other conditions. Severity can also range from no effect on intelligibility to speech being totally unintelligible. The details collected in the study do not allow for any differentiation and is simply recorded as the existence or non-existence of speech difficulties.

7.5.2.Clinical Evaluation of Language Fundamentals (CELF-4 UK)

The Clinical Evaluation of Language Fundamentals, Fourth Edition, UK version (Semel et al., 2006) is a standardised language assessment which has been standardised specifically for use in the United Kingdom (UK). The UK Fourth Edition is standardised for individuals up to the age of 16;11 in the UK, whilst it is standardised up to the age of 21 in the United States. Although the participants in this study exceed the age range of UK standardisation it was felt this was an appropriate tool for this population as it was being used with this age range in other countries. It is also the most commonly used assessment tool in research studies across the world with young people in contact with the criminal justice system (Blanton & Dagenais, 2007; Bryan et al., 2015; Gregory & Bryan, 2011; Sanger et al., 2001; Snow & Powell, 2008).

Whilst there is an argument that as this cohort is overwhelmingly from BAME backgrounds that the use of a standardised language assessment provides an unfairly harsh picture of their potentially non-standard English language skills (McNulty, Bellair, & Watts, 2013), others have no significant differences between these groups in contact with the criminal justice system (Anderson, Daniel, Hoskins, Gillis, & Khen, 2013). Another argument for the use of a standardised language assessment is that these individuals are required to access education, rehabilitation programmes and employment opportunities that all require the use of standard English language skills.

The core language battery subtests from the CELF-4 UK was used in this study. The authors of the tool found the four subtests (Recalling Sentences, Formulated Sentences, Word Classes

and Word Definitions) were "the most discriminating and clinically sensitive in identifying a language disorder" (Semel et al., 2006, p. 166).

Recalling Sentences

Recalling sentences requires the individual to repeat a sentence exactly after spoken by the examiner. The sentences increase progressively in length and complexity. There are 24 items in the subtest and for individuals 14 years of age and over the start is Item nine. No repetitions are allowed and the subtest is discontinued after five consecutive zero scores. A score of three is gained where no errors are made and gradually decrease to zero where four or more errors are made. The inability to precisely imitate is used as a means to discriminate between normal language development and disordered language. This subtest assesses the individual's ability to listen to and repeat increasingly complex sentences whilst maintaining syntax and meaning.

Formulated Sentences

In this subtest, the individual is presented with a picture and a given word. They are required to create a sentence about the picture using the given word. The word given becomes progressively less concrete and more low frequency. There are 28 items in the subtest and for individuals 15 years of age and over the start is Item ten. Repetitions are allowed and the subtest is discontinued after five consecutive zero scores. A score of two is given for a grammatically, semantically and syntactically correct sentence. A score of one is given where there is a complete sentence but there are one or two syntactic or semantic errors. A score of zero is given where there is an incomplete sentence, the sentence does not make sense or there are multiple errors. This subtest assesses the individual's ability to form syntactically and semantically correct sentences within contextual constraints.

Word Classes

Word classes requires the individual to decide which two words are related from a choice of four targets (receptive) and subsequently describe the link between the chosen words (expressive). The words become progressively less concrete and more low frequency. There are 24 items in the subtest and for individuals 15 years of age and over the start is Item three. Repetitions are allowed and the subtest is discontinued after five consecutive zero scores on the receptive element. Both the receptive and expressive elements are scored either zero or one. One is scored on the receptive element where both target words are correctly identified. Zero is automatically score on the expressive element if there is a zero score for the receptive element. A score of one is given where the response matches the targets on the response

form. This subtest assesses the individual's semantic knowledge, their ability to understand and explain relationships between linked words.

Word Definitions

In this subtest the individual is given a word, which is also presented within a sentence, and they are required to define the said word. The words are chosen to come from a range of educational topics and become gradually more complex. There are 24 items in the subtest and all ages start with Item one. Repetitions are allowed and the subtest is discontinued after seven consecutive zero. A score of two is given where all elements of the definition are provided. A score of one is given for a partial definition. A score of zero is given where no response is given or the response is unrelated to the target word. This subtest assesses the individual's word knowledge and their ability to put this knowledge in to words.

The subtests generate a raw score which was subsequently converted in to a scaled score. For participants over the age of 16;11, the scaled score was calculated using the 16;0-16;11 age range tables. The CELF-4 UK was used outside of its age ranges for the majority of participants (n=34). Whilst this is a limitation, none of the individuals assessed performed at ceiling level. The new version of the CELF, 5th Edition (Semel, Wiig, & Secord, 2017), is now standardised for the UK population up to the age of 21;11.

Scores were calculated by the therapist completing the assessment and ratified by the researcher. The researcher had access to the raw data and re-scored all of the subtests and re-calculated scaled scores. Where different scores were found these were discussed between the therapist and researcher. These were largely due to miscalculation of raw scores and errors using the tables to calculate scaled scores. A definitive score was then decided upon by the researcher.

7.5.3.Talkabout Social Skills Student Self-Assessment

The Social Skills Student Self-Assessment is taken from the resource book Talkabout for Teenagers (Kelly & Sains, 2009, p. 18). This is a non-standardised assessment. The checklist is a 15 item, self-rating tool. Each item is rated on a three point scale; Yes (2), Sometimes (1), No (0). Questions cover self-esteem, non-verbal communication, pragmatics and emotional awareness. A maximum score of 30 would indicate the individual does not consider they have any social skills difficulties, the lower the score the higher the level of perceived difficulties.

Each individual was asked if they wanted to read the assessment themselves or have it read to them. If the individual chose to read it themselves they were advised they should ask for support if there was something they did not understand.

Scoring was totalled by the therapist completing the assessment and verified by the researcher. The researcher had access to the raw data and checked the summation of scores for all individuals. Where different scores were found these were discussed between the therapist and researcher. A definitive score was then decided upon by the researcher. No differences in scoring were found on this assessment tool.

There is limited information about the efficacy of use of self-report for social skills especially adolescents. A concern in using self-report is the potential impact of the individual's lack of self-awareness of any difficulties. There are also a number of reported limitations of the self-report method including self-presentation (Paulhus & Vazire, 2007), this needs to be considered especially in adolescence when the sense of self is developing and changing (Blasi & Milton, 1991).

7.5.4.Comprehensive Health Assessment Tool – Part 5: Neurodisability

All individuals should also have completed the Speech, Language and Communication screen within the Neurodisability section of the Comprehensive Health Assessment Tool (CHAT, Shaw, Bailey, Tarbuck, Chitsabean, Theodosiou, & Lennox, 2014).

The CHAT is a compulsory assessment which has been completed with all young people entering a custodial setting since 2014. The speech, language and communication screen is part of the wider neurodisability assessment and is intended to be completed within the first 10 days after admission; this should be expedited where there are specific concerns. The assessment tool was piloted within HM YOI Hindley before being rolled out across the secure estate. The sensitivity for the speech, language and communication screen was 79% and the specificity was 59% (Shaw et al., 2014).

To validate the CHAT Assessment tool, the CHAT neurodisability assessment was completed by one member of the research team, and a second member of the team then assessed the young person using the 'reference standard neurodisability tools' (Lennox, King, Chitsabesan, Theodosiou, & Shaw, 2013, p. 15). The reference standard tool chosen for the speech, language and communication section was the Test of Word Knowledge (TOWK, Wiig & Secord, 1992). In the TOWK the participant is not required to generate a language sample or answer any questions about contact with services. Expressive language is assessed by giving a single

word response to a visual stimulus. This is very different to the requirement in the assessment to generate an explanation of an everyday task and to disclose any previous contact with services. It could be considered an unrepresentative comparison and questions the validation of the instrument.

Prior to meeting with the young person the assessor should review available relevant records. The assessment tool itself comprises of two sections; a narrative task and a question section. The assessment has 12 Yes/No items across the two sections. The final item being a decision about whether there are any needs in this area that require further assessment. There are no cut-off scores. The assessor is asked to reflect on the responses and decide whether further assessment is required. Guidance suggests difficulties in the narrative task or any 'Yes' responses in the second section could be indicative of speech, language and communication difficulties.

Narrative Task

Whilst titled as a narrative task this activity in fact is a procedural discourse task (Nippold, 2007). The procedural discourse task involves the young person producing a monologue describing how a familiar activity is carried out e.g. making a sandwich. The assessor must then make judgements as to the accuracy and complexity of the information given including; vocabulary and sequencing. The scores range from zero which equates to no difficulties, to four which equates to difficulties with all aspects. A score of two or more is said to indicate the individual may have language and communication difficulties.

The assessor is asked to record the young person's response verbatim. However, the full language sample is not generally recorded in the healthcare records. We are reliant on the assessor having an understanding of developmental language norms to assess the language sample and answer the subsequent questions. Assessors are not required to complete training in language development prior to using the assessment tool. The CHAT manual (Shaw et al., 2014) provides samples of expected responses but guidance on what is appropriate is very limited.

Question Section

This section consists of seven questions including historical items (2) and observations (5) from the assessor about the young person's engagement with the whole assessment. The assessor is required to consult records and liaise with carers to gather information regarding the historical items. Historical items include; whether the individual has had previous contact with

SLT services or has been recorded as having difficulties in this area. The five observation questions include items about the young person's speech, language and communication skills.

The final question requires the assessor to reach a decision as to whether further input is required in this area based on the 11 preceding questions.

The CHAT was completed by a member of the mental health team (this could be either a; mental health nurse, psychologist, psychology assistant, occupational therapist or SLT) within the London region YOI prior to the young person undertaking the speech, language and communication assessment battery with the SLTs.

7.6. Demographic Data

Demographic information was collected from existing healthcare records held at the YOI. This data includes information on socioeconomic and socio-cultural backgrounds, mental health, education and offending behaviour.

7.6.1. Ethnicity

Ethnicity was coded using the National Health Service codes (NHS, 2018) as recorded in the individuals' healthcare record. A detailed list of the codes is reported in Table 9. This data is collected on admission and taken from self-report.

Table 9 - Ethnicity Codes

Code	Definition
A1	Asian/Asian British: Indian
A2	Asian/Asian British: Pakistani
A3	Asian/Asian British: Bangladeshi
A4	Asian/Asian British: Chinese
A9	Asian/Asian British: Any other background
	TOTAL ASIAN
B1	Black/Black British: Caribbean
B2	Black/Black British: African
B9	Black/Black British: Any other background
	TOTAL BLACK
M1	Mixed: White and Black Caribbean
M2	Mixed: White and Black African
M3	Mixed: White and Asian
M9	Mixed: Any other background
	TOTAL MIXED
O2	Other: Arabic
O9	Other: Any other background
	TOTAL OTHER
W1	White: Eng/Welsh/Scot/N.Irish/British
W2	White: Irish
W3	White: Gypsy or Irish Traveller
W9	White: Any other background
	TOTAL WHITE
NS	Prefer not to say

Note: Eng = English; Scot = Scottish; N. Irish = Northern Irish

7.6.2.Socioeconomic status

The socioeconomic status (SES) of each young person was taken from the last known address recorded on the healthcare records. For those records with a complete postcode the first half of the postcode was used to identify the specific area (Lower layer Super Output Area (LSOA)). Where the postcode was not available the borough was used as an approximation (n = 6). For one individual where no address was recorded the postcode from their General Practitioner (GP) was used as a proxy measure.

The National Indices of Multiple Deprivation (2015) calculates deprivation based on postcode. The indices calculate the level of deprivation based on; average income, crime rates, employment, health, living environment and education in a given post code area. There is also an overall indices of multiple deprivation (IMD) score calculated based on all of these fields. Every neighbourhood in England is ranked in terms of its relative deprivation, from zero (most deprived) to 32,844 (least deprived). Alongside ranks deciles are also calculated. In addition to

the aforementioned calculations an additional field is available specific to juveniles; the income deprivation affecting children index (IDACI).

7.6.3.Type and Length of Offence

Offending was coded using the Office for National Statistics offence groups (Home Office, 2013). The Office for National Statistics (ONS) divides 195 specific crimes into ten groupings: criminal damage & arson, drug offences, fraud offences to 2012/13, miscellaneous crimes against society, possession of weapons offences, public order offences, robbery, sexual offences, theft offences, violence against the person. Examples of crimes in each coding group are given in Table 10.

Table 10 - Offending Categories

Offending Category	Specific Crimes (examples)
Criminal damage & arson	Arson, Criminal damage to a dwelling, Racially or religiously aggravated Criminal damage
Drug offences	Trafficking in controlled drugs, Possession of controlled drugs (Cannabis)
Fraud offences to 2012/13	False accounting, Obtaining services dishonestly
Miscellaneous crimes against society	Exploitation of prostitution, Going equipped for stealing, etc, Perverting the course of justice
Possession of weapons offences	Possession of firearms with intent, Possession of article with blade or point
Public order offences	Violent disorder, Riot
Robbery	Robbery of business property, Robbery of personal property
Sexual offences	Rape of a female, Rape of a male, Abuse of children through prostitution and pornography
Theft offences	Blackmail, Aggravated vehicle taking, Theft from the person
Violence against the person	Murder, Kidnapping, Stalking

Length of sentence was also recorded as an indication of the level of seriousness as Snow (2011) had found an association between offending severity and language profiles. Individuals were then assigned to one of two groups based on the average custodial sentence: those below the average in one group, those at or above the average in the second group. Information regarding whether the offence was violent or non-violent was also collected as a number of previous studies have explored the links between the use of violence and language competence (Eastwood, 1985; Muñoz et al., 2008; Myers & Mutch, 1992).

7.6.4.Education History

All data available on education was collected, this included; the year they left school, whether they had been expelled, exam results, Special Educational Needs (SEN) status and whether they had received a statement. This data is gathered routinely as part of the CHAT assessment, Education history details are collected in: Part 3 – Substance Misuse, Part 4 –Mental Health, and Part 5 – Neurodisability. Numerous studies have found links between high levels of SEN, exclusion from school and an increased risk of contact with the CJS (Clegg, Stackhouse, Finch, Murphy, & Nicholls, 2009; Karniski, Levine, Clarke, Palfrey, & Meltzer, 1982; Snow & Powell, 2012).

7.6.5.Substance Misuse

Data was gathered on the use of alcohol, cannabis, other illicit substances and the age these were first used. This data is gathered routinely as part of the CHAT Part 3 – Substance Misuse. In addition, there were occasional references to substance misuse details as part of the mental health section. Alcohol and illicit substances have been demonstrated to have an adverse effect on brain development especially when used at a young age (Gralton, 2014; Moffitt, 1990).

7.6.6.Mental Health

Data was gathered on contact with mental health services, mental health diagnoses and risk of self-harm. Data relating to mental health and risk of self-harm is gathered in the CHAT Part 4, a question relating to the risk of self-harm is also included in the neurodisability section. Individuals with mental health difficulties have been shown to have higher levels of SLCN than the general population (Beitchman, Brownlie, & Lin, 2014; Botting, Durkin, Toseeb, Pickles, & Conti-Ramsden, 2016; Conti-Ramsden, Mok, Pickles, & Durkin, 2013).

7.6.7.Other health conditions

Data was collected on other health conditions known to have higher than average levels of SLCN, these included; traumatic brain injury (TBI), learning disability (LD) and hearing impairment (HI). Data relating to TBI and LD are gathered in the CHAT Part 5, data relating to hearing impairment is gathered in Part 2 – Physical Health. These health conditions have also been shown to be more prevalent amongst the custodial population than in the general population (Belenchia & Crowe, 1983; Hughes et al., 2012; Kaal, Brand, & Nieuwenhuijzen, 2012).

7.6.8.Other

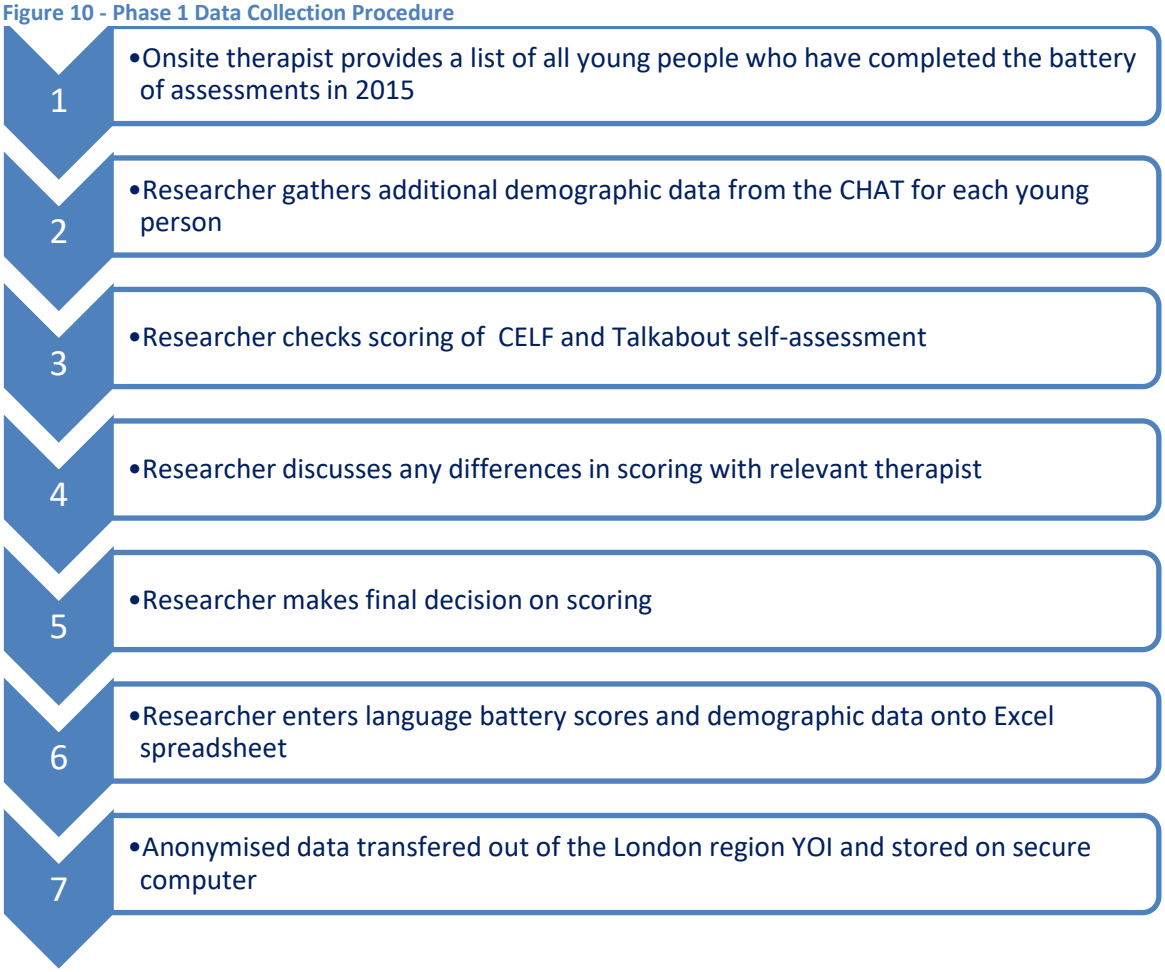
Data was also collected on whether individuals had ever been considered 'Looked after Children' (LAC) in the community. Individuals are asked if they lived with their parents prior to entering custody and if they are considered LAC in the CHAT Part 2 – Physical Health. LAC have been found to be over-represented in the CJS (Laming, 2016) and also found to have higher than average levels of SLCN (McCool & Stevens, 2011). Finally, data was collected on relationships with peers also in contact with the CJS. The CHAT Section 3 asks whether an individual has gang affiliation or if they associate with other individuals who are involved with the CJS.

It has been found supportive and pro-social social networks are an important protective factor when thinking about individuals with SLCN and those at risk of contact with the CJS (Dandreaux & Frick, 2009; M. Glogowska, Roulstone, Peters, & Enderby, 2006).

7.7. Procedure

Once ethical approval was granted a list of individuals who met the participant criteria was gathered from the therapist onsite. This list was then passed to the researcher who collected demographic information for each individual. Assessment data and demographic data was then entered into a spreadsheet onsite by the researcher, who was also a member of staff at the YOI, and all identifiable information was removed. A flowchart of the procedure is presented in Figure 10.

Figure 10 - Phase 1 Data Collection Procedure



Note. CHAT = Comprehensive Health Assessment Tool; CELF = Clinical Evaluation of Language Fundamentals; YOI = Young Offender Institution.

Initially the plan for the study had been to collect data from both healthcare and prison records to ensure completeness and to be comparable with other studies. As permission was not granted to access the prison records for this study there are fields with significant amounts of missing data. It had been hoped data on previous offending history would be available, again to compare with findings from other studies (Snow & Powell, 2011). This data is not contained within healthcare records and therefore was not collected.

Information about SES was obtained from the last known address recorded in the healthcare records. For one individual this data was missing. For this individual the postcode used was based on their last registered General Practitioner (GP). This may have led to SES having been incorrectly assessed for this individual.

Once all identifiable data was removed it was then transferred securely to be held on a stand-alone, password protected University computer. The computer is based on a site with 24 hour security and access to the building is restricted.

7.8. Access and Consent

This phase of the study did not involve the collection of additional data. Consent was already sought from the individual to complete the assessment battery (See Appendix 2). It was not deemed necessary to approach the individuals to seek consent as the data has already been collected for clinical purposes. Consent to access secondary data which was anonymised, not individually scrutinised, and not identifiable was instead sought from the Caldicott Guardian (see Appendix 3.2) as per NHS guidance.

"A Caldicott Guardian is a senior person responsible for protecting the confidentiality of people's health and care information and making sure it is used properly." (UK Government, 2018)

It would also be problematic to seek consent from individuals given that phase was using data already collected, the average length of stay in the YOI is just over six weeks and therefore it is highly likely the majority of individuals would have left the YOI and may have moved anywhere in the country or even overseas. Young people often do not have or leave a forwarding address for healthcare providers on discharge.

7.9. Ethics and Ethical Considerations

The study received ethical approval from the NHS Research Ethics Committee (15/NE/062) and the North Central London Research Consortium (NOCLOR). All data was anonymised onsite by the researcher who was also part of the clinical team. Consent was additionally sought to use the data from the Calidcott Guardian (NHS) and the Head of the Healthcare Service. Approval letters can be found in Appendix 3.

The steps and timeframes for the Phase 1 ethics process are listed in Figure 11. The timeframes in light blue are those stipulated in respective bodies' documentation. Figures in dark blue are actual timeframes. Figures in brackets are the actual time taken when in excess of the bodies' own written documentation. The anticipated length of the process from start to finish was six months. Although the total of anticipated weeks in Figure 11 total almost one year (50 weeks) some of these processes are intended to take place concurrently. However the actual length of the process, from writing the initial application to final consent, was over 90 weeks (January 2015 - November 2016).

For Phase 1, approval was sought from both healthcare and criminal justice ethics bodies. The study was intended to collate previously completed SLT assessments and additional information on these individuals from healthcare and prison databases to mirror previous

studies as closely as possible. University ethics procedures meant gaining these consents negated the need to also complete a University based ethics application.

Figure 11 - Phase 1 Ethics Process

Note. URMS = University Research Management System; R&D = Research and Development; IRAS = Integrated Research Application System; NHS = National Health Service; REC = Research Ethics Committee; NOMS = National Offender Management Service.

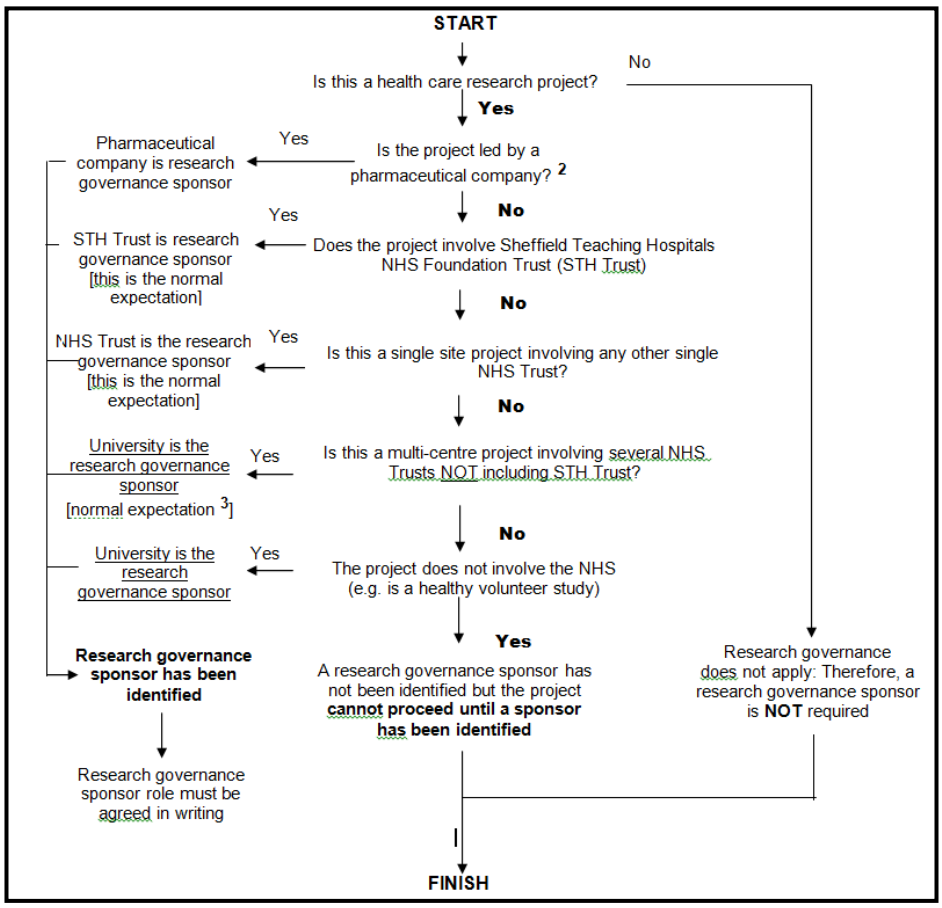
7.9.1.Ethics process for Phase 1

The following section details the criteria Phase 1 of the study was required to comply with, the processes followed and the outcomes.

1. **Seek theoretical approval from Prison Governor to start process.** All research taking place in a prison environment must have the approval of the Governor in the establishment you wish to conduct the research. Even if you have approval from all relevant bodies the local Governor has the right to decide whether the study can proceed or not.
2. **Seek theoretical approval from Healthcare Trust to start process.** It was also necessary to gain the approval of the local healthcare manager and Trust management for the study in principal before completing the full process. As the healthcare within the prison was provided by two different healthcare providers (mental health and primary care) approval from the managers of both services was sought.
3. **Register study on University Research Management System (URMS).** The University research governance procedure stipulates all healthcare research studies must be registered on URMS. URMS was the database which held records of all clinical trials and funded research conducted within the University of Sheffield.
4. **Register study with Healthcare Research & Development (R&D) team.** All healthcare studies must also be registered with the R&D team in the relevant trust. After contacting the local research and development team the study was redirected to the North Central London Research Consortium (NOCLOR) who provide this service for a number of healthcare trusts in North London. The study was initially allocated to one member of staff who was experienced with prison studies however due to their volume of work it was reallocated to another member of staff. This member of staff was new to the team and had no prison experience which led to delays. The study was finally allocated to the Research Operations Manager and approval was granted to proceed.
5. **Complete Integrated Research Application System (IRAS) forms.** IRAS is a single system for applying for the permissions and approvals for health and social care / community care research in the UK. Dependent on the responses to a set of questions the appropriate forms are generated for the specific study. For this study the response to these questions indicated the need for National Offender Management Service (NOMS), National Health Service Research Ethics Committee (NHS REC) and National Health Service Research and Development (NHS R&D) approval. There are two levels of review of applications: full and proportionate. As this study involved individuals under 18 a full review was required.

6. **Get independent scientific approval.** The University and IRAS both required an independent researcher to conduct a review of the study to ensure the methodology and rationale for the study are sound. This was completed by an academic in the department of the Human Communication Sciences who was not involved in the study in any capacity.
7. **Meet with University Department research staff.** This was the first study in the Human Communication Sciences department to go through these processes and therefore a meeting was arranged with the department research leads to ensure the correct protocols were being observed.
8. **Identify sponsor.** For research studies completed in one healthcare trust as part of a university qualification the local healthcare trust would normally act as sponsor. Although this study was being completed in one healthcare trust because it was also being completed in a prison it was designated as a multi-site study, this was confirmed by the University (see Figure 12) and the R&D team. As a multi-site study this then meant the University would act as sponsor.

Figure 12 - University Sponsor Guidance



Note. NHS = National Health Service; STH = Sheffield Teaching Hospitals. Retrieved from: https://www.sheffield.ac.uk/polopoly_fs/1.121332!/file/sponsor.pdf

9. **Get required signatures for submission.** To ensure agreement has been obtained from all parties it is necessary to get signatures from University supervisors, the sponsor's representative and the Prison Governor before submitting the IRAS forms to the relevant bodies.
10. **Submit to NHS Research Ethics Committee (REC).** For general research studies the paperwork would normally be sent to the local REC panel for consideration. However, for prison based studies there are four identified REC panels nationwide. Accordingly, this study was sent through the central booking system to be allocated to an appropriate panel. Generally secondary data analysis studies would be accepted for proportionate review rather than a full review but because the study includes participants defined as vulnerable (prisoners, juveniles) it was necessary to go for a full review.
11. **Submit to National Offender Management Service (NOMS).** Guidance was sought from the Offender Health Research Network (http://www.ohrn.nhs.uk/) and the advice was to submit to both the NHS REC and NOMS at the same time. As the study was being conducted in one prison establishment it was allocated to an individual at that establishment for review. This individual went on maternity leave before the application could be considered. The application was then transferred to another member of the team, not based at the local site. This transfer led to delays in this stage of the process. Consent for the study was initially declined as it was felt the application did not sufficiently address consent issues and further clarification around analysis was requested. This information was added however consent to access data from prison systems was denied as it was felt the research would not generate findings of sufficient relevance for the wider prison estate.
12. **Attend NHS REC panel.** The NHS REC panel consists of healthcare and lay members who have read the IRAS documents and can pose specific questions on ethical issues related to the given study. The panel may choose to approve the study, request amendments or to reject the study. A decision should be provided with 60 days of submission. The panel was attended by the researcher and supervisor, Dr Judy Clegg. The panel gave the study approval subject to minor amendments.
13. **Make amendments as stipulated by REC panel.** A list of amendments required by the panel was then sent in a letter. These amendments were made and sent back to the panel chair. Amendments must be approved in order for final REC clearance to be given. Some additional amendments were required following the decision from the NOMS to not support the study.

14. **Send approvals to Healthcare R&D Team.** Once all relevant approvals had been given these were then sent to the R&D department for review. The R&D department should complete this review within three weeks. For healthcare research not completed within a prison environment once R&D give approval the study can commence.
15. **Final clearance from Prison Governor.** For studies conducted within a prison environment the final step is to gain approval from the Governor that they are happy the approval process has been followed correctly and any changes to the study design made as part of the ethical approval process are agreeable. Even if all approvals have been completed successfully the Governor can still decide they do not wish for the study to be conducted in their establishment at this point. Whilst NOMS did not support the study the local Governor was happy for the research to take place.

It was anticipated the ethics for the study would be lengthy and complex and this proved to be the case with the process taking in excess of 90 weeks. The process became more complex when approval was granted by healthcare but denied by prison services. This led to changes in the overall methodology described in detail below and additional processes being incurred (see Step 13).

The previously stated approval from the National Offender Management Service (NOMS) was not given. Adaptations to the method and protocol were made to reflect this. Tables 11-15 indicate the original plans of which fields would be collected and where from. The Young Offender Assessment Profile (ASSET) (Youth Justice Board, 2014) and the Prison National Offender Management Information System (p-NOMIS) are both systems overseen by NOMS. The ASSET is a structured assessment tool used by Youth Offending Teams with all young people in contact with their services; the ASSET was superseded by the ASSETPlus in 2016.

Table 11 - Education Data

	Source
% attendance	ASSET
Exam results	ASSET
Expelled (+ age)	ASSET (not age)
Years of education	ASSET
SEN	HEALTH, ASSET
Statement/EHC plan	HEALTH, ASSET
ESL	HEALTH, ASSET

Note. ASSET = Young offender assessment profile; SEN = Special educational needs; EHC = Education, health and care; ESL = English as a second language.

Table 12 - Mental health data

	Source
Conduct disorder	HEALTH
ODD	HEALTH
ADHD	HEALTH
ASD	HEALTH
Substance misuse	HEALTH, ASSET
Nonverbal IQ	HEALTH
Previous contact with services	HEALTH, ASSET

Note. ODD = Oppositional defiant disorder; ADHD = Attention deficit hyperactivity disorder; ASD = Autistic spectrum disorder; ASSET = Young offender assessment profile; IQ = Intelligence quotient.

Table 13 - Family and society data

	Source
Family structure	ASSET
LAC	HEALTH, ASSET
SES	p-NOMIS
Child Protection	ASSET
BAME	HEALTH, p-NOMIS, ASSET
Abuse/Neglect	ASSET
Similar peers	ASSET

Note. ASSET = Young offender assessment profile; LAC = Looked after child; SES = socioeconomic status; p-NOMIS = Prison national offender management information system; BAME = Black, Asian and minority ethnic groups.

Table 14 - Offending data

	Source
Index offence	ASSET, p-NOMIS
Early v late onset	ASSET
Frequency	ASSET
Violent v non violent	ASSET, p-NOMIS

Note. ASSET = Young offender assessment profile; p-NOMIS = Prison national offender management information system.

Table 15 - Physical health data

	Source
TBI	HEALTH
Birth	ASSET

Note. TBI = Traumatic brain injury; ASSET = Young offender assessment profile.

Some of the data for education was available from the CHAT, however this was not routinely recorded for all individuals leading to significant amounts of missing data. It was not possible to gather data on attendance at school. All mental health data fields were available from healthcare records. With regards to family and society data, it was not possible to gather data on family structure, child protection or abuse/neglect. Information on SES was gathered via postcode data from healthcare records. Offending data held on the healthcare records was limited, the length of stay and index offence were however available. It was not possible to gather data on the age of onset or the frequency of offending. Information regarding the use

of violence was available for some individuals. It was not possible to gather physical health data on birth from healthcare records.

7.10. Data Analysis

Data was analysed using the Statistical Package for Social Scientists (SPSS v21). Descriptive statistics were used to illuminate the findings from the speech, language and communication assessments and explore the overall demographic information. Correlation analysis were performed to explore the associations between the speech, language and communication data and the demographic information.

8. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Results

This chapter will report the results relating to Phase 1 of the study. This includes:

- Describing the profile of SLCN in this cohort of young people residing in a London region YOI (N = 45)
- Exploring the relationships between speech, language and communication difficulties in this group
- Reporting on education, mental health, family and societal factors
- Exploring the relationship between SLCN and socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour.

In order to answer the Phase 1 research questions:

1. Do young people in the London region YOI have similar levels of language difficulties to previously researched populations?
2. What is the profile of language difficulties in this population?
3. Does this population have similar education, mental health and societal backgrounds as previously researched populations?
4. Are language difficulties associated with
    a. socioeconomic and socio-cultural backgrounds,
    b. developmental history,
    c. educational history and attainment,
    d. mental and physical health
    e. and offending behaviour?

8.1. Profiling speech, language and communication needs

Language data was available from 45 individuals assessed between 2015-2016. Data was collected from consecutive admissions to Feltham (n = 26, 58%) and then from referrals to the SLT service (n = 19, 42%). These two groups were analysed separately to check for potential differences. This was tested by looking at the mean scaled score on the CELF-4 UK (Semel et al., 2006) for Core Language. The mean scaled score across both groups was 70 (n = 36), see Table 16. The mean scaled score for the consecutive admissions groups was 69.8 (n = 20) and

70.25 (n = 16) for the referrals group. This suggests there were no significant differences between the language scores of the two groups based on referral type. The whole cohort also ranged in age between 16;1 and 18;2 with the mean age being 17;2. Core language scores were again used to check for variation according to age. An independent samples t-test was conducted, this found the mean core language score for individuals >17;2 (n = 17) was 68.29, and the mean score for individuals <= 17;2 (n = 19) was 71.53. This difference was not statistically significant suggesting there is no important variation between the cohorts based on age. Based on these findings the cohort will be described as a whole group.

As there was a significant amount of missing data across the whole dataset a table (see Table 16) has been included which shows what data was available for each participant. The table shows where all data fields were complete (C), where there was some data missing (P) or where no data was available (M) in that particular area.

Table 16 - Missing Data Overview

Case ID	CELF	Social Skills	Speech	CHAT	Referral Info	Age	Education	Mental Health	Physical Health	Substance Misuse	Family & Societal Factors	Ethnicity	IMD	Offending
1	C	C	C	C	P	C	C	C	C	P	C	C	C	C
2	C	C	C	C	P	C	C	C	C	C	C	C	C	C
3	P	C	C	C	P	C	P	C	C	M	C	P	C	C
4	M	M	C	C	P	C	P	C	C	P	C	C	C	C
5	C	C	C	C	P	C	P	C	C	C	C	C	C	C
6	C	M	C	C	C	C	P	C	C	M	C	P	C	C
7	C	C	C	C	C	C	P	C	C	C	C	C	C	C
8	C	C	M	C	C	C	P	C	C	M	C	C	C	C
9	C	C	M	C	C	C	P	C	C	P	C	P	C	C
10	C	C	C	C	C	C	P	C	C	P	C	C	C	C
11	C	C	M	C	C	C	P	C	C	P	C	C	C	C
12	C	C	C	M	M	C	P	C	C	P	C	P	C	C
13	M	C	C	M	M	C	P	C	C	P	C	C	C	C
14	P	C	C	C	P	C	P	C	C	P	C	P	C	C
15	C	C	C	C	P	C	P	C	C	P	C	C	C	C
16	C	C	C	C	P	C	P	C	C	C	C	C	C	C
17	C	M	C	C	P	C	P	C	C	P	C	C	C	C
18	C	C	C	C	P	C	P	C	C	P	C	C	C	C
19	C	C	C	C	C	C	C	C	C	P	C	P	C	C
20	C	C	C	M	M	C	P	C	C	P	C	P	C	C
21	C	C	C	C	C	C	P	C	C	M	C	P	C	C
22	C	C	C	C	C	C	P	C	C	P	C	C	C	C
23	C	C	M	C	C	C	C	C	C	P	C	P	C	C
24	M	M	M	C	C	C	C	C	C	P	C	P	C	C

Case ID	CELF	Social Skills	Speech	CHAT	Referral Info	Age	Education	Mental Health	Physical Health	Substance Misuse	Family & Societal Factors	Ethnicity	IMD	Offending
25	C	C	M	C	C	C	P	C	C	C	C	C	C	C
26	C	C	M	C	C	C	P	C	C	C	C	C	C	C
27	C	C	M	C	C	C	P	C	C	M	C	P	C	C
28	C	C	M	C	C	C	P	C	C	P	C	C	C	C
29	C	C	C	P	C	C	P	C	C	P	C	P	C	C
30	M	M	M	C	P	C	C	C	C	P	C	P	C	C
31	M	M	M	P	P	C	P	C	C	P	C	C	C	C
32	P	M	M	C	C	C	C	C	C	C	C	C	C	C
33	C	C	M	C	C	C	P	C	C	P	C	P	C	C
34	C	M	C	C	C	C	P	C	C	P	C	C	C	C
35	C	C	C	C	C	C	P	C	C	P	C	P	C	C
36	C	M	C	C	C	C	C	C	C	P	C	C	C	C
37	C	M	M	C	C	C	P	C	C	P	C	P	C	C
38	C	M	C	C	C	C	C	C	C	C	C	C	C	C
39	P	M	M	M	C	C	P	P	M	P	C	P	C	C
40	C	M	C	C	C	C	C	C	C	P	C	P	C	C
41	C	C	C	C	C	C	P	P	C	P	C	P	C	C
42	C	M	C	C	C	C	C	C	C	P	C	C	C	C
43	C	M	C	C	C	C	C	C	C	P	C	P	C	C
44	C	C	C	C	C	C	P	C	C	P	C	P	C	P
45	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Note. Case ID = Case identifier, CELF = Clinical Evaluation of Language Fundamentals, CHAT = Comprehensive Health Assessment Tool, Referral Info = Referral Information, IMD = Indices of Multiple Deprivation, C = Complete, P =Partial, M = Missing.

8.2. Clinical Evaluation of Language Fundamentals 4th Edition UK – Core Language Subtests

The four CELF Core Language subtests (recalling sentences, formulated sentences, word classes, word definitions) were intended to be completed by all participants. Thirty six participants (80%) completed all subtests. Thirty eight individuals (84.4%) completed some of the subtests. Seven participants (15.6%) did not complete the full Core Language Scale. The reasons for non-completion were; declined to participate (n = 3, 6.6%), declined to continue (n = 2, 4.4%), not completed due to regime (n = 2, 4.4%). Non completion due to the regime may mean an incident occurred within the prison or changes in staffing levels meant the individual had to be returned to their room before the assessment was completed.

8.3. Recalling sentences

Recalling sentences was completed by 84.4% (n = 38) of participants. There was one significant outlier (11) in the lower extremes. The outliers in each sub-test will be described in more detail at the end of this chapter. Outliers were calculated using the Grubb's test (Grubbs, 1969). The Grubb's test looks at the distance of outliers from the other scores, rather than being based on inter-quartile ranges. The mean scaled score was seven, 1 *SD* below the expected scores from the normative sample. Twenty five percent of participants (n = 8) performed at or above the expected level. Data was normally distributed (Distribution is reported in Appendix 4). Table 16 shows the mean, standard deviation and range of scaled scores for the subtest.

8.4. Formulated Sentences

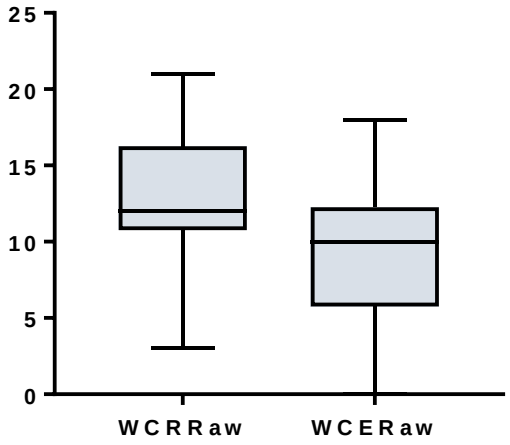
Formulated sentences was completed by 84.4% (n = 38) of participants. There were three (19, 36, 42) significant outlier in the lower extremes. The mean scaled score was 5.05, 1.5 *SD* below the expected scores from the normative sample. Two participants (4.4%) performed at or above the expected level. Data was normally distributed (Distribution is reported in Appendix 4). Table 16 shows the mean, standard deviation and range of scaled scores for the subtest.

8.5. Word Classes

Word classes was completed by 84.4% (n = 38) of participants. There were no significant outliers for the receptive or expressive components. The mean scaled score for the receptive component was 5.11, 1.5 *SD* below the expected scores from the normative sample. The mean scaled score for the expressive component was 5.03, 1.5 *SD* below the expected scores from the normative sample. The mean scaled score for the whole sub-test was 4.82, 1.5 *SD* below the expected scores from the normative sample. Three participants (6.6%) performed at or above the expected level on the whole sub-test. Data was normally distributed (Distribution is

reported in Appendix 4). Table 16 shows the mean, standard deviation and range of scaled scores for the subtest.

Figure 13 - Box plot of raw scores for word classes subtest



Note. WCRRaw = Word Classes Receptive Raw score; WCERaw = Word Classes Expressive Raw score.

When calculating the distribution of data acceptable levels of skewness (+/-2) and kurtosis (+/-3) have been taken from Field (2009).

8.6. Word Definitions

Word definitions was completed by 84.4% (n = 38) of participants. There were no significant outliers. The mean scaled score was 4.5, 1.5 *SD* below the expected scores from the normative sample. One participant (2.2%) performed at or above the expected level. Data was normally distributed (Distribution is reported in Appendix 4). Table 17 shows the mean, standard deviation and range of scaled scores for the subtest.

Table 17 - Core Language Subtests: scaled score summary

Core language subtest	Mean	SD	Min/Max
Recalling Sentences	7.0	3.238	1-12
Formulating Sentences	5.053	2.789	1-12
Word Classes	4.816	3.135	1-11
Word Definitions	4.5	2.788	1-11
Core Language	**70**	**18.216**	**24-104**

Note. SD = Standard deviation; Min = minimum; Max = maximum.

8.7. Core Language Score (CLS)

The core language score could be calculated for n = 36 (80%). There were no significant outliers. The mean scaled score was 70, 2 *SD* below the expected scores from the normative

sample. Six participants (13.2%) performed within the expected range (85-115). One of these participants scored above the mean (≥ 100). No participants scored above the expected range (≥115). There was a significant range (80) in scores however data was normally distributed (see Appendix 4). Table 16 shows the mean, standard deviation and range of scaled scores.

8.8. Social Skills Assessment

The Social Skills Checklist is taken from the resource book Talkabout for Teenagers (Kelly & Sains, 2009). This is a non-standardised assessment. The checklist is a 15 item, self-rating tool. Each item is rated on a three point scale; Yes (2), Sometimes (1), No (0). The social skills assessment was completed by 64.4% (n = 29) of participants. The reasons for non-completion by other participants was not available. There were no significant outliers. The mean score 20.41, the highest possible score being 30. The higher the score the greater the individuals' confidence in their skills. One participant scored himself at the maximum. There was a significant range in scores (23), however data was normally distributed (see Appendix 4). Sixteen participants scored below the mean, with five of these scoring below 50% which is indicative of marked concerns about their social skills.

8.9. Speech

Speech was simply coded as a binary Yes/No. Therapists had been guided to score 'Yes' where intelligibility was affected and/or the young person reported speech difficulties. Type or level of impairment was not routinely recorded. Data on the presence of speech difficulties was collected for 66.6% (n = 30) of participants. Six participants (20%) were coded as having speech difficulties. This data was not collected from 15 individuals (33.3%). The reasons for the missing data are unknown.

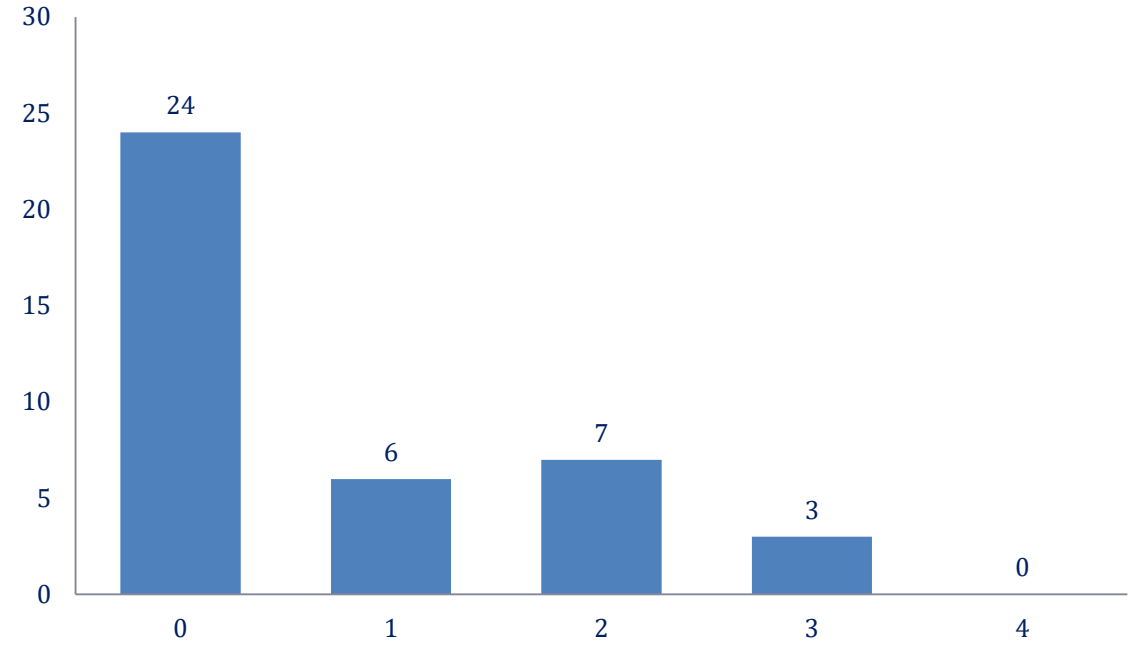
8.10. Comprehensive Health Assessment Tool (CHAT) - Speech, language and communication needs

The CHAT SLCN section is intended to be completed by all participants within 10 days of arriving in the custodial environment. The assessment tool itself comprises of two sections; a narrative task and a question section. The assessment has 12 Yes/No items across the two sections. The final item being a decision about whether there are any needs in this area requiring further assessment. There are no cut-off scores. Forty-one participants (91.1%) completed some questions on the CHAT, forty participants (89.9%) completed all sections. The reason for non-completion for the one non-completer was not available.

8.11. Narrative Section

The narrative task was completed by 88.9% (n = 40) of participants. The mean score was 0.73, the highest possible score being 4. The range of scores is shown in Figure 14. Three individuals (7.5%) scored 3. No participants scored the maximum 4. Data was non-normally distributed, with skewness of 2.53 (SE = .37) and kurtosis of 6.16.

Figure 14 - Histogram of CHAT Narrative Scores



Note. CHAT = Comprehensive Health Assessment Tool.

8.12. Question Section

This section consists of seven questions including historical items (2) and observations (5) from the assessor about the young person's engagement with the whole assessment. And a final question asking whether based on the preceding questions, in section one and two, whether an onward referral is required.

8.12.1. History of Speech and Language Difficulties or History of contact with Speech and Language Therapy Services

Data for these items was present for 41 participants (91.1%). Seven participants (15.6%) were coded as having a history of difficulties and contact with SLT services.

Six individuals were recorded as having a history of speech and language difficulties and contact with SLT services. One individual was recorded as having a history of speech and language difficulties but no contact with SLT services. One individual was recorded as having contact with SLT services but not as having a history of speech and language difficulties.

8.12.2.Speech Difficulties

Data on the presence of speech difficulties was collected for 91.1% (n = 41) of participants. Twelve out of the 41 participants were coded as having speech difficulties. There is a discrepancy here between the findings from this question and the data about speech difficulties collected by the Speech and language therapists (SLTs). This discrepancy is discussed in detail later in this chapter (see section 8.15.2).

8.12.3.Comprehension

Data on comprehension was collected for 41 participants (91.1%). The mean score was 0.34, the highest possible score being three. Two individuals (4.4%) scored three. Data was not normally distributed (see Appendix 4). This may be due to erroneous grouping of three items, two items test the rater's comprehension of the participant whilst the third tests the participant's comprehension of the rater. Access to the raw data is unavailable to test whether this is the case.

8.12.4.Minimal Response

Data on minimal response was collected for 91.1% (n = 41) of participants. Seven participants (15.6%) were coded as responding minimally.

8.12.5.Referral Recommended and Referral Made

Data on onward referral was collected for 89.9% (n = 40) of participants. It was recommended eleven participants (24.4%) were referred on to SLT services. Nine of these participants (20%) were referred to SLT services following the CHAT SLCN assessment.

8.13.CHAT - Speech, language and communication needs score

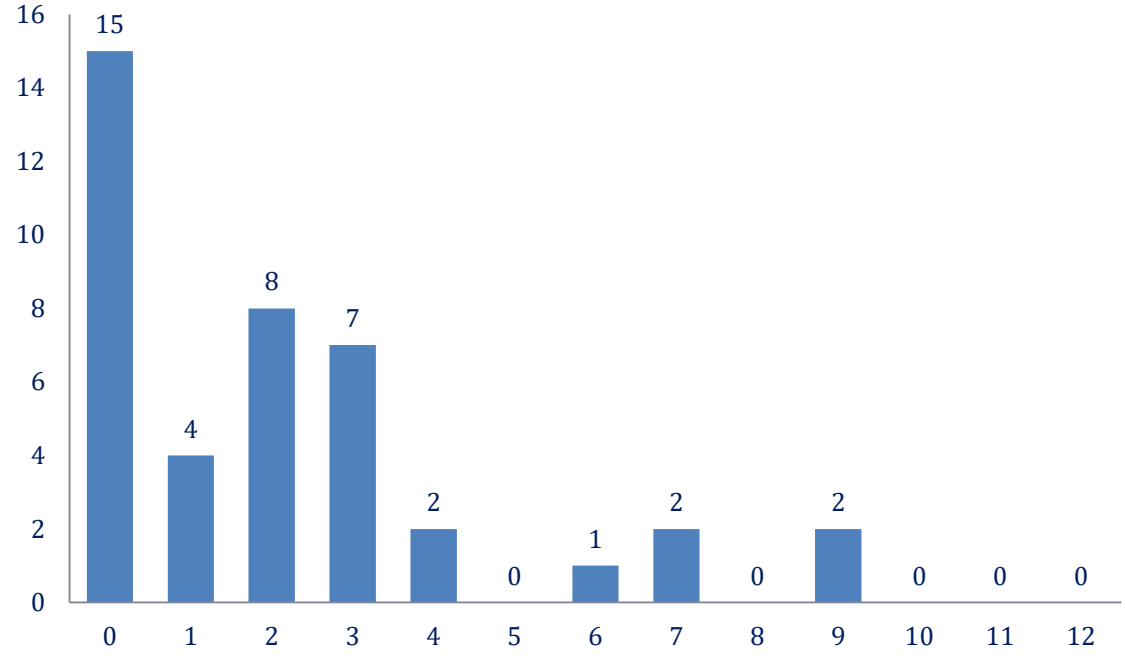
The CHAT is formed of 12 items, comprising of two sections; Narrative task, and History and Observation of SLCN. The mean score on the assessment was 2.211. A summary of the scores for each question is shown in Table 18. The distribution of total scores on the CHAT is shown in Figure 15. Fifteen participants did not score at all on the assessment. No participants scored the maximum of 12, the highest score was nine (n = 2).

Table 18 - CHAT Summary of Scores

	N	Mean	Std. Deviation	Min	Max	Potential Max
Narrative	40	0.725	1.012	0	3	4
History of SLCN	41	0.171	0.381	0	1	1
Previous SLT	41	0.171	0.381	0	1	1
Speech	41	0.293	0.461	0	1	1
Comprehension	41	0.342	0.762	0	3	3
Minimal Response	41	0.171	0.381	0	1	1
Referral Recommended	40	0.275	0.452	0	1	1
CHAT Total	**41**	**2.122**	**2.462**	**0**	**9**	**12**

Note. Min = minimum; Max = maximum; SLCN = Speech, language and communication needs; SLT = Speech and language therapy; CHAT = Comprehensive Health Assessment Tool.

Figure 15 - CHAT SLCN Total Score



Note. CHAT = Comprehensive Health Assessment Tool; SLCN = Speech Language and Communication Needs.

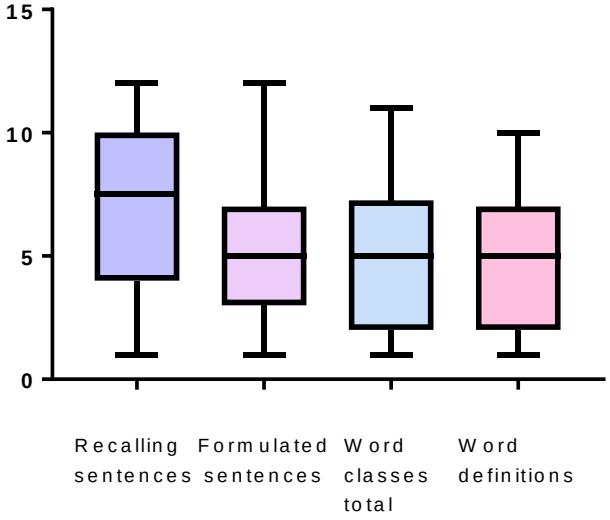
8.14. Exploring relationships between performance on speech, language and communication assessments

8.14.1. CELF Core Language Subtests

Scores on the Recalling sentences subtest are a lot higher than on the other subtests. Figure 16 shows the relative scaled scores on each of the core language subtests. There is very little overlap between the upper and lower bound on the scaled scores between this subtest and the other subtests in the core language scale. Further analysis using paired t-tests

demonstrates the difference between Recalling sentences and the other subtests is significant (p = .001, p = .000, p = .000).

Figure 16 - Box plots of scaled scores on core language subtests

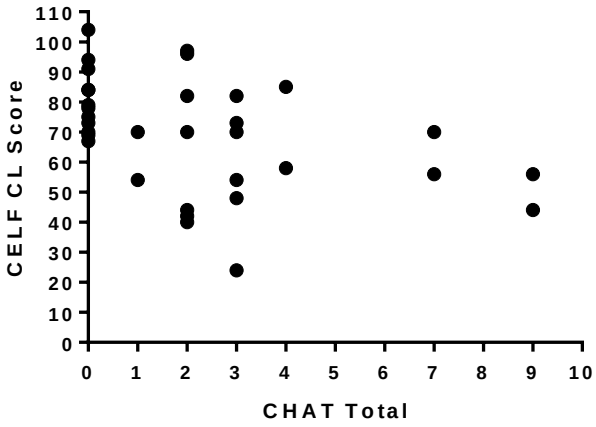


8.15. Relationship between language battery scores and CHAT screen

8.15.1. CELF Core Language Score

A Pearson correlation was performed to investigate if there was a relationship between scores on the CELF core language score and the CHAT total. The analysis found a significant negative correlation (r= -0.425, p = .012) between the 36 pairs. This correlation demonstrates that in general a lower score on the CELF would correlate with a higher score on the CHAT, indicating both assessments were identifying those with language difficulties. This inverse relationship can also be seen on the scatter plot in Figure 17.

Figure 17 - Relationship between CELF and CHAT scores



Note. CELF CL Score = Clinical evaluation of language fundamentals core language score; CHAT = Comprehensive health assessment tool.

8.15.2.Speech difficulties

Speech difficulties were recorded in both the language battery and CHAT screen, Table 19 shows the results for the 16 participants rated as having a speech difficulty on either of these assessments. Only two participants (12.5%) were rated as having speech difficulties on both assessments. There was a difference in the raters' views for seven participants (43.75%) and data was unavailable for both assessments for seven participants.

Table 19 - Reporting of Speech Difficulties

Case ID	Language Battery	CHAT
2	N	Y
8	NR	Y
10	**Y**	**Y**
13	Y	NR
16	Y	N
22	N	Y
23	NR	Y
27	NR	Y
28	NR	Y
30	NR	Y
32	NR	Y
34	N	Y
38	Y	N
41	N	Y
42	**Y**	**Y**
45	Y	N

Note. Case ID = Case identifier; CHAT = Comprehensive health assessment tool; N = No; Y = Yes; NR = Not recorded.

8.15.3.Social Skills

There are no questions on the CHAT relating to how the individual feels about their language skills so correlations were conducted to explore potential relationships between the CELF core language score and the Social Skills score. To check for consistency a correlation was also conducted examining the relationship between CHAT total score and Social Skills. The correlations were both insignificant but had very similar negative *r* values, see Table 20.

Table 20 - Social skills correlations

	r	*p*
CELF Core Language	-0.11	0.58
CHAT Total	-0.12	0.57

Note. CELF Core Language = Clinical evaluation of language fundamentals core language; CHAT Total = Comprehensive health assessment tool total.

8.16.Referral to SLT

Data on referral to SLT was collected for 42 participants. In addition to those referred from CHAT, 21 other individuals were referred. In total 30 of the participants were referred (66.7%). This figure will be artificially high as 19 of the data sets are from those referred. A Pearson chi-

square test was performed between the two groups (consecutive and referral) which did show an asymmetric distribution (p = .000). Eleven (47.8%) of the consecutive cases were referred for SLT (see Table 21). There were no significant differences on language (p = .079) or social skills (p = .111) scores between those referred and not referred.

Table 21 - Referrals to SLT by Type

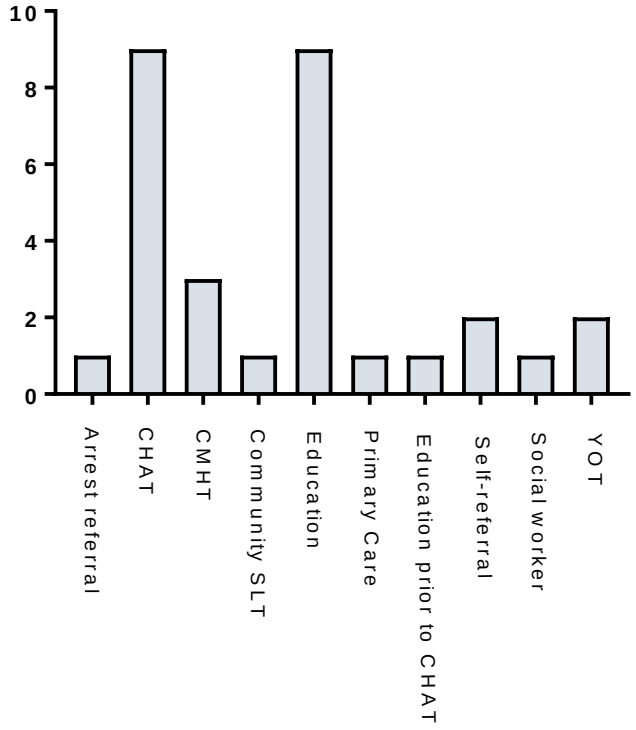
		Referral to SLT		Total
		Yes	No	
Type	Consecutive	11	12	23
	Referral	19	0	19
Total		30	12	42

Note. Referral to SLT = Referral to speech and language therapy.

8.17. Referral Source

Data on referral source was available for all individuals referred (n = 30), see Figure 18. The most common source of referral was Education (30%) and then from the CHAT assessment (27%). The least common referral routes (n = 1) were; arrest referral, community SLT, Primary care, Education prior to CHAT and Social worker. Arrest referrals generally occur when an individual discloses a history of SLT on admission to the prison and as such could be seen as a self-referral. Six participants disclosed having accessed SLT services prior to admission, community services are limited for adolescents it is likely the one referral from the community SLT service would be a service attached to a youth offending team. Prior to the introduction of the CHAT screen for SLCN the Primary care staff completed a three question screen for SLCN and referrals from this source were more common. Primary care staff are aware of this new screen and therefore this may account for the limited referrals from this source. The Education prior to CHAT category is in addition to an Education field; it may be there are referrals in the broader Education category that were also made prior to the CHAT. The Education induction process generally occurs within the first week of admission whereas the CHAT occurs within the first 10 days of admission. Each individual is allocated a social worker on admission to the YOI as they officially become classed as LAC. The social worker will review community documents and therefore an individual who has a report from SLT services on their file is likely to be referred.

Figure 18 - Referrals to SLT by source



Note. SLT = Speech and Language Therapy; CHAT = Comprehensive health assessment tool; CMHT = Community mental health team; Community SLT = Community Speech and language therapist; Education prior to CHAT = Education prior to Comprehensive health assessment tool; YOT = Youth offending team.

8.18. Demographic Factors

8.18.1. Age

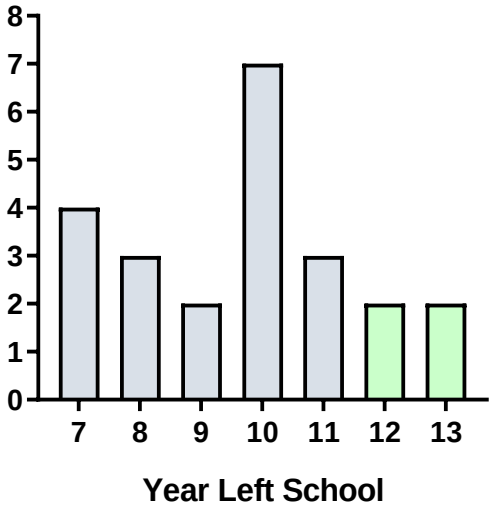
Eligible participants were aged between 15-18 years. The majority of young people in custody are aged 17 (*Youth Custody Report March* 2018), so it would be expected the mean would be close to this. The mean age of the cohort was 17.2 (*SD* .59), there were no participants aged 15 and five participants were aged 18 or over. Data was normally distributed.

8.19. Education

8.19.1. School leaving age

Data on year of leaving school was available for 23 participants. Four participants (8.9%) were in education on admission, see Figure 19. The majority left school in Year 10 (n = 7) aged 14-15 years old, three or four years before the official government school leaving age and prior to talking any formal qualifications. Four individuals left school in the first year of secondary education.

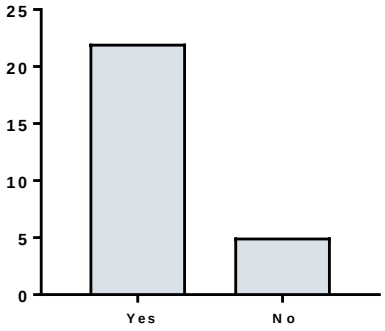
Figure 19 – School leaving age



8.19.2.School Exclusion

Data on whether an individual had been expelled was available for 27 participants. Over 80% of participants for whom data was available had been expelled from school, see Figure 20.

Figure 20 - School exclusion



8.19.3.Examination Attainment

Data on exam results was available for 27 participants. The data did not stipulate whether examinations were; General Certificates of Secondary Education (GCSEs), Business and Technology Education Council Firsts (BTECs), National Vocational Qualification Level 2 (NVQs) or other qualifications. Given the age of participants (mean=17;2) it is unlikely these examinations would include Advanced Level qualifications. The majority of individuals (n = 15, 55.6%) had received no formal qualifications at school. For those who did pass examination, details of the number of exams attained is given in Table 22.

Table 22 - Number of Exams Passed

	Number	Percentage (%)
3	3	11.1
4	1	3.7
5	1	3.7
6	2	7.4
7	1	3.7
Some	4	14.8

8.19.4.Special Educational Needs (SEN)

Data on SEN was collected for 44 participants. Twenty one participants (46.7%) reported having being registered as having SEN.

8.19.5.Statement of SEN/Education and Healthcare Plan

Data on statementing was collected for 44 participants. Eight participants (17.8%) reported having a statement of special educational needs.

8.20.Mental Health

8.20.1.Attention Deficit Hyperactivity Disorder (ADHD)

Data on ADHD was collected for all participants (*N* = 45). Five individuals (11.1%) reported having ADHD and a further four reported a possible diagnosis.

8.20.2.Autistic Spectrum Disorders (ASD)

Data on ASD was collected for 44 participants. Three individuals (6.7%) reported having a possible diagnosis; they were aware autism had been mentioned but none were sure if they had a confirmed diagnosis.

8.20.3.Learning Disability (LD)

Data on LD was collected for 44 participants. Five individuals (11.1%) reported having a possible diagnosis, whilst one individual reported a confirmed diagnosis of a learning disability.

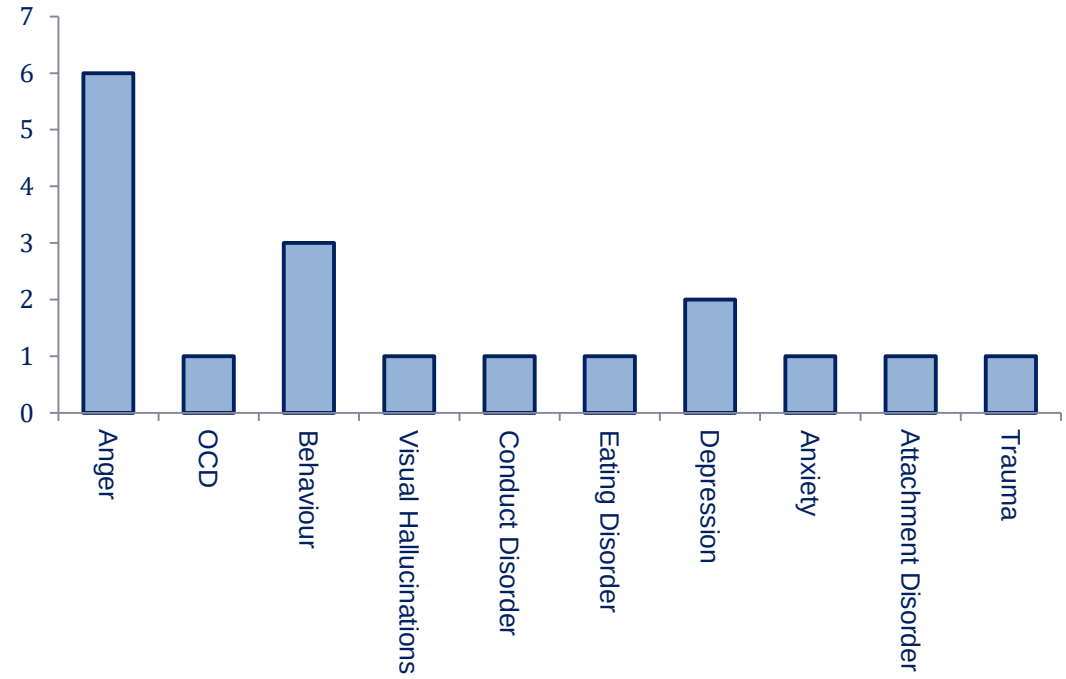
8.20.4.Risk to Self

Data on Risk to Self was collected for all participants (*N* = 45). Five individuals (11.1%) were considered an immediate risk to themselves by the healthcare professional completing the assessment.

8.20.5.Other mental health diagnoses

Fifteen participants were recorded as having mental health issues other than those listed above. The most common other diagnosis was ‘anger’ (n = 6). Figure 21 shows a breakdown of the mental health diagnoses reported by the participants.

Figure 21 - Other mental health diagnoses



Note. OCD = Obsessive compulsive disorder

8.20.6.Contact with Mental Health Services

Data on previous contact with mental health services was collected for all participants (*N* = 45). Over half of the participants (51.1%) reported having had had previous contact with services.

8.21.Physical Health

8.21.1.Hearing

No participants were reported as having any hearing difficulties. The assessment did not require the individual to be asked whether they had hearing difficulties, the healthcare professional was required to judge whether the individual was having any difficulties during the assessment process.

8.21.2.Traumatic Brain Injury (TBI)

Data on TBI was collected for 44 participants. Almost half of the participants (46.7%) reported having a history of TBI.

8.22.Substance Misuse

8.22.1.Alcohol

Data on alcohol use was collected for 30 participants (66.6%). Over half of participants (60%) reported a history of alcohol use.

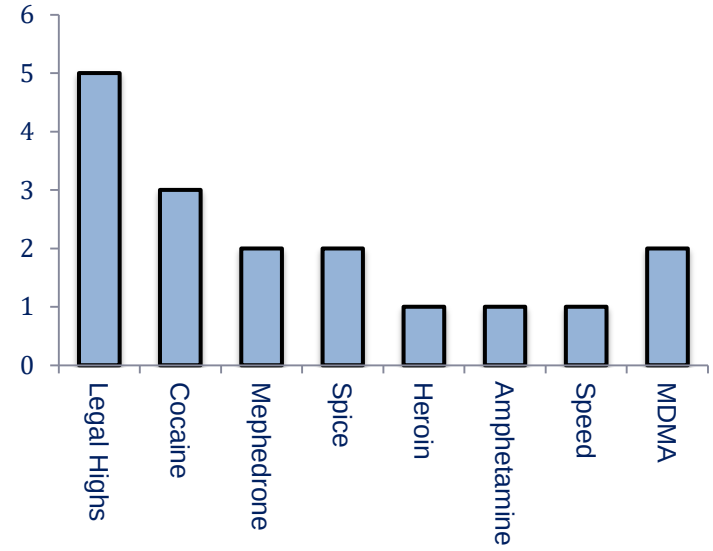
8.22.2.Cannabis

Data on cannabis use was collected for 40 participants (88.9%). More than three quarters of participants (85%) reported a history of cannabis use.

8.22.3.Other Substances

Ten participants reported using substances other than cannabis and alcohol; half of these reported using multiple substances. Figure 22 shows the other substances reported.

Figure 22 - Other substances



Note. MDMA = Methylenedioxymethamphetamine.

8.23.Family & Societal Factors

8.23.1.Looked after child (LAC)

Data on looked after child status prior to admission was collected for all participants (*N* = 45). Nineteen participants were designated LAC status.

8.24.Ethnicity

Data on ethnicity was collected for all participants (*N* = 45). One participant declined to declare their ethnicity. The largest percentage (n = 10, 22.2%) of the group identified as White: Eng/Welsh/Scot/N.Irish/British. A full breakdown of the ethnicity of participants is shown in Table 23.

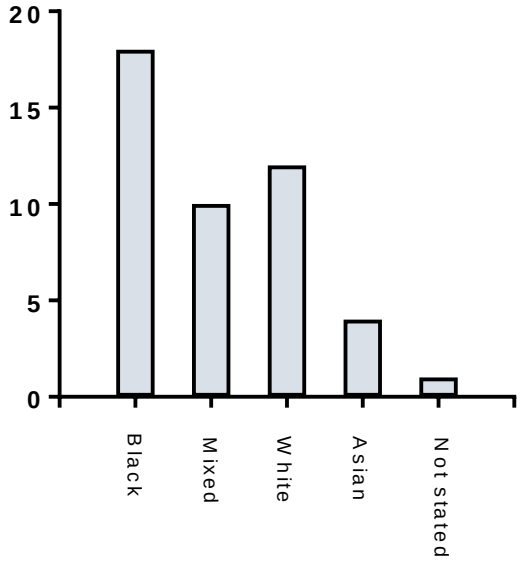
Table 23 - Ethnicity of participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Asian/Asian British: Pakistani	1	2.2	2.2	2.2
Asian/Asian British: Bangladeshi	3	6.7	6.7	8.9
Black/Black British: Caribbean	7	15.6	15.6	24.4
Black/Black British: African	8	17.8	17.8	42.2
Black/Black British: Any other background	3	6.7	6.7	48.9
Mixed: White and Black Caribbean	6	13.3	13.3	62.2
Mixed: White and Black African	1	2.2	2.2	64.4
Mixed: White and Asian	2	4.4	4.4	68.9
Mixed: Any other background	1	2.2	2.2	71.1
White: Eng/Welsh/Scot/N.Irish/British	10	22.2	22.2	93.3
White: Any other background	2	4.4	4.4	97.8
Prefer not to say	1	2.2	2.2	100.0
Total	45	100.0	100.0	

Note. White: Eng/Welsh/Scot/N.Irish/British = White: English/Welsh/Scottish/Northern Irish/British.

When these groups are condensed to their broader titles (see Figure 23); the largest group identified as Black (n = 18) and over three quarters identified as Black, Asian and minority ethnic (BAME) individuals (n = 32).

Figure 23 - Ethnicity by broader groupings



8.24.1. English as a Second Language (ESL)

One participant was reported as having a language other than English as their first language. They were recorded as being a Romanian speaker. Participants were not directly asked if they had English as a second language unless they appeared to have difficulties answering questions on the CHAT.

8.24.2. Similar Peers

Data on association with similar peers was collected for 23 participants. Of those 23 participants, 16 were recorded as having relationships with similar peers.

8.25. Indices of Multiple Deprivation (IMD)

The IMD divides England in to 32,844 small areas or neighbourhoods, called Lower-layer Super Output Areas (LSOA). The lower the number the more deprived an area is deemed to be. The IMD data from 2015 has been used to generate this data from the last known postcodes of participants.

8.25.1. Overall IMD Rank and Decile

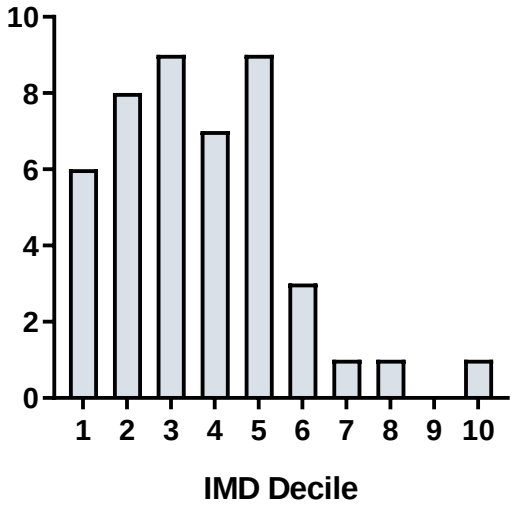
Data on the IMD rank and decile was available for all participants (*N* = 45), details of ranking is given in Table 24.

Table 24 - IMD Rankings

N	Range	Minimum	Maximum	Mean	Std. Deviation
45	30138	719	30857	10546.18	6611.782

Over 50% of the cohort are in the lowest third (between the 1st and 3rd decile), whilst 6.6% are in the top third (7th and 10th decile), as seen in Figure 24.

Figure 24 - IMD Deciles



Note. IMD = Indices of Multiple Deprivation.

8.25.2.Education Rank and Decile

Data on the IMD education rank and decile was available for all participants (*N* = 45), details of ranking is given in Table 25.

Table 25 - Education Rank

N	Range	Minimum	Maximum	Mean	Std. Deviation
45	28697	2208	30905	15876.27	8074. 507

62.2% (n = 28) of participants were in the lowest half (1st – 5th decile).

8.25.3.Crime Rank and Decile

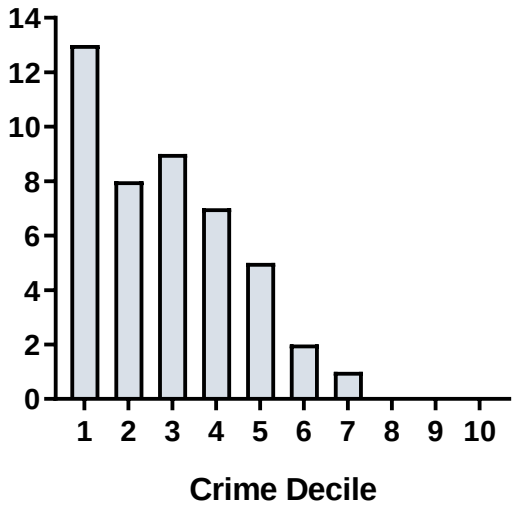
Data on the IMD crime rank and decile was available for all participants (*N* = 45), details of ranking is given in Table 26.

Table 26 - Crime Rank

N	Minimum	Maximum	Mean	Std. Deviation
45	266	20336	7520.91	5447.003

66.7% (n = 30) of participants were in the lowest third (1st –3rd decile). None of the participants fell in the highest third (8th – 10th decile), as seen in Figure 25.

Figure 25 - Crime Decile



8.25.4.IDACI Rank and Decile

The income deprivation affecting children index (IDACI) is used by the UK government to calculate the proportion of children under the age of 16 living in low income households per Lower-layer Super Output Area. Like the IMD, the lower the number the more deprived an area is deemed to be. Data was available for all participants (*N* = 45) and ranking is shown in Table 27.

Table 27 - IDACI Rank

N	Minimum	Maximum	Mean	Std. Deviation
45	613	30712	9094.31	6900.805

Note. IDACI = Income Deprivation Affecting Children Index.

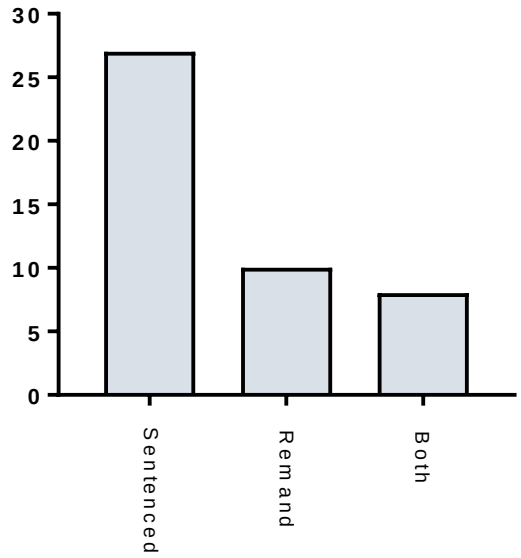
57.8% (n = 26) of participants fall in the lowest third (1st - 3rd decile) as opposed to 6.6% (n = 3) in the highest third (8th – 10th decile).

8.26.Offending

8.26.1.Sentence Status

Data on sentence status was available for all participants (*N* = 45). As shown in Figure 26, participants were either on remand (n = 10), sentenced (n = 27), or their stay consisted of both (n = 8).

Figure 26 - Sentence Status



8.26.2. Length of stay

Data on length of stay in custody was available for 44 participants. Length of stay ranged between 38 days and 2571 days (7 years). The average length of stay was 382 days. Table 28 gives further details about sentence length.

Table 28 - Length of Stay Details

Participants	Range	Minimum	Maximum	Mean	Std. Deviation	Range
44	2533	38	2571	382.16	432.307	2533

The group was divided using the average length of stay in to low (n = 27, 61.4%) and high (n = 17, 38.6%) stay groups for further analysis. These groups were created by dividing the participants based on those above/below the mean sentence length. These groupings were used in further analysis (see section 8.27.4).

8.26.3.Index Offence

Data on (alleged) index offence was available for all participants (*N* = 45). Categories of offending as defined by the Ministry of Justice were used. The most common offence category was violence against the person (n = 18). This was followed by robbery (n = 12). The least common offence types were miscellaneous crimes against society (n = 2) and sexual offences (n = 2). A full breakdown of offence types can be found in Table 29.

Table 29 - Offence Type

	Frequency	Percent
Miscellaneous crimes against society	2	4.4
Possession of weapons	3	6.7
Drug offences	3	6.7
Theft offences	5	11.1
Robbery	12	26.7
Sexual offences	2	4.4
Violence against the person	18	40.0
Total	45	100.0

8.26.4.Violence

Data on the use of the violence in the index offence was recorded for 25 participants; it is unknown whether violence was involved in the remaining 20 cases. It is therefore not possible to divide this group in to non-violent and violent crimes as originally anticipated.

8.27.Relationship between language and demographic characteristics

The relationship between language, socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour was explored based on previous research findings. Relationships were explored using various analyses including; t-tests and correlations.

A full correlation table of continuous variables is shown in Table 30 on the following pages:

Table 30 - Correlation Table

	Age at Ax	RS Raw	FS Raw	WCR Raw	WCE Raw	WCT Scaled	WD Raw	CLS Score	Social Skills	CHAT Narrative
Age at Ax		-0.007	-0.159	0.122	0.114	0.228	0.117	-0.015	-0.348	0.237
RS Raw	-0.007		**0.506****	**0.564****	**0.524****	**0.546****	**0.546****	**0.670****	-0.187	-0.254
FS Raw	-0.159	**0.506****		**0.641****	**0.628****	**0.518****	**0.640****	**0.694****	-0.121	**-0.629****
WCR Raw	0.122	**0.564****	**0.641****		**0.826****	**0.900****	**0.631****	**0.708****	-0.300	-0.450**
WCE Raw	0.114	**0.524****	**0.628****	**0.826****		**0.929****	**0.702****	**0.694****	-0.037	**-0.579****
WCT Scaled	0.228	**0.546****	**0.518****	**0.900****	**0.929****		**0.674****	**0.694****	-0.147	-0.449**
WD Raw	0.117	**0.546****	**0.640****	**0.631****	**0.702****	**0.674****		**0.824****	0.082	-0.401*
CLS Score	-0.015	**0.670****	**0.694****	**0.708****	**0.694****	**0.694****	**0.824****		-0.111	-0.409*
Social Skills	-0.348	-0.187	-0.121	-0.300	-0.037	-0.147	0.082	-0.111		-0.039
CHAT Narrative	0.237	-0.254	**-0.629****	-0.450**	**-0.579****	-0.449**	-0.401*	-0.409*	-0.039	
CHAT Comp	0.014	-0.058	-0.235	-0.059	-0.241	-0.143	-0.240	-0.151	-0.268	0.456**
CHAT Total	0.170	-0.234	-0.379*	-0.321	**-0.530****	-0.444**	-0.419*	-0.425*	-0.118	**0.727****
Length of stay	0.138	0.173	0.044	0.178	0.212	0.248	0.278	0.241	-0.006	-0.087
IMD Rank	0.222	0.101	0.156	0.388*	0.376*	0.446**	0.400*	0.152	-0.381*	-0.004
IMD Decile	0.178	0.095	0.114	0.362*	0.343*	0.415**	0.360*	0.093	-0.355	0.019
Education Rank	0.270	0.108	0.253	0.479**	0.390*	**0.504****	0.305	0.186	-0.273	-0.033
Education Decile	0.293	0.130	0.253	0.496**	0.393*	**0.523****	0.337*	0.219	-0.277	-0.028
Crime Rank	0.301*	-0.083	-0.146	0.134	0.111	0.181	0.102	0.009	-0.418*	0.025
Crime Decile	0.310*	-0.111	-0.101	0.157	0.150	0.193	0.119	0.015	-0.413*	-0.008
IDACI Rank	0.217	0.180	0.214	0.451**	0.444**	0.497**	0.372*	0.197	-0.361	-0.068
IDACI Decile	0.228	0.188	0.204	0.456**	0.441**	0.496**	0.364*	0.181	-0.355	-0.094
IDACI Score	-0.329*	-0.105	-0.085	-0.431**	-0.409*	-0.478**	-0.341*	-0.143	0.373*	-0.003

Note. Ax = Assessment; RS Raw = recalling sentences raw score; FS Raw = formulated sentences raw score; WCR Raw = word classes receptive raw score; WCE Raw = word classes expressive raw score, WCT Scaled = word classes total scaled score; WD Raw = word definitions raw score; CLS = Core Language Score; CHAT = Comprehensive Health Assessment Tool; Comp = Comprehension; IMD = indices of multiple deprivation; IDACI = income deprivation affecting children index.

*p<.05 (two tailed). **p<.01.**>.50** = strong. .30 -.48 = moderate.

CHAT Comp	CHAT Total	Length of stay	IMD Rank	IMD Decile	Education Rank	Education Decile	Crime Rank	Crime Decile	IDACI Rank	IDACI Decile	IDACI Score
0.014	0.170	0.138	0.222	0.178	0.270	0.293	0.301*	0.310*	0.217	0.228	-0.329*
-0.058	-0.234	0.173	0.101	0.095	0.108	0.130	-0.083	-0.111	0.180	0.188	-0.105
-0.235	-0.379*	0.044	0.156	0.114	0.253	0.253	-0.146	-0.101	0.214	0.204	-0.085
-0.059	-0.321	0.178	0.388	0.362*	0.479**	0.496**	0.134	0.157	0.451**	0.456**	-0.431**
-0.241	**-0.530****	0.212	0.376*	0.343*	0.390*	0.393*	0.111	0.150	0.444**	0.441**	-0.409*
-0.143	-0.444**	0.248	0.446**	0.415**	**0.504****	**0.523****	0.181	0.193	0.497**	0.496**	-0.478**
-0.240	-0.419*	0.278	0.400*	0.360*	0.305	0.337*	0.102	0.119	0.372*	0.364*	-0.341*
-0.151	-0.425*	0.241	0.152	0.093	0.186	0.219	0.009	0.015	0.197	0.181	-0.143
-0.268	-0.118	-0.006	-0.381*	-0.355	-0.273	-0.277	-0.418*	-0.413*	-0.361	-0.355	0.373*
0.456**	**0.727****	-0.087	-0.004	0.019	-0.033	-0.028	0.025	-0.008	-0.068	-0.094	-0.003
	0.697**	-0.037	0.028	0.078	0.095	0.118	-0.021	-0.026	0.043	0.034	-0.023
0.697**		-0.146	-0.076	-0.041	0.068	0.068	-0.106	-0.126	-0.052	-0.048	0.021
-0.037	-0.146		0.086	0.033	-0.034	-0.013	0.090	0.088	-0.003	0.009	-0.039
0.028	-0.076	0.086		**0.989****	**0.697****	**0.697****	0.291	0.286	**0.884****	**0.876****	**-0.849****
0.078	-0.041	0.033	**0.989****		**0.693****	**0.693****	0.280	0.276	**0.869****	**0.864****	**-0.830****
0.095	0.068	-0.034	**0.697****	**0.693****		**0.993****	0.054	0.070	**0.677****	**0.698****	**-0.633****
0.118	0.068	-0.013	**0.697****	**0.693****	**0.993****		0.062	0.081	**0.674****	**0.698****	**-0.640****
-0.021	-0.106	0.090	0.291	0.280	0.054	0.062		**0.981****	0.120	0.114	-0.152
-0.026	-0.126	0.088	0.286	0.276	0.070	0.081	**0.981****		0.117	0.116	-0.158
0.043	-0.052	-0.003	**0.884****	**0.869****	**0.677****	**0.674****	0.120	0.117		**0.990****	**-0.950****
0.034	-0.048	0.009	**0.876****	**0.864****	**0.698****	**0.698****	0.114	0.116	**0.990****		**-0.934****
-0.023	0.021	-0.039	**-0.849****	**-0.830****	**-0.633****	**-0.640****	-0.152	-0.158	**-0.950****	**-0.934****	

8.27.1.Correlations between assessment scores and socioeconomic status

Although there was not a significant correlation between the CELF core language score and the indices of multiple deprivation (IMD) measures there were significant correlations between IMD scores and individual language sub-tests, as shown in Table 29. The language sub-test most strongly correlated to overall IMD rank was Word Classes total (r(38) = .45, p .002). Word classes total was also the most strongly correlated to the IMD sub-measure of education (r(38) = .50, p< .001). The only significant correlation between the IMD crime rank and assessment scores was for social skills self-assessment (r(29) = .42, p .02). Word classes total was again the most strongly correlated to the IMD sub-measure for children (r(38) = .48, p .002).

8.27.2.Correlations between assessment scores and CHAT scores

As shown in Table 29, there was a moderate correlation between the CELF core language score and the CHAT total score (r(34) = .43, p .01). However, the strongest correlation for the CHAT total score was with the Word classes expressive sub-test (r(36) = .53, p < .001). The strongest correlation between any element of the CHAT and the assessment scores was between the CHAT narrative score and the formulated sentences sub-test (r(35) = .63, p < .001).

8.27.3.Other correlations

There were no significant correlations between length of stay and any of the language measures. The only significant correlations, as shown in Table 29, for age at assessment were with the IMD crime sub-measure and the overall IMD sub-measure for children (IDACI).

8.27.4.CELF core language score in relation to length of stay

The mean CELF core language score for those with a shorter length of stay was five points lower than those with a longer length of stay, see Table 31. The difference between the two groups was not significant (*p* = .438).

Table 31 – CELF core language score mean by length of stay

	Stay	N	Mean	Std. Dev	Std. Err Mean
Scaled Score	Low	22	67.77	19.011	4.053
	High	13	72.85	17.478	4.847

Note. CELF = Clinical Evaluation of Language Fundamentals.

8.28. Outliers

In this section, there are detailed descriptions of the four individual participants who were outliers on any of the CELF-4 UK Core Language subtests. Grubb's test was used to identify those participants whose scores were significantly distant from other scores on the same subtest. Outliers are investigated here to see whether there are any particular patterns in the data. All outliers were in the lower ranges, there was one outlier on the recalling sentences subtest and three outliers on the formulated sentences subtest.

8.28.1. Participant 11

This participant was a low outlier on the recalling sentences task. Within the whole group, recalling sentences was the subtest with the highest mean score (*M* = 7). This participant performed below the group mean on all the core language subtests. His core language score was almost one standard deviation below the group mean (*M* = 70), see Table 32. His score on the CHAT was within the average range (3). He was referred to the SLT service following the CHAT assessment. This participant had a history of contact with SLT services and mental health services. There were reports of substance misuse including cannabis and legal highs. The participant had never been a Looked After Child. He had been sentenced for an acquisitive offence. His IDACI rank (11060) was slightly above the group mean (*M* = 9094.31).

Table 32 - Participant 11: CELF and Social Skills Scores

Age	RS S	FS S	WCR S	WCE S	WCT S	WD S	CLS	Social Skills
16.5	1	6	2	1	1	3	54	20

Note. CELF = Clinical Evaluation of Language Fundamentals; RS S = Recalling sentences scaled score; FS S = Formulated Sentences scaled score; WCR S = Word classes receptive scaled score; Word classes expressive scaled score; WCT S = Word classes total scaled score; WD S = Word definitions scaled score; CLS = Core language score.

8.28.2. Participant 19

This participant was a low outlier on the formulated sentences task. This individual achieved the lowest possible scaled score on all the core language subtests. His core language score was more than 1.5 standard deviations below the group mean (*M* = 70), see Table 33. Their score on the CHAT was slightly below the average range (2). He was referred to the SLT service by their local Youth Offending Team. This participant was the only one in the group to have had English identified as a second language. In addition, he had a statement of special educational needs (SEN) and had been excluded from school. There were reports of substance misuse including cannabis and cocaine. The participant had never been a Looked After Child. He had been sentenced for an acquisitive offence. His IDACI rank (5783) was slightly below the group mean (*M* = 9094.31).

Table 33 - Participant 19: CELF and Social Skills Scores

Age	RS S	FS S	WCR S	WCE S	WCT S	WD S	CLS	Social Skills
17.1	1	1	1	1	1	1	40	23

Note. CELF = Clinical Evaluation of Language Fundamentals; RS S = Recalling sentences scaled score; FS S = Formulated Sentences scaled score; WCR S = Word classes receptive scaled score; Word classes expressive scaled score; WCT S = Word classes total scaled score; WD S = Word definitions scaled score; CLS = Core language score.

8.28.3.Participant 36

This participant was a low outlier on the formulated sentences task. This participant achieved the lowest possible scaled score on all the core language subtests, except recalling sentences where he scored two, see Table 34. His core language score was 1.5 standard deviations below the group mean (*M* = 70). The participant's score on the CHAT was slightly below the average range (2). He was referred to the SLT service by Education. This participant had a statement of special educational needs (SEN) and had been excluded from school. He had a history of contact with mental health services. There were reports of substance misuse including cannabis and heroin. The participant had never been a Looked After Child. He was on remand for an acquisitive offence. His IDACI rank (10686) was slightly above the group mean (*M* = 9094.31).

Table 34 - Participant 36: CELF and Social Skills Scores

Age	RS S	FS S	WCR S	WCE S	WCT S	WD S	CLS	Social Skills
17.8	2	1	1	1	1	1	42	-

Note. CELF = Clinical Evaluation of Language Fundamentals; RS S = Recalling sentences scaled score; FS S = Formulated Sentences scaled score; WCR S = Word classes receptive scaled score; Word classes expressive scaled score; WCT S = Word classes total scaled score; WD S = Word definitions scaled score; CLS = Core language score.

8.28.4.Participant 42

This participant was a low outlier on the formulated sentences task. This participant achieved the lowest possible scaled score on all the core language subtests, except for recalling sentences where he was more than one standard deviation below the group mean (*M* = 7). His core language score was more than one standard deviation below the group mean (*M* = 70). Scores are shown in Table 35. The participant's score on the CHAT (9) was significantly above the mean (*M* = 2.83). He was referred to the SLT service following the CHAT. This participant had been excluded from school. He had a history of contact with mental health services. There were reports of the use of cannabis. The participant had previously had LAC status. He was on remand and then sentenced for a violent offence. His IDACI rank (5516) was slightly below the group mean (*M* = 9094.31).

Table 35 - Participant 42: CELF and Social Skills Scores

Age	RS S	FS S	WCR S	WCE S	WCT S	WD S	CLS	Social Skills
18.2	3	1	1	1	1	1	44	-

Note. CELF = Clinical Evaluation of Language Fundamentals; RS S = Recalling sentences scaled score; FS S = Formulated Sentences scaled score; WCR S = Word classes receptive scaled score; Word classes expressive scaled score; WCT S = Word classes total scaled score; WD S = Word definitions scaled score; CLS = Core language score.

8.28.5.Summary of outliers

Investigating the outliers in greater detail revealed some interesting patterns in the data. The outliers ranged in age from 16;5 to 18;2, similar to the age range of the whole group (16;1 – 18;2). However, all outliers had a core language score below the 25% percentile (*M* = 70, 25% percentile = 56). They also all scored one for the word classes total, although they were not outliers on this subtest. All of the outliers were referred to SLT services; two from the CHAT and the other two from external sources. Each outlier had used cannabis, and three of the four had also taken other illegal substances. Three of the four outliers had had contact with mental health services and the fourth had had a statement of special education needs.

9. Re-evaluating the profile of speech, language and communication needs amongst young people in YOIs in England - Discussion

9.1. Introduction

This chapter discusses the findings from Phase 1 of the study, including methodological limitations and directions for further research. Firstly, this chapter investigates how the results address the research questions before addressing specific issues encountered during the study.

The main aims of this phase were to:

- Identify if the London region YOI population has a similar level of language difficulties to previously researched populations of young people in contact with the CJS
- Profile the level and type of language difficulties these young people present with
- Ascertain whether the London region YOI population has a similar profile to previously researched populations in relation to:
    - Education
    - Mental Health
    - Family and societal factors
- Understand if and how profiles of language difficulties are associated with socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour

The research questions were:

1. Do young people in the London region YOI have similar levels of language difficulties to previously researched populations?
2. What is the profile of language difficulties in this population?
3. Does this population have similar education, mental health and societal backgrounds as previously researched populations?
4. Are language difficulties associated with
    a. socioeconomic and socio-cultural backgrounds,
    b. developmental history,
    c. educational history and attainment,

d. mental and physical health
e. and offending behaviour?

Finally, this chapter will conclude with clinical implications, including how these findings can be used as a basis for further developing SLT service provision in this area and avenues for future research.

9.2. Phase 1 Summary

Phase 1 consisted of secondary data analysis of SLT assessments and demographic data collected from a London region YOI. Data was collected from 45 individuals over a one year time period. This data was then analysed to investigate whether the male, juvenile, custodial population in the London region have comparable language difficulties to previously researched populations. The second aim was to explore more closely the characteristics of the language profiles, as detailed above. Demographic information was collected from existing healthcare records held at the YOI. This study will extend previous studies by looking more closely at potential associations between BAME, socioeconomic and socio-cultural backgrounds, offending behaviour and individuals' speech, language and communication profiles.

9.3. Language Profiles

This study aims to describe the profile of language difficulties experienced by young people in youth offending institutions in England and comparing this against previous studies. The specific research questions are laid out in section 9.1. Findings regarding these research questions are discussed below.

Mottram (2007) in their study of young people in custody, in England, found the average intelligence quotient (IQ) amongst the population to be 87, 13 points lower than the population mean of 100. Therefore one might expect to find language scores would be in line with this figure, yet the average CELF-4 UK (Semel et al., 2006) Core Language Score (CLS) was 70, 30 points lower than the population mean. Mottram (2007) used the Weschler Adult Intelligence Scale (WAIS, Wechsler, 1997) to measure IQ. One would normally expect verbal IQ (VIQ) and performance IQ scores (PIQ) to be closely matched, however over one third had a difference of 9 points or greater in this study. This may account, in part, for the discrepancy between CLS and IQ score. However in the Mottram (2007) study, those with a significant discrepancy between VIQ and PIQ were equally split in each direction, meaning we would be more likely to see a bimodal distribution of CLS rather than the unimodal distribution found in Figure 27 (see section 9.6.3). As Mottram suggests in her study (2007), the IQ profiles of this

population would benefit from further investigation. Overall scores in this population, for both IQ and language, may be expected to be lower as the vast majority have missed significant amounts of education (Kennedy, 2013) and have experienced a number of adverse childhood experiences (Basto-Pereira, Miranda, Ribeiro, & Maia, 2016). A pattern of language scores being lower than overall IQ has been found in other research studies (Blanton & Dagenais, 2007; Snow & Powell, 2008).

The participants scored lower than would be expected on all four CLS subtests; however whilst scores on the recalling sentences subtest were lower than for the general population they were significantly higher than the other subtests (p = .001, p = .000, p = .000). The mean score on the recalling sentences subtest was one standard deviation below the average, rather than the overall figure of two standard deviations below the mean. There have been a number of research studies which have explored whether a sentence repetition task is assessing primarily language or memory skills. Spreen, Gaddes, Meikle, and Spellacy (1969) published developmental norms for the sentence repetition task which they described as assessing immediate memory for linguistic material. However in their 2015 paper, Klem et al. state; "Sentence repetition is best seen as a reflection of an underlying language ability factor rather than as a measure of a separate construct with a specific role in language processing." (Klem et al., 2015, p. 146) If this task is a measure of underlying language ability, it may be the language deficits seen are due to lack of exposure to language and practice rather than an underlying disorder. This would benefit from further exploration. Research shows there is a poorer prognosis associated with receptive language skills being more impaired than expressive language skills (Ebbels et al., 2018). This population, generally, have a more even language profile (see Figure 16). Therefore, if language difficulties experienced by this group were related to exposure it could mean embedded structured language support (Joffe, 2011; Parsons & Branagan, 2013) in to the education provision may lead to improvements on standardised language tests. This targeted Tier 2 provision may prove an effective use of resources. This would then permit the SLT service to provide a more intensive service for individuals with an uneven profile or especially low scores.

A notable finding in this study was the non-significant difference in language abilities (p = .079), or social skills scores (p = .111), between individuals who were referred to SLT services and those who were not referred. This suggests professionals have difficulties identifying those who would benefit from SLT support. At Milton Keynes Youth Offending Service they now adopt a ‘screening out, not screening in’ approach (Minnitt, 2018) in response to the high

levels of need and the fact SLCN are often 'hidden'. When the CHAT Part 5 (Shaw et al., 2014) is next revised, it may be worthwhile considering such an approach. For example, in this study the average score on the CHAT was 2.1, therefore for all individuals scoring more than 2 a referral should be triggered unless the assessor can give a specific reason as to why this would be inappropriate. Although the differences were non-significant the scores of those referred (M = 66.59, 18.83) were lower than those not referred (M = 80.43, 22.88). Given a larger cohort the difference in language scores may have been significant.

There have been two previous studies which have assessed the language skills on young people in YOIs in England, both originating from a YOI in the North of England (Bryan et al., 2007; Hughes et al., 2017). Similarities and differences between the young people's language profiles are described in the following paragraphs.

Bryan et al. (2007) used the Test of Adolescent and Adult Language (Hammill, Brown, Larsen, & Wiederholt, 1994), the British Picture Vocabulary Scale (BPVS, Dunn et al., 1997) and The Test for Reception of Grammar (Bishop, 2003). This makes comparison across the studies difficult, due to the differences in assessment tools. On the TOAL, Bryan et al. (2007) found between 46-67% performed Poor or Very Poor on each subtest. In this study, between 75-98% scored 'Poor' (≥ -1SD) on each subtest of the CELF CLS (Semel et al., 2006). On the BPVS none of the participants achieved their age equivalent, whilst one participant achieved their age equivalent on the CELF CLS in this study. Bryan et al (2007) found a correlation between self-awareness of communication difficulties and those with expressive language difficulties, whilst no correlation was found between self-assessment and language scores in this study.

Hughes et al. (2017) assessed language skills using the Test of Word Knowledge (Wiig & Secord, 1992) and social communication skills were assessed using the Social Responsiveness Scale (SRS, Constantino, 2002). In Hughes et al. (2017), 41% had an overall standardised score of <84, whereas in this study the figure was 87%. Hughes et al. (2017) found more participants had impairments in their receptive skills (44%) rather than their expressive skills (30%). In this study, on the Word Classes subtest the receptive scores (m = 5.11) were actually slightly higher than expressive scores (m = 5.03), although the difference was not significant. Additionally, like Bryan et al. (2007), they found social communication skills were correlated with overall and receptive language skills, but not expressive language skills. The SRS (Constantino, 2002) is an others' report, rather than a self-report tool. This may account for the difference in findings; so rather than identifying a difference in social skills between the cohorts, it is identifying a difference in awareness and reporting methods.

In some other research studies, expressive (Bryan et al., 2015) or receptive language (Hughes et al., 2017) difficulties have been found to be more impaired, whereas in this study the participants were found to have similar performance in both areas.

It was expected the change in the size of the custodial population since the Bryan et al. (2007) study would have led to a change in the language needs and profiles of young people in custody. However, 58% of this cohort classify as language impaired (≥ -1.5SD) on the CELF CLS which is broadly in line with the Bryan study (2007), and the widely accepted figure of 60% for young people in the CJS as a whole (Anderson et al., 2016). So, despite the custodial population in England decreasing from 3,000 to less than 1,000 between these studies the level of language impairment remains constant. It may be that whilst we would expect this smaller group to have more complex needs, those with the most complex needs are now being diverted from the CJS (Offender Health Collaborative, 2015).

9.4. Additional Factors

This study aimed to ascertain whether the London region YOI population has a similar profile to previously researched populations in relation to: education, mental health, and family and societal factors.

Previous research has begun to draw links between poor attainment and engagement with education and an increased risk of contact with the CJS, this phenomena has been dubbed the 'school to prison pipeline' (Snow & Powell, 2012). Permanent exclusions across all state funded schools was 0.1% in 2016 (Office for National Statistics, 2017), whereas the percentage of young people in YOIs in England reporting having been excluded from school was 90%, and 89% in the YOI where the research study was conducted (Her Majesty's Inspectorate of Prisons, 2018a). Within the study cohort, 81% reported school exclusion which is slightly lower than the national levels (Her Majesty's Inspectorate of Prisons, 2018a). Bryan et al. (2007) did not report on school exclusions but did report 90% had left school before the statutory school leaving age (this was 16 at the time of data collection). Hughes et al. (2017) reported 76% of their cohort had been excluded from school.

The majority of participants in this study reported leaving school in Year 10, therefore missing three or four years of formal education. As a great deal of language development in the secondary years takes place in the school environment (Nagy & Townsend, 2012; Nippold, 2007) it is perhaps unsurprising to see such high levels of SLCN in this population. In addition, 47% reported having been registered as having Special Educational Needs (SEN), amongst

whom 18% reported having a statement. Special education needs, literacy difficulties and learning difficulties have previously found to be higher in this population (Chitsabesan et al., 2007).

Mental health difficulties are also commonly found to be overrepresented in this population. Livanou, Furtado and Singh (2016) found young people in custody were three times more likely to experience mental health problems than their peers. Bryan et al. (2007) did not collect data specifically on mental health; the closest was a field which encompassed both mental and physical health diagnoses with 16% of the cohort reporting a diagnosis. Hughes et al. (2017) collected data from the CHAT on mental health with 6% reporting depression and 30% reporting previous episodes of self-harm. The most recent youth custody data reports 31% of young people in this setting consider they have emotional or mental health problems, with 26% of young people in the YOI in the study reporting problems in this area (Her Majesty's Inspectorate of Prisons, 2018a). Over half of the participants (51.1%) in this study reported having had had previous contact with mental health services, higher than may be expected. However, the most commonly reported reason for contact with mental health services was reported as 'anger' and therefore these individuals may not considered themselves as having an emotional or mental health problem.

Data collected on family and societal factors was limited due to consent to access prison records being declined; data was available on LAC status, ethnicity and SES. In the general population the percentage of children classed as having LAC status is less than 0.1%, whilst this rises to 43% amongst young people in YOIs in England (Her Majesty's Inspectorate of Prisons, 2018a). The most common reason for a child being looked after is due to abuse or neglect (Office for National Statistics, 2018), this falls under the classification of an Adverse Childhood Experiences (ACES). It has been shown the greater number of ACES a child encounters the higher the risk of later contact with the CJS. A Scottish Government document suggests individuals who have experienced 4 or more ACES are 20 times more likely than their peers to have been incarcerated in their lifetime (Justice Analytical Services, 2018). SLCN have also been observed to be more prevalent amongst LAC individuals (Lushey, Hyde-Dryden, Holmes, & Blackmore, 2017; McCool & Stevens, 2011). Lushey et al. (2017) found 58% of individuals seen were found to be identified with SLCN, very similar to the oft quoted 60% figure in youth justice.

Bryan et al. (2007) found 33% of their total participants were designated LAC status, whereas Hughes et al. (2017) only reported LAC status of those who were found to have impaired

language skills which was 44%. In the current study LAC status was recorded for all participants and then analysed to discover any potential differences in language abilities and self-rating of social skills between the groups. Forty two percent of individuals were designated as having LAC status, in line with the most recent figures for the custodial youth estate (Her Majesty's Inspectorate of Prisons, 2018a). There was no difference in language scores on the CELF CLS between the two groups with both having a mean of 70. There was a small difference in scores on the social skills self-assessment, with the LAC group (m = 18.9) scoring lower than the non-LAC group (m = 21.3), however this difference was not significant (p = .30). The lower the score the more dissatisfied the individual is with their skills in the area.

A recent report by MP David Lammy (2017) highlighted the issue of overrepresentation of BAME individuals in the justice system. Whilst the number of BAME individuals being arrested is broadly in line with the percentage of BAME individuals in the general population, this group is heavily overrepresented in the custodial population. Additionally the review provides evidence this group is less likely to have additional needs; learning difficulties, mental health difficulties identified (Lammy, 2017). The most recent report from the Ministry of Justice (Her Majesty's Inspectorate of Prisons, 2018a) found 44% of individuals in YOIs in England identify as BAME, whilst 71% of individuals at this study site identify as BAME. Some research has suggested individuals from BAME backgrounds are more likely to experience SLCN, whilst others have found this is negated when SES is taken in to account (McNulty et al., 2013). No research has found individuals from BAME backgrounds are less likely to have SLCN, therefore the findings from the Lammy review are likely to indicate these individuals have yet to be identified rather than them being less likely to have additional needs.

Only ten percent of individuals in Hughes et al. (2017) identified as BAME, and 29% in Bryan et al (2007). Both these figures are under the national average of 44% in English YOIs, however this may be due to both of these studies taking place in a YOI in the North of England where there is less ethnic and cultural diversity than in Southern YOIs. In the current study, 71% of the cohort identified as BAME, directly in line with the HMIP figures. In contrast to previous studies, BAME individuals had slightly higher language scores (m = 70.3) than non-BAME individuals (m = 63), however this difference was not statistically significant (p = .583) and the non-BAME groups comprised of just two individuals so no conclusions can be drawn from this. It may however benefit from further exploration

Research has consistently found individuals from lower SES backgrounds are more likely to have SLCN on school entry (Law, Rush, Schoon, & Parsons, 2009; Locke et al., 2002) and come

in contact with CJS (Clegg et al., 2005; Moffitt, Gabrielli, Mednick, & Schulsinger, 1981) later in life. These relationships are complex (McGarvey, 2017) and it is difficult to untangle the multiple strands involved, however SES is often reported as a risk factor. SES was not reported in either of the previous English YOI studies on SLCN (Bryan et al., 2007; Hughes et al., 2017). In the current study, over 50% of the cohort are in the lowest third (between the 1st and 3rd decile), whilst 6.6% are in the top third (7th and 10th decile). There was no difference between high and low SES group on CELF core language scores, this is consistent with findings from Moffitt (1994).

In conclusion, in line with previous research individuals with SLCN in custody are more likely to have been looked after, come from a BAME background and live in lower SES environments. Research into sentencing has shown those from minority backgrounds (Abrams, Bertrand, & Mullainathan, 2012; Steffensmeier & Demuth, 2001) and those who do not demonstrate 'appropriate' remorse (Bandes, 2016; Corwin, Cramer, Griffin, & Brodsky, 2012) in the court room are more likely to receive custodial sentences. This may, in part, explain the over representation of individuals with SLCN and those from BAME backgrounds in youth custody.

9.5. Links between language profiles and additional factors

Given the majority of individuals in youth custody could be expected to have SLCN and resources are limited, looking for common characteristics which may assist in identifying individuals who require additional support, more easily, would be beneficial. Also, identifying patterns may assist when considering which groups may benefit from a joint approach with other education/health care professionals. Due to consent not being obtained to gather information from prison records this section is limited in its findings.

Snow and Powell (2011) found those with a 'high' offending background had higher levels of SLCN, they also found those young people with the highest levels of violent offending had the lowest language scores. It was intended to further explore these factors in the current study. Additionally, then exploring further whether those from different SES, socio-cultural backgrounds or those with particular mental health diagnoses had particular language profiles. However, due to limited numbers, missing data and having no access to prison records it was not possible to gather robust data.

Data collected on offending behaviour in this study was limited. However it was possible to gather data for all participants on length of stay. Snow and Powell (2011) used the Cormier-Lang Crime Index (Quinsey, 1998) to calculate offending severity. This measure takes in to

account the number and type of offences, but not the length of sentence. Therefore the two measures cannot be directly compared. What was found in this study was those with a short stay had lower CELF CLS (m = 68) than those with a long stay (m = 73), although this difference was not statistically significant (p = .483). It may be beneficial to look at this again, with larger numbers in future studies.

9.6. Methodological Limitations

There were a number of limitations that became apparent through data collection process including; access to data, data collection issues, limited sample, issues with gathering secondary data, the researcher having dual roles in the study and assessment tools chosen.

9.6.1. Data access

Ideally the methodology for this study would have ensured the closest match to previous studies to enable research questions to be tested and expanded upon. However the original methodology had to be amended as approval was not granted from the National Offender Management System (NOMS) to access prison records. This created some unforeseen limitations on the data fields which could be collected; some data that was requested could not be gathered and modifications had to be made to other data fields. This particularly affected study aims three and four; ascertaining whether the London region YOI population has a similar profile to previously researched populations in relation to: education, mental health and family and societal factors and understanding if and how profiles of language difficulties are associated with socioeconomic and socio-cultural backgrounds, developmental history, educational history and attainment, mental and physical health and offending behaviour. With regards to study aim three, there was limited data available regarding education and family and societal factors available on the healthcare records. Global information on the numbers who have been excluded from school and have not attended school after the age of 14 years are available publicly via Her Majesty's Inspectorate of Prisons (HMIP) annual reports. However, we are unable to see if there is a correlation between language scores and school attendance or exclusion. Regarding study aim four, there was limited information about the young person's offending history available on healthcare records. It was not possible to gain information about previous offending history, length of sentence and whether violence was involved. In the healthcare records it was only recorded when violence was known to be involved but not specifically if it was not.

9.6.2.Data Collection

During the clinical audit period in which the CELF-4 UK was being completed in the YOI, Transforming Youth Custody was implemented, leading to the requirement for young people to be in Education for 30 hours a week rather than 15. This meant the local clinicians were struggling to complete the assessment battery with all new admissions and had to take a pragmatic approach moving from assessing consecutive admissions to those referred to the SLT service.

It may have been predicted there would be a difference between those assessed pre and post Transforming Custody. However, there was minimal difference between the two groups; consecutive scored 69.8 (n = 20) on the CELF-4 UK core language components and the referred group scored 70.25 (n = 16). As there was no significant difference between the two groups they were analysed as a whole.

9.6.3.Limited data sample

There were five YOI in England (currently there are four sites), in 2015/16, when the data was being collected. Of these five YOIs, three had SLT services during the data collection period. The data for this study is collected from one site, a London region YOI. The data gathered will not necessarily be representative of the other YOIs. There are significant differences between the sites in terms of both population size and demographics (this is explored further in Phase 2). It would have been preferable to have gathered prospective data from all the sites, rather than retrospective data from one site. Additionally, one of the reasons the study was not granted approval was NOMS did not view the study as having implications for the broader prison estate, had the study been multi-site it may have been more likely to have been granted approval. However, such a methodology would have been beyond the scope of a PhD study.

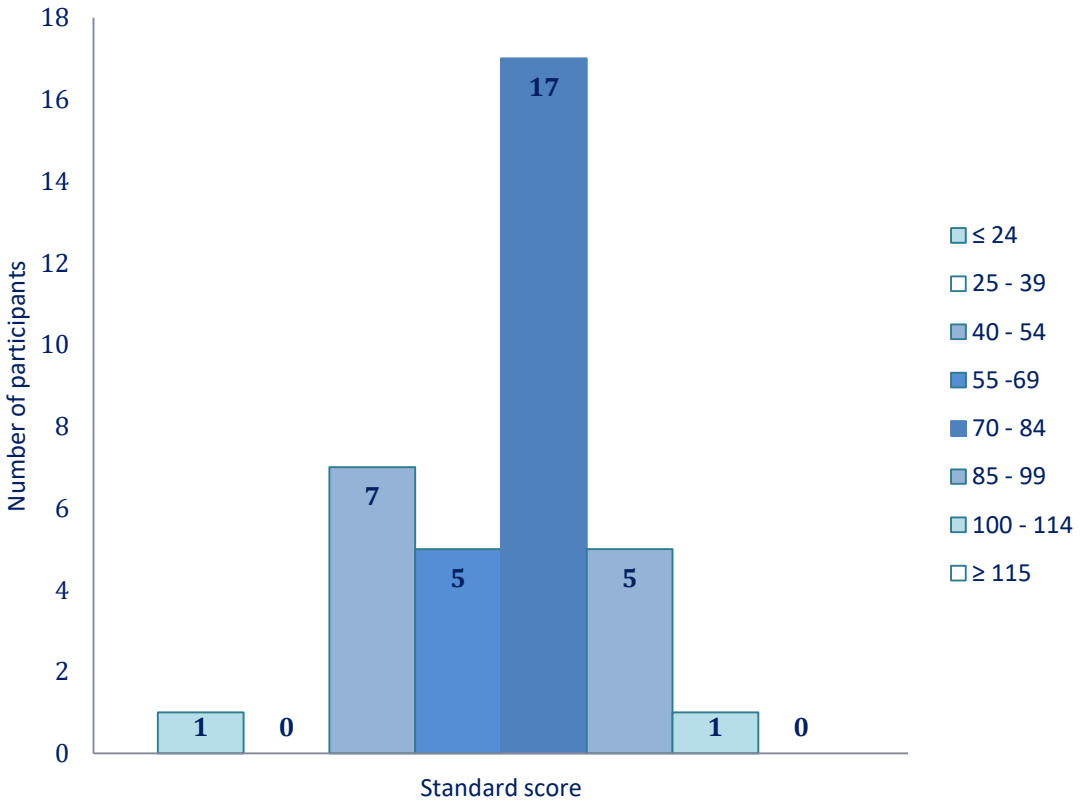
A power calculation was completed based on the size of the custodial population at the site at the time and the widely accepted 60% figure for SLCN. This indicated a sample size of 71 would be appropriate. As this phase comprised of secondary data analysis it was not possible to stipulate 71 data sets must be provided, 45 cases were included in the study. Therefore there are limitations in both how this data can be applied to the individual site and the broader youth custodial estate.

In addition to being under-powered, there were additional difficulties with certain fields having a large amount of missing data. As this phase involved secondary data analysis only, the study was reliant on the onsite team to have routinely completed all required data fields. The

CHAT Part 3 - Substance Misuse (Shaw et al., 2014), in particular, had significant amounts of missing data which placed limitations on both the data analysis and conclusions drawn. It was planned to complete categorical regression analysis to investigate the links between fields such as behaviour and language (Petersen et al., 2013), however due to the small data set and missing data this was not viable.

When the CELF-4 UK (Semel et al., 2006) data was analysed, by subtest, there were four outliers found across two of the four subtests forming the core language measure. All these outliers were in the lower ranges identifying a possible non-normal distribution in this cohort. However, when looking at the core language scores using the group mean (70) rather than the population mean (100) the data appears normally distributed (see Figure 27); 64% (n = 23) fall between +/- 1 SD, 94% (n = 34) fall between +/- 2 SD and 97% (n = 35) fall between +/- 3 SD.

Figure 27 - Distribution of Core Language Scores (n = 36)



9.6.4.Secondary data analysis

As the study was based on secondary data analysis there was no flexibility in the range of assessment tools used and how the data from these assessment tools were recorded. The assessment battery comprised of; CELF-4 UK (Semel et al., 2006) core language scales, speech difficulties Yes/No and a social skills self-assessment tool (Kelly & Sains, 2009). This does give a

view as to what is generally available to clinicians but limits the ability to build the most robust profile of the young person's speech, language and communication profile. For example, the clinician was required to code whether or not speech difficulties were present with a simple Yes/No field. There was a lot of missing data in this field. It was unclear if a non-coded entry meant there were no speech difficulties present or whether the clinician had simply forgotten to complete the field. Also, speech difficulties is a very broad field and could encompass a mild speech impairment which had no effect on speech intelligibility to a severe stammer where intelligibility was considerably affected. The CELF-4 UK (Semel et al., 2006) was used outside of its age range for the majority of the young people, the CELF-4 UK is standardised up to 16;11 whilst the average age of the cohort was 17;2. Although the assessment tool was used outside of the age range only one participant scored >100 and there was no ceiling effect. The CELF is also the most widely used assessment tool in this client group across international research studies (Blanton & Dagenais, 2007; Games et al., 2012; Sanger et al., 2001; Snow & Powell, 2008). The social skills self-assessment tool (Kelly & Sains, 2009) is not standardised and has no scoring guide and therefore drawing any conclusions from the scores is difficult.

9.6.5.Dual Roles

Whilst the data analysed by the researcher in this phase was not primary data gathered specifically for the research study, the researcher was involved in the collection of the data. The researcher was also the lead clinician at the data collection site and therefore collected some of the data sets in their clinical role. Being an 'insider' in a research study, having dual roles adds complications but also benefits. There are many papers (Cartwright & Limandri, 1997; Colbourne & Sque, 2004; Labaree, 2002) published on the topic of dual roles in qualitative healthcare research, this topic is discussed in Phase 2 (see section 12.8.2), but there is little reference to dual roles in quantitative healthcare research. With regards to this study, being a clinician as well as the researcher was beneficial as I was aware of what data could be gathered via which systems and also knew who to approach in order to start the approval process. Complications could be that when I started the audit within my clinician role I was aware I would be applying for ethical approval to use this data for research purposes. I may therefore have been more likely to encourage a client to complete the assessment when they were struggling, for the sake of complete data sets, rather than making a clinical judgement to discontinue. As I was mindful of this possibility I completed a guidance document for clinicians (see Appendix 2) to attempt to balance between the desire for complete data against person-centred practice. On reflection, I feel being conscious of this conflict I was actually more likely

to discontinue the assessment than if I had not been aware of the research, as I was trying extra hard to avoid any impact of having the additional researcher role.

9.6.6.Assessment Tools

The assessment battery comprised; CELF-4 UK (Semel et al., 2006) core language scales, speech difficulties Yes/No and a social skills self-assessment tool (Kelly & Sains, 2009). There were a number of issues raised regarding the use of these tools which are discussed below.

CELF-4 UK Core Language

The CELF-4 UK (Semel et al., 2006) provides us with a number of different scores; raw scores, scaled scores and age equivalents. All these scores can be used to describe the language abilities of the individuals assessed. There could be an argument for using raw scores or scaled scores in data analysis in this study. A choice was made to use scaled scores as there was a significant age range in the young people being recruited; they could have been aged between 15;0 and 18;10. Those between 15;0 and 15;11 would have been expected to have lower raw scores than those ≥ 16;0. However, the youngest participant in the study was 16;1 and therefore they would all have been in the highest bracket and therefore it may have been more sensitive to use raw scores.

Another issue with the CELF-4 UK (Semel et al., 2006) is it is only standardised up to 16;11 and we now understand language continues to develop throughout adolescence (Nippold, 2007). Therefore comparing a young person of 16;0 and another at 18;10 may not be a fair comparison. Kievit et al. (2017) found developments in vocabulary beyond the age of 18 and greater development in those with poorer skills at the first testing time point. Given the majority have been excluded from school and missed many opportunities for vocabulary development we may expect now they are regularly accessing education we could see large gains during this time. For future research studies this would not be an issue as the new CELF-5 UK (Semel et al., 2017) is standardised up to 21;11.

Social skills self-assessment tool

There are few social skills tools designed for use with adolescents and even fewer are designed to gather the individual's views of their skills. The CELF-4 UK (Semel et al., 2006) includes a pragmatics assessment. This comes with the advantage it has been through the same standardisation process as the rest of the assessment tool. However, it is designed to be completed by the assessor and does not capture the views of the individual.

The social skills self-assessment tool from Kelly and Sains (2009) is; quick to administer, accessible for those with limited literacy skills and captures the views of the individual.

However, it has not been standardised and there is no 'cut-off' score to indicate an impairment in this area.

There are limitations in both self-report and professional judgement of social skills, as these are largely subjective skills. Studies question the validity and reliability of self-assessment; "evidence suggests school students are relatively inaccurate assessors" (Harris & Brown, 2013, p. 102). This paper found secondary school students needed to feel they were in psychologically safe relationships with the teacher to complete the assessment and they were worried about their ability to accurately self-rate. Given this assessment was likely to be completed on the first or second meeting with the SLT they were unlikely to have had the time to build the safe relationship required. Safe relationships are also likely to take longer develop amongst this population; the majority of whom will have experienced a number of adverse childhood experiences (ACES, Wilson, 2018). Baxter and Norman (2011) also found a limited correlation between self-rating and actual performance in nursing students. These findings were consistent with previous research (Hodges, Regehr, & Martin, 2001) finding those with the most limited skills and knowledge are the most likely to overestimate their competence. The findings from previous research were echoed in this study with no significant correlation found between language scores and self-assessment of social skills (r = -0.11, p = 0.58). By working with individuals to develop their self-awareness, this has the potential to bring benefits as they could then employ strategies to scaffold their skills and/or seek the appropriate support. An alternative approach would be to use professional judgement rather than self-assessment of social skills. However, this would not necessarily be better as the individual is not well known to assessor.

The social skills self-assessment tool from Kelly and Sains (2009) gives a view of the individual's perception of their skills which has an impact on self-esteem and mental health (Sanger et al., 2000; Spencer, Clegg, & Stackhouse, 2010) and therefore provides useful information as part of the assessment process.

9.7. Clinical Implications and Directions for future research

As discussed in this chapter the average IQ of a young person is custody is lower than found in the general population (Mottram, 2007). This study supports findings from previous research (Anderson et al., 2016) that language scores are even lower than IQ scores amongst young people in custody. This has implications when devising offending behaviour programmes, the primary tool for rehabilitation in youth justice. Although the number of young people within the CJS has decreased significantly over the last decade re-offending rates remain high and are

a priority for the Youth Justice Board (YJB, Youth Justice Board, 2016). Starting in 2013 the YJB ran a four year project aimed at reducing re-offending, they identified intervention programmes were a key tool and these should meet the needs of the population (Youth Justice Board, 2016). Language used within these programmes needs to be accessible and special consideration should be taken when looking at self-study tasks. Previous research (Davies, Lewis, Byatt, Purvis, & Cole, 2004) has found these programmes are at a higher level than the average IQ amongst this population. Research also supports high levels of literacy (Snowling, Adams, Bowyer-Crane, & Tobin, 2000) and reading (Shelley-Tremblay, Brien, & Langhinrichsen-Rohling, 2007) difficulties amongst this population.

The present study showed the young people performed significantly better on the recalling sentences subtest than the other core language subtests on the CELF-4 UK (Semel et al., 2006). This finding, while preliminary, suggests providing enhanced language support in the classroom may lead to substantial improvements in broader language abilities. Programmes developed for use within the general adolescent population such as the Narrative Improvement Programme (Joffe, 2011) or Word Aware (Parsons & Branagan, 2013) could be employed to test this hypothesis.

Another issue emerging from this study is the statistically insignificant difference on language scores between those referred and not referred to SLT services. Given the high levels of SLCN in this population and lack of distinction between the groups a move towards screening out rather than screening in may be indicated. This approach has been championed by Diz Minnitt, Operational Manager of Milton Keynes YOT where they have seen a significant decrease in reoffending rates following the introduction of this method (Minnitt, 2018).

As this study comprised of secondary data analysis it was not possible to influence the design of the assessment battery. It may be beneficial for future research to conduct prospective research across multiple sites with a larger battery of assessments to explore expressive, receptive language profiles further. Conducting a larger scale study may enable access to prison data which would then allow researchers to explore the relationships between language profiles and additional factors. Future directions for research are explored in more depth in Chapter 13.

9.8. Conclusions

This current study found young people in this London region YOI had high levels of language impairment not explained based on ethnicity, SES or age. The average core language score was

2 standard deviations below the mean, with 58% meeting an accepted clinical cut-off for a language impairment (≥ -1.5SD).

This current study demonstrates prevalence remains unchanged since the first study (Bryan et al., 2007) on prevalence in this population despite significant changes in the number of individuals in custody over the decade. The prevalence is in line with previous research conducted with individuals in contact with the CJS who are; young, old, male, female, in community and custodial settings, across the world (Anderson et al., 2016; Weaver Jones & Healey, 1973). As little difference is found between cohorts and settings it may be beneficial to move the research agenda forwards to look more specifically at profiles, risk factors and methods of supporting these individuals.

10. Investigating the provision of speech and language therapy (SLT) services to young people in Young Offender Institutions (YOIs) in England – Methodology

10.1. Introduction

This chapter describes the Phase 2 method. The main aim of Phase two is:

• To examine the purpose, structure and function of speech and language therapy (SLT) services in English young offender institutions (YOIs)

Phase 2 asks the following research questions:

1. What are the similarities and differences between SLT services in English YOIs?
2. Is there an evidence base underpinning the interventions offered in these SLT services?
3. Can community based service delivery models be applied in YOI SLT services?
4. Could the theoretical service delivery model laid out by Snow, Sanger, Caire, Eadie and Dinslage (2015a) be applied in English YOIs?

This study will provide the first description of the purpose, structure, function and delivery of SLT services in English YOIs.

The author was also the lead clinician at one of the research sites, and therefore measures were put in place, described in this section, to ensure potential bias was minimised.

10.2. Research Design

The study was conducted in the three YOIs in England with SLT provision to map national service provision. Phase 2 has a mixed methods design with quantitative and qualitative data in order to build a rich picture of the SLT services. The data was analysed to examine the purpose, structure, function and delivery of SLT services in English YOIs.

This phase involves the collection and analysis of: survey, interview and service delivery audit data, alongside a series of single case studies. There were four YOIs at the time of data collection, three of which had on-site SLT services at the outset. Survey and interview data was collected from these three SLT services. Audit data and case studies were only collected from two services as the third SLT service had a vacant SLT position during this time.

10.3.Services

In 2016 there were four YOIs in England; two serving the north of the country and two based in the south. Three of these services had commissioned[12] SLT services. The fourth YOI has been the site for research studies in to the prevalence of speech, language and communication needs (SLCN, Bryan et al., 2007; Hughes et al., 2017) but has never had a clinical SLT service. A short overview is provided below about the YOIs, summarised from online material (https://www.justice.gov.uk/contacts/prison-finder, November 2018).

10.3.1.Service 1

Service 1 is based within a YOI in the south of England. This establishment was built in the 1970s and was originally designed to be occupied by young adults (males aged between 18-25 years of age). In 2007/8 it was designated as a YOI, to house 15-18 year old males. It was re-designated as a YOI to relieve pressure on capacity in London and the South East. The YOI has a maximum capacity of 178 beds and houses young males on remand and/or sentenced as directed by the courts. Each room is single occupancy and the majority have their own sanitation and telephone.

10.3.2.Service 2

Service 2 is based within a YOI in the south of England. The current establishment was built in the 1980s and originally designated as a remand centre. In 1990/1 it was re-designated to house 15-25 year old males on remand and/or sentenced as directed by the courts. Under 18's are housed separately from the young adults (males aged between 18-25 years of age). The YOI has a maximum capacity of 180 places for young people and 360 for young adults. Young people are housed in single occupancy rooms which all have in-cell sanitation.

10.3.3.Service 3

Service 3 is based within a YOI in the north of England. The current establishment was built in the 1970s and further extended in the 1990s and 2000s. Since it was built, it has housed 15-18 year old males and currently operates as a YOI, housing individuals on remand and/or sentenced as directed by the courts. The YOI has a maximum capacity of 336 beds; all rooms are single occupancy with in-cell sanitation.

[12] NHS England are responsible for providing health care in to all prisons and youth offending institutions in England and Wales. Each local Clinical Commissioning Group (CCG) is responsible for deciding what staff mix is required to meet the local needs.

10.4. Participants

The participants for this phase of the study were the lead clinicians within each SLT service. The lead clinician was defined as the highest banded therapist within the service who had managerial responsibilities for the SLT service. The lead clinician in Service 1 had been in post for less than one year and left the role during this study. The lead clinician at Service 2 had been in post for seven years and had previously worked full time at the YOI. The lead clinician at Service 3 had been in this role for 18 months and had previously provided clinical input within the YOI. All lead clinicians had held a highly specialist (NHS Band 7) post before taking up this current post.

10.5. Phase 2 materials

This phase involves the collection and analysis of survey, interview and audit data and a series of single case studies.

10.5.1. Survey materials

Published service evaluations (Gallagher & Chiat, 2009; Stansfield, 2012) have focused on the number of clients within the service and the number of client contacts rather than looking at who the population served were or who the workforce providing these services were. Therefore a survey design was chosen to gather this information as it is critical to look at these questions when thinking about service capacity.

The lead clinician for each SLT service was asked to complete an online survey about their service in order to gain information about the size of the service, staffing, referral criteria and services delivered. The online survey was used to gain data about the services and also to inform the content of the individual interviews with the lead clinicians[13].

The aim of the survey was to identify the scope and method of delivery of SLT services in English YOIs. The survey asked the following research questions:

1. How are SLT services in English YOIs structured?

2. How do SLT services in English YOIs identify SLCN in young people?

3. What models of intervention do SLT services in English YOIs use?

4. What are the similarities and differences in how SLT services in English YOIs are delivered?

[13] This has subsequently been published in the Journal of Clinical Practice in Speech and Language Pathology, the data is used here with the permission of the Speech Pathology Association of Australia who owns the copyright to the material.

The survey consisted of 14 questions with a range of response types including; yes/no, rating scales and category responses (a copy of the survey is in Appendix 5). The survey specifically asked participants about the number of young people in their respective YOI, the size of the SLT service, number of staff employed, staff roles, the referral criteria and procedure, how long the SLT service had been established, level of SLT expertise, screening of SLCN, assessments used, and type of interventions delivered.

Participants (lead clinicians) were recruited via national clinical networks. Each participant (N = 3) gave their own consent to participate and was required to have the approval of their service manager, in addition to Trust capacity and capability agreement. The three participants were sent consent forms to gain their agreement to engage in the study. Once consent was confirmed, a link to the online survey was sent electronically. Participants were required to complete every question in the survey. Descriptive analysis was used to examine the survey responses.

10.5.2.Semi-structured interview materials

The semi-structured interview was designed to provide more in depth information, following on from the survey, about service delivery and to discuss models of service delivery with the lead clinician at each site. This stage offered an opportunity to consider the adapted Response to Intervention (RTI) model (Snow et al., 2015a) and suitability for the youth custodial estate in England. The participants were sent the Snow et al. (2015a) paper and asked to read this in advance of the interview in order to consider its applicability. The interview allowed the opportunity to explore any differences between services highlighted from the survey, and for service leads to highlight relevant issues they felt were not captured in the survey.

An interview guide was created at the outset of the study this was then subject to adaptation following the receipt of the survey data (see Appendix 6). Where survey responses were ambiguous or provided only a partial answer, follow up questions were added to the interview. The topics included in all the interviews were; service development, the RTI framework, service delivery models, referral procedures, types of interventions provided, client group characteristics, and the ideal service (see Table 36). These topics included Service specific questions based on the individual services survey data. Each interview closed with the participant being asked if there was anything they felt they wished to add.

Table 36 - Interview guide

Topic	Questions
Service development	How did the service develop? Was a specific service delivery model employed? Has a model subsequently been employed? If a model is in place where was this driven from?
The RTI framework	What do you think about the model? Is it feasible in English YOIs? If not, is it feasible with adaptations? Do you think a better model exists?
Service frameworks	Do you think we can/should apply service delivery models used in community SLT provision? Should we adapt framework from the Criminal Justice System? Do we need a specific service delivery model? If so, what should it look like?
Referrals	*Service 1* Referrals from CHAT 5 – Is there a score above which people are referred? Who does the CHAT 5? What percentage of referrals comes from the CHAT? Do you have one or several referral forms? Are all referrals accepted? If not, what are reasons for declining a referral? *Service 2* Referrals from CHAT 5 – Is there a score above which people are referred? Who does the CHAT 5? What percentage of referrals comes from the CHAT? Can individuals self-refer? Are all referrals accepted? If not, what are reasons for declining a referral? *Service 3* Referrals from CHAT 5 – Is there a score above which people are referred? Who does the CHAT 5? What percentage of referrals comes from the CHAT? Do you have one or several referral forms? You mentioned referral criteria, could you talk about these? Are all referrals accepted? If not, what is a reason for declining a referral?
Interventions	*Service 1* How was it decided what interventions to provide? For the interventions you stated you provide on the survey: What kind of approach do you use? How was this chosen? For the interventions you stated you didn't provide on the survey: Was it a conscious choice not to provide these interventions? No clinical need? No evidence? Intervention was delivered both individually and in groups. Pros and cons of both methods? Any particular issues associated with either? *Service 2*

	What interventions do you provide? Are there any interventions that you wouldn't provide? Are there opportunities for joint working? Intervention was delivered both individually and in groups. Pros and cons of both methods? Any particular issues associated with either? *Service 3* How was it decided what interventions to provide? For the interventions you stated you provide on the survey: What kind of approach do you use? How was this chosen? For the interventions you stated you didn't provide on the survey: Was it a conscious choice not to provide these interventions? No clinical need? No evidence? Survey stated that intervention was 100% individual. Was it a conscious choice not to provide groups? Have groups previously been delivered? Pros and cons of both methods? Any particular issues associated with either?
Client group	Do you think your service is reaching the people it should be? If not, why not and how could this be redressed?
The 'ideal' service	What would the ideal service look like? What do we need to do to achieve this? Which stakeholders need to be involved? How do we know if we've achieved the goal?
Other	*Service 1* What screen does Education use? Survey states that 'Some screening done by SLT'. Under what circumstances? When/why? Only two assessment tools are used. How did these work with the population? Where these sufficient? What assessment tools would have been useful in addition? 50% of your time is spent not in direct contact with clients – What does this time look like? Can you provide more details on accessible information and staff training? *Service 2* Do you get feedback on the service you provide from staff and young people? Tell me more about the screening tools used by Education and Mental health Is there a difference between an SLT and another member of staff completing the CHAT? Tell me more about the assessment tools you use 30% of your time is spent not in direct contact with clients – What does this time look like? Can you provide more details on support and staff training? *Service 3* Screening and assessment. How do you make the distinction between the two? Could you tell me more about the PHAB assessment tool? Survey states that 'Screening mainly done by SLT'. Under what circumstances is it not? When/why?

	How do the assessment tools you use work with the population? Are these sufficient? What assessment tools would be useful in addition? 30% of your time is spent not in direct contact with clients – What does this time look like? Can you provide more details on accessible information, advice, support and staff training?

Note. RTI = Response To Intervention; YOI = Young Offender Institution; SLT = Speech and Language Therapist, CHAT = Comprehensive Health Assessment Tool, PHAB = Phonological Assessment Battery.

The interview schedule gave an order and suggested wording for each question. This level of structure was included to ensure no areas were missed. However it was intended as a guide only and as these were semi-structured interviews, there was the opportunity to follow the respondents lead should they provide additional relevant information. Interview transcripts show the wording of questions did vary slightly between interviews but all of the key areas were covered.

10.5.3.Audit material

It was intended for data from referrals and interventions would be collected at the three sites across a six month period; with data being collected from all individuals providing SLT services at each site. The audit was designed to provide information about: what SLT services are provided, how are SLT services provided, who is receiving SLT support, what does this support look like. The audit tool was developed based on what data was already being collected on-site to avoid additional workload for the clinicians, with extra fields for completeness, based on published SLT service audits (Broomfield & Dodd, 2004) and published case studies (Snow & Woodward, 2016).

Each SLT service was asked to complete a form listing the number of referrals, sessions offered and other relevant details. A copy of the paper based audit format is provided in Appendix 7. Services submitted this data on a regular basis to the researcher. This data was gathered over six months. Data was gathered over this time period to provide a reliable 'snapshot' of service provision. Previous reviews of clinical audits have shown using a shorter period did not allow for variation in provision due to annual leave, maternity leave and staff sickness. Stansfield (2012) collected data across 24 months in order to gain a truly representative picture of service provision, rather than the ideal picture. It was not possible within the confines of this study to collect data across such an extended period. The raw data from the audit was offered back to services after the 6 month period so the data could be used within the service for audit, or service development purposes.

Audit data included recording information on referrals, assessments, interventions and other work. Fields relating to referrals were; date of referral, referral source and reason for referral. Referral source was selected from a drop down list (see Table 37). These choices replicated those used by the local services.

Table 37 - Referral source options

CAMHS	GP	Psychology	SLT
Carer	OT	Relative/friend	Treatment Provider
Child Protection Specialist	Pharmacist	Secure Children's Home	YOI
CMHT	Police	Secure Training Centre	YOT
Drug and Alcohol Team	Primary Care	Self-Referral	CHAT
Education	Prison service	Social Services	Other
External Care Agency	Probation	Social Worker	

Note. CAMHS = Child and adolescent mental health service, GP = General Practitioner, SLT = Speech and language therapist, OT = Occupational Therapist, YOI = Young offender institution, CMHT = Community mental health team, YOT = Youth offending team, CHAT = Comprehensive health assessment tool.

The reason for referral was also selected from a drop down list (see Table 38). These choices were chosen in conjunction with the lead clinicians to mimic the most commonly used referral reasons in to each service and those used on local referral forms.

Table 38 - Referral type options

Speech	ASD	Other
Language	Hearing Impairment	
Communication	Head Injury	

Note. ASD = Autism spectrum disorder

Fields relating to assessment were; date of assessment, facilitators, type, session un/planned, not/attended, reason for non-attendance, length of session. There were two fields relating to facilitators; the first being whether the session was conducted by an individual facilitator, whether it was a 2:1 or a group assessment, the second field recorded the lead facilitator. The type of assessment/screening session was selected from a drop down list (see Table 39).

Table 39 - Assessment type options

SLT Assessment	ASD Assessment	CHAT 5
Mental Health Assessment	CHAT 4	

Note. SLT = Speech and language therapy, ASD = Autism spectrum disorder, CHAT = Comprehensive health assessment tool.

The reason for non-attendance was selected from a drop down list (see Table 40). These choices were chosen in conjunction with the lead clinicians to mimic the non-attendance reasons used in each service. The length of session was recorded in minutes.

Table 40 – Non-attendance options

Declined - Unwell	Unavailable - Internal activity	Therapist Unavailable
Declined - Does not want to engage	Unavailable - External activity	Other
Education unable to facilitate	Primary Care unable to facilitate	
Unit unable to facilitate	Specialist unit unable to facilitate	

Fields relating to intervention were; date of session, facilitators, session un/planned, not/attended, reason for non-attendance, length of session. The same recording conventions as for assessments were used.

Fields relating to other work were; date of session, therapist, type and length. The type of other work was selected from a drop down list (see Table 41). These choices were chosen in conjunction with the lead clinicians to mimic the most common other services provided in each service.

Table 41 - Other work options

Intervention	Professionals Meeting	Psycho-education
Consultation	CPA	Discharge Follow-up
ACCT Review	GOOD Review	Maintenance/Check up

Note. ACCT Review = Assessment, Care in Custody, Teamwork Review, CPA = Care Programme Approach meeting, GOOD Review = Good Order or Discipline review

10.5.4.Case studies materials

In order to gather more detailed information of what services are delivered and how they are delivered, a small number of case studies which described an episode of treatment for a service user were gathered from clinicians. Any available feedback from the service users on their experience of SLT was requested, to give insight into the acceptability of the service provided.

Snow et al. (2015a) suggest single case studies to gather initial evidence about the effectiveness of SLT in the criminal justice arena. Single case studies also provide the opportunity to describe how interventions and support are provided. It was decided to collect six detailed case studies, in order for the breadth of the services offered to be reflected. The

case studies were collected from the therapists working in these services to: represent the variety of provision, offer the opportunity to look at variation between service providers, and also to minimise the time required from each clinician.

The case study template (see Appendix 8) was based on Snow and Woodward (2016) who also published a series of case studies from a youth custodial setting. The case studies all included; background information, referral information, assessment details, intervention details, and session descriptions (see Table 42).

Table 42 - Case Study overview

Background of participating service user	**Age:** (month, years) **Education:** (Exam results, Expelled (+ age), Years of education, SEN, Statement/EHC plan, ESL) **Mental Health:** (Diagnoses, ADHD, ASD, Substance Misuse, Previous contact with services) **Family & Society:** (LAC, SES, Child Protection, Ethnicity, Similar Peers) **Offending:** (Index Offence Category, Length of stay, Violent v Non Violent) **Physical Health:** (TBI and other relevant conditions)
Referral	**Referral source:** **Reason for referral:**
Assessment	**Assessment tools:** **Assessment summary:** **Primary areas of need:** **Time taken for assessment:** (no of sessions and minutes)
Intervention	**Treatment aims:** **Intervention approach:** **Sessions:** (no of sessions and minutes) **Sessions cancelled:** (and reason) **Weeks in therapy:** **Therapy provider:** (include whether 1:1 or prison officer/assistant sitting in)
Session description	**Took place/Cancelled:** (if cancelled give reason) **Where:** **Room set up:** (who present, how seated, furniture) **Target:** **Achieved/Not achieved:** **Materials:** **General presentation:** **Progress:**

Note. SEN = Special Education Needs, EHC Plan = Education and Healthcare Plan, ESL = English as a second language, ADHD = Attention Deficit Hyperactivity Disorder, ASD = Autistic spectrum disorder, LAC = Looked after child, SES = Socioeconomic status, TBI = Traumatic brain injury

10.6. Procedure

This following section will describe the overall procedure for gathering the data in Phase 2 and then for each type of data (survey, interview, audit, case study). This is also shown as a flowchart in Figure 28.

After ethical approval for Phase 2 was received, the lead clinician at each site was sent the Participant Information leaflet (see Appendix 9) by email. After having time to consider the information in the leaflet the consent form (see Appendix 10) was sent two weeks later, again by email. The participants were invited to contact the researcher by email if they had any questions about the study. Arrangements were made so a follow up phone call or site visit could be arranged if required. None of the participants had any questions and all agreed to participate in the study. The participants were asked to sign the consent form and send a paper copy back to the researcher if they agreed to participate in the study.

Figure 28 - Procedure for Phase 2

10.6.1.Survey procedure

Once consent had been given by a participant they were sent a link to the online survey. The participant was able to complete the survey in their own time. The web platform (Google) hosting the survey automatically sent an email to the author to let me know when the participant had completed the survey.

The survey was designed to take no longer than 15 minutes to complete. All questions were compulsory and consisted of multiple choice questions and rating scales, some of these questions were followed by optional free text fields to provide further detail.

10.6.2.Semi-structured Interview procedure

Following completion of the survey, the researcher contacted the lead clinician at each site to arrange the interview. The participant selected a convenient time and an appropriate venue of their choice (e.g. work place, a quiet meeting room). The author is a lead clinician at one of the three YOIs, and so an independent therapist, experienced in the criminal justice field, acted as the interviewer. Two participants chose to be interviewed at their workplace and the third chose a neutral venue (a meeting room in a public venue).

Prior to the interview the researcher sent the participant a copy of the interview question guide and the journal article proposing an adapted RTI service delivery model is applied within YOIs (Snow et al., 2015a). The interview question guide was sent so the participant could familiarise themselves with the questions and prepare if they felt this was necessary. The participant was asked to read the article in advance of the interview so they could discuss the proposals and compare the RTI model put forward to service delivery in their YOI.

The interviews took place between May and July 2017. They were designed to last around one hour. The interviews actually ranged between 38 – 77 minutes in length; Service 1 interview duration 38 minutes, Service 2 interview duration 77 minutes, Service 3 interview duration 73 minutes.

The interviews were digitally recorded using an Olympus Linear Pulse Code Modulation (PCM) Recorder (LS-3) audio recorder. The recordings were saved in Motion Pictures Expert Group (MPEG) Audio Layer III (mp3) and Windows Media Audio (WMA) formats.

Prior to the interview commencing the interviewer placed the audio recorder in situ and checked the sound levels by recording a short soliloquy and listening back via headphones, also ensuring to check peak levels were not exceeded on the audio recorder's screen.

The interview process was explained to the participant and any questions addressed prior to the recording being started. Before the questions commenced the interviewer recorded the date and name of the participant so each interview could be easily identified.

Once the interview was complete the interviewer uploaded the recording to the hard-drive of their University desktop computer. At this point the original recording was deleted from the

audio recorder. The researcher then transcribed the interview data and removed all identifiable data. The transcription was then sent back to the participant to ensure the transcription was an accurate representation of the interview and they were happy with the content. The transcript was sent via email with questions asked to clarify any ambiguities in the data and an overall question as to whether the interviewee was happy the transcript was accurate and did not contain any information they would be unhappy to have shared. This process was repeated until the transcription was agreed. The researcher was led by the lead clinician in this process[14]. The lead clinicians in Service 1 and 2 did not ask for any changes to be made. The lead clinician in Service 3 marked the sections they wished to be removed from the transcript, the researcher made these changes and then resent the transcript to the clinician for final verification. The uploaded recording was then deleted once the transcription had been agreed between the interviewee and the researcher. The transcribed interviews do not contain full names, or location specific details.

10.6.3.Audit procedure

After the interview was completed it was discussed and agreed with the lead clinician when the audit phase would start, how the audit data would be recorded, and when and how data would be shared between the local site and the researcher. As one of the SLT services was vacant during this time audit data was only gathered from two sites; Service 2 and Service 3.

Following the interviews, the audit template was devised based on feedback from the lead clinicians and trialled at both sites for two weeks. The template was again modified following the trial, adding items requested to the relevant drop down lists and removing duplicate items; for example in the initial template 'Prison Service' and 'YOI' were listed as separate referral sources although this was the same source. The audit then commenced in August 2017 and ran until the end of January 2018.

Service 2 recorded their data electronically and inputted directly into a spreadsheet whilst Service 3 recorded their data via a paper based system. Data recording choices were given to lead clinicians so they could choose the system they felt most comfortable with and would be the least time consuming for them. The researcher was aware Service 2 was required to record contacts electronically whilst Service 3 collected these in a handwritten document. The researcher then transferred the paper based entries on to a spreadsheet.

[14] A significant amount of, potentially useful, data was removed from the Service 3 interview at the request of the lead clinician as they felt this may be politically sensitive.

Both services decided to return their data monthly to the researcher. Client identifiable data was removed by the lead clinician at each site before being passed to the researcher. Data was shared between participants and the researcher using nhs.net email addresses as these provided a secure connection and removed the risk of patient identifiable information being shared outside of the National Health Service (NHS) in error. Should confidential information have been found it was agreed in the Participant Information Leaflet (v7) that the email would be immediately returned to the participant and a request made for the identifiable data to be removed.

It was anticipated the recording of audit data would take the lead clinician at each site approximately 15 minutes per week.

10.6.4.Single case studies procedure

The case study template was shared with participants at the end of the interview. This allowed the lead clinician to ask questions should any of the data fields be unclear. They were also invited to share these with their team and send any queries to the researcher if required. No questions or queries were received and therefore this was accepted as the final case study template (see Appendix 8).

It was anticipated it would take the SLT approximately three hours to complete a case study. As this was seen as a time consuming task each service was asked how many case studies they felt they could complete. Service 2 agreed to complete four case studies, one completed by each of the therapists and student therapist present at the time of data collection. Service 3 agreed to complete two case studies; one completed by each of the qualified therapists working clinically on site.

Lead clinicians were asked to ensure the case studies were completed and emailed to the researcher by the end of the audit process in January 2018. The same email process as for the audit was used for data protection purposes.

10.7.Access and Consent

The researcher did not have direct access to any clients or clinical data in this phase of the study. Access to clinical data for the audit and case studies was through the lead clinician at each site with all identifiable data being removed prior to being sent to the researcher.

Written consent was gained from the lead clinician at each site as their time and knowledge was central to this phase. The lead clinician had to also gain the consent of their local service

manager to ensure their commitment would not adversely affect service provision. The researcher was also required to get capacity and capability approval from each NHS Trust to ensure the Trust as a whole was not overly committing itself to external projects.

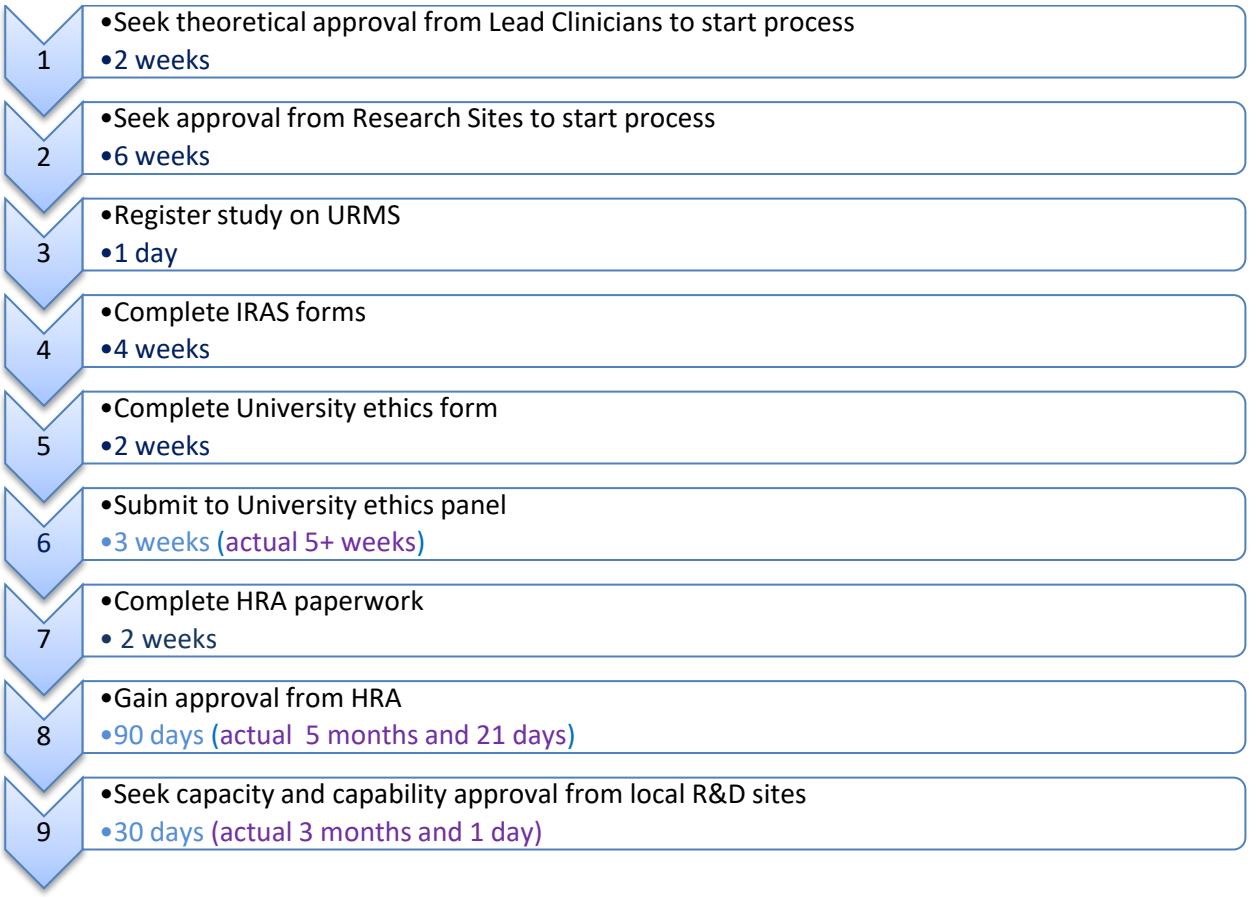
10.8. Ethics and Ethical Considerations

The study received ethical approval from the Department of Human Communication Sciences at the University of Sheffield (012491). Capacity and capability approval was obtained from the Health Research Authority (HRA) (IRAS 209118) and the local trusts; North Central London Research Consortium (NOCLOR) and Leeds Community Healthcare NHS Trust. Approval letters can be found in Appendix 11. A detailed description of the ethics process is given below.

The steps and timeframes for Phase 2 are listed in Figure 29. The same colour coding rules are applied as for Phase 1 (see section 7.9.1). The timeframes in light blue are those stipulated in respective bodies' documentation. Figures in dark blue are actual timeframes. Figures in brackets are the actual time taken when in excess of the body's own written documentation.

For Phase 2, approval was initially sought solely from the healthcare ethics body. For this phase direct contact was sought with the lead speech and language therapist (SLT) at each site and for these individuals to provide anonymised service data. After completing the IRAS forms the HRA advised whilst their approval was required for consent and capacity ethical approval should be gained via the University. Although the total of anticipated weeks in Figure 29 total almost six months (25 weeks) some of these processes are intended to take place concurrently. The actual length of the process, from gaining theoretical approval from the participants to final consent, was 16 months (March 2016 - July 2017).

Figure 29 - Phase 2 Ethics Process



Note. URMS = University Research Management System; IRAS = Integrated Research Application System; HRA = Health Research Authority; R&D = Research and Development.

10.8.1.Ethics process for Phase 2

The following section details the criteria Phase 2 of the study was required to comply with, the processes followed and the outcomes.

1. **Seek theoretical approval from Lead Clinicians to start process.** As there was going to be a time commitment required from the lead clinicians at each site it was necessary to approach them first to ask whether they would potentially be interested in being involved in the study. As the Researcher is also a clinician in this field the therapists were already known to the researcher through clinical networks. Initial contact was made via email so as to reduce any pressure the clinician may have felt to agree if done face-to-face.
2. **Seek approval from Research Sites to start process.** The new HRA processes meant Research and Development (R&D) approval was no longer required from each Trust prior to submitting IRAS application. This change was made as a way of streamlining procedures, rather than approach each Trust the HRA would advise for all Trusts. However, the HRA advice was to approach each Trust's R&D department as a courtesy and to ensure there

were no particular issues to be aware of. As the transition between these old and new processes was happening at the time there was some confusion amongst all parties as to the exact requirements. This did lead to some delays at a stage that was not theoretically compulsory.

3. **Register study on URMS.** Again, as for Phase 1, University research governance procedures were followed and the study was registered on URMS.
4. **Complete IRAS forms.** Advice was sought initially about which ethics procedures would be required and the researcher was advised NHS ethics approval would again be required. Whilst the application was being written the move to the new processes under the HRA happened. On submission of the IRAS form the researcher was informed although the study would require HRA approval the ethics should now come through the University.
5. **Complete University ethics form.** The University ethics forms had similar questions to the IRAS application, these answers were modified accordingly to meet the University's requirements.
6. **Submit to University ethics panel.** Submission to the University ethics panel is undertaken via an online process. Reviewers are then assigned, who give written feedback to the departments lead Ethics Administrator. The lead reviewer then sends a letter to the researcher advising whether the application is successful and whether any amendments are required. Approval was received with optional amendments to the wording on data storage.
7. **Complete HRA paperwork.** As the HRA was a relatively new body the accompanying paperwork was also new. The researcher was required to complete the Schedule of events and Statement of activities. There was limited advice and support available for this as few individuals had been through the process and the HRA were dealing with the backlog which occurred in the transition between old and new systems.
8. **Gain approval from HRA.** As previously mentioned this was a new process. The HRA website had warnings there were backlogs and the timeframes may be extended in this transition period.
9. **Seek capacity and capability approval from local R&D sites.** As the HRA processes were new to the R&D departments too it wasn't always clear what was required, when, and from whom. This meant there ended up being slightly different procedures in each Trust. However, all Trusts required finalised consent was sought from the lead clinician at each site.

10.8.2.Ethics Summary

It was hoped having been through the healthcare ethical approval processes for Phase 1 would permit Phase 2 to be completed more quickly and smoothly. However, conflicting advice and the transition to the HRA meant new processes were encountered in this second phase which again led to delays and the whole process took over one year to complete.

10.9.Data Analysis

This following section will describe the procedure for analysing the data for each part of Phase 2.

10.9.1.Survey analysis

The survey data was subject to descriptive analysis, and each question was evaluated separately. Similarities/differences between the services were drawn out and are described in the following results chapter.

10.9.2.Semi-structured Interview analysis

A two-step process was taken to the analysis of the interview data. Orthographical transcription was completed by the researcher, these were then edited to remove hesitations and pauses as these were not required for analysis purposes (Bailey, 2008). After the data had been transcribed it was divided in to two types of information; describing details and facts about the SLT services and reporting perceptions, attitudes and opinions about services. Descriptive analysis of the factual data was conducted using the same method as employed for the survey data. This data is presented with the results of the survey in the Phase 2 results chapter. This included additional information regarding assessment tools used and clarification on referral procedures.

Interpretive analysis of the participant's views was conducted using thematic analysis (Braun & Clarke, 2006). The epistemological and ontological viewpoint of the individual conducting a thematic analysis should be transparent as these will affect the analytical process and outcomes, as Heidegger (1962) states all description inevitably involves an element of interpretation. The researcher identifies as a neuroconstructivist. Neuroconstructivism views development as "a trajectory that is shaped by multiple interacting biological and environmental constraints" (Westermann, Thomas, & Karmiloff-Smith, 2010, p. 724). Their ontological position is that of social-constructionism. Irwin (2010) describes social-constructionism as viewing constructs as being shaped by the societies in which they exist and

specific to that time point. The impact of the researcher's epistemological and ontological viewpoint on the process is explored in the discussion (see section 12.8.2).

The six step process as laid out by Braun & Clarke (2006) was used to conduct the thematic analysis (see Table 43). NVivo qualitative data analysis Software; QSR International Pty Ltd. Version 11, 2017 was used to support this process.

Table 43 - Thematic Analysis Process

Braun & Clarke's Steps	Process	Result
1. Familiarise yourself with the data	Transcribe the data, read and re-read	List of initial thoughts about the data
2. Generating initial codes	Coding interesting features in the entire data set in a systematic fashion	Initial nodes generated in NVivo
3. Searching for themes	Codes to be collated into potential themes. Entire data set searched for data relevant to each potential theme	Groupings to be refined into potential themes. Initial thematic diagram to be generated
4. Reviewing themes	Check if potential themes work; when related back to initial thoughts and groupings, and also in relation to the whole data set	Potential themes checked against initial themes and groupings. Themes checked by independent researcher
5. Defining and naming themes	Review the specific nature of potential themes and how they contribute to the overall story	Themes named and clearly defined
6. Producing the report	Select persuasive extracts to illustrate themes relating back to research questions and literature	Write up results chapter

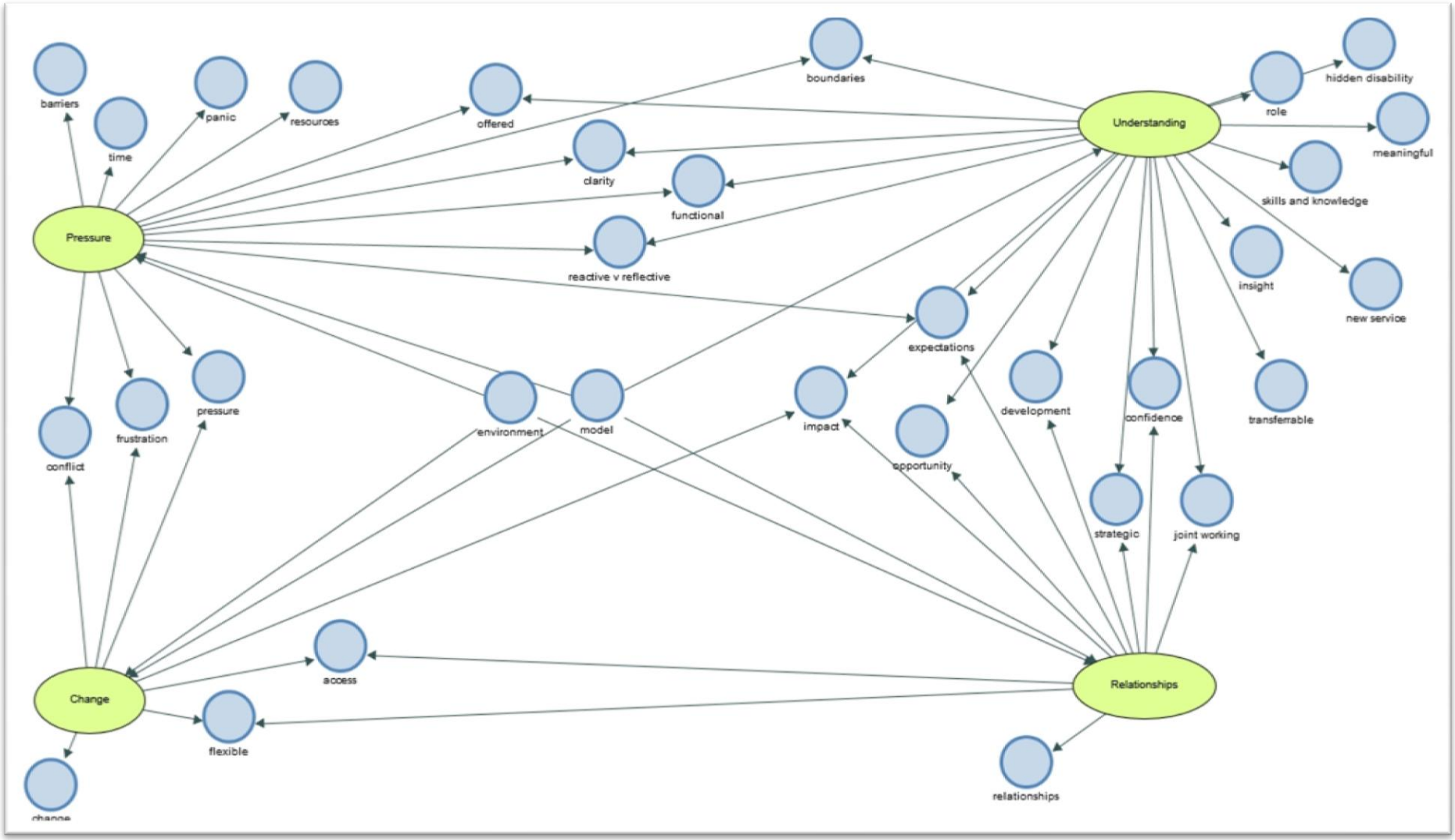
In Step 1 each interview was looked at individually, key information highlighted and given a label representative of the topic being discussed. When this process had been completed for each interview the labels were collected together. Labels which appeared across interviews or appeared related were used as a basis to form Step 2's initial nodes. From the initial process of highlighting key text in the transcripts 32 nodes were created. As shown in Table 44, the majority of nodes were present in two or three of the sources. The only nodes present in one source were; confidence, environment, panic, and transferrable. Panic and confidence were also only mentioned once in the one source and therefore could be seen as unimportant; however they are related to other nodes and therefore could be subsumed. Panic could be seen as closely related to pressure and confidence integrated with skills and knowledge.

Table 44 - Initial Node List

Name	Sources	References
access	2	13
barriers	3	45
boundaries	3	4
change	3	19
clarity	2	6
confidence	1	1
conflict	2	4
development	3	12
environment	1	4
expectations	3	17
flexible	2	10
frustration	3	12
functional	3	19
hidden disability	2	7
impact	3	23
insight	3	11
joint working	3	29
meaningful	2	5
model	3	24
new service	3	6
offered	2	2
opportunity	3	19
panic	1	1
pressure	3	16
reactive v reflective	3	5
relationships	3	13
resources	2	18
role	3	19
skills and knowledge	3	21
strategic	2	4
time	3	26
transferrable	1	4

The interviews were then reviewed again using these initial codes to see what patterns presented in the data and whether these could be drawn together under headings. This process was then drawn together by the development of an initial thematic diagram, see Figure 30.

Figure 30 - Initial Thematic Diagram



Once the initial thematic diagram was developed Step 4 was completed. At this stage the diagram was sent, with a compilation of 20% of the interview data, to an independent researcher unfamiliar with the study for checking. The interview was sent with three specific instructions:

1. Look at the data and make a note of what themes you discover in the data.
2. Refer to the mind map and see whether you feel the themes identified are representative of the data.
3. If themes are not representative, can you say what you feel is missing or added?

The independent researcher felt the initial themes were representative of the data but felt the relationships theme could be more accurately labelled as collaboration and they felt this appeared to be the dominant theme in the data. The lead researcher then revisited the initial codes and themes and developed these further to ensure they accurately reflected the data sources and covered all of the salient information highlighted in Step 2. Step 5 involved the creation of a final thematic diagram (see Figure 31) with themes being renamed and one theme being sub divided for additional clarity.

Relationships – As suggested by the independent researcher this theme was renamed to bring the sense of a need for collaboration to the fore. This theme then became **'collaboration is key'**. This theme name was felt to highlight the importance of relationships within the setting for success.

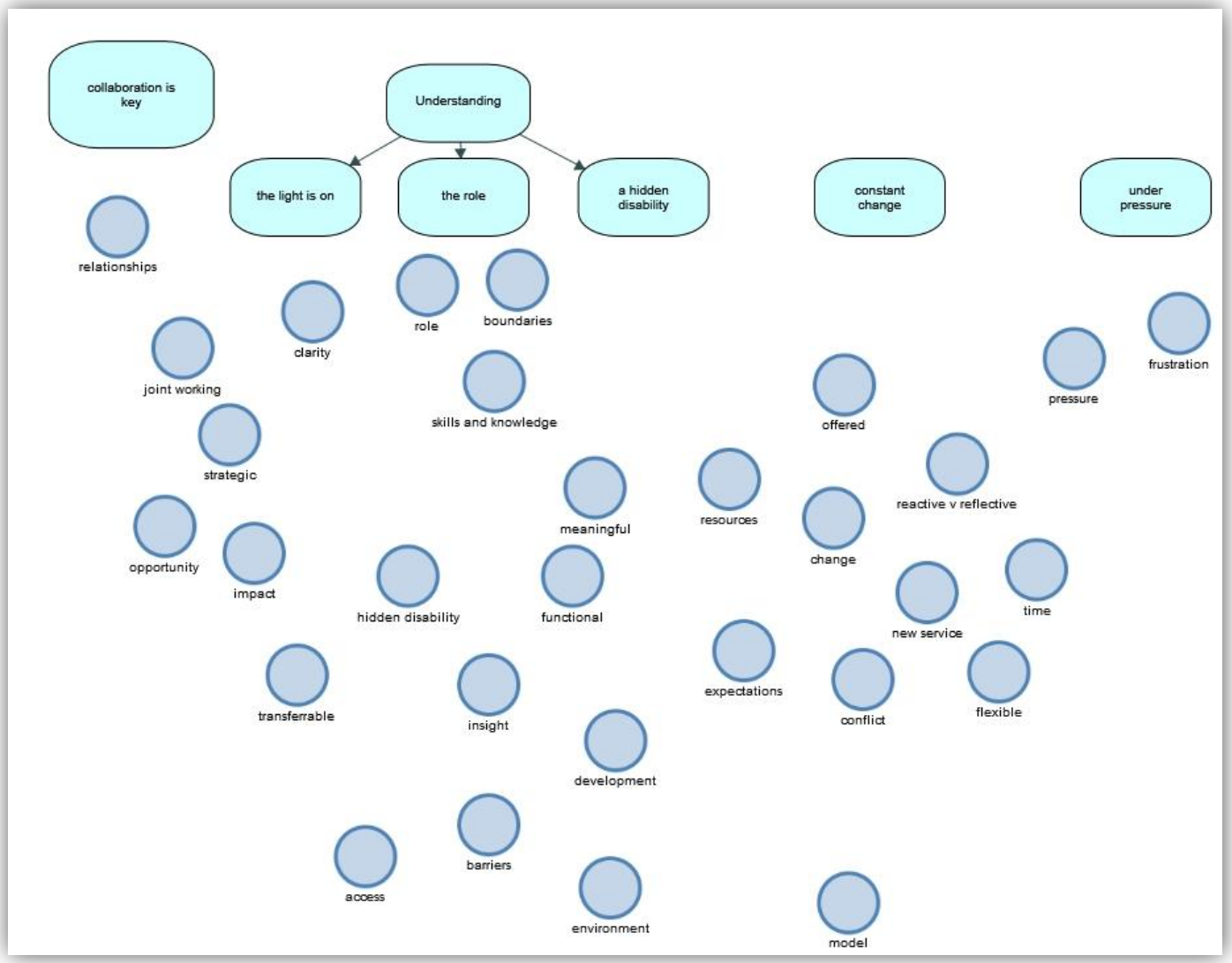
Change – This one word initial title did not indicate whether change was a positive, negative or what this specifically related to. This theme was therefore renamed as **'constant change'** to reflect that it was not one specific change but rather a repeated process.

Understanding – This theme encompassed understanding of the role of the SLT, the difficulties encountered through lack of understanding and also the benefits of increasing understanding and insight and therefore it was decided to sub-divide this theme to reflect the three separate strands. The sub theme relating to the role of the SLT was simply named **'the role'**. A lack of understanding was named **'a hidden disability'** as this term is often used to describe speech, language and communication difficulties and explain why they are not well understood. The benefits of increasing understanding was named from a phrase used in one of the interviews capturing the feeling; the interviewee describes 'a lightbulb moment' for an individual this was transformed to become **'the light is on'**. It was felt 'a lightbulb moment' needed to be altered as understanding refers to more than just a moment.

Pressure – This theme encompassed both pressures on the individual and pressures on the service as a whole. The weight of this pressure could be felt when reading and re-reading the transcripts and therefore it was felt necessary to convey this weight in the theme's title. This theme therefore became **'under pressure'**.

These final themes are shown in Figure 31. The nodes belonging to a specific theme are situated most closely to the theme title. Those situated further away cover several themes. Many of the nodes fit in several themes; however, the themes were felt to be distinct enough to not need collapsing further.

Figure 31 - Final thematic diagram



The final phases of thematic analysis comprise of the defining of themes and the presentation of the analysis, this can be found in the results chapter.

10.9.3. Audit analysis

Data was analysed using the Statistical Package for Social Scientists (SPSS v21). Descriptive statistics were used to illuminate the findings from the audit and explore the similarities and differences between the two services.

10.9.4. Single case study analysis

The single case studies are presented in full for the reader to gain an understanding of how SLT is delivered in English YOIs. The case studies are also contrasted to Snow & Woodward (2016) as the only comparable paper published at the time of writing. Case studies were also analysed in comparison to data collected about SLCN gathered in Phase 1 and data around service provision collected earlier in Phase 2.

11. Investigating the provision of SLT services to young people in YOIs in England – Results

11.1. Introduction

This chapter will report the results from Phase 2 of the study. This aim of Phase 2 was to examine the purpose, structure and function of SLT services in English YOIs, answering the following research questions:

1. What are the similarities and differences between SLT services in English YOIs?
2. Is there an evidence base underpinning the interventions offered in these SLT services?
3. Can community based service delivery models be applied in YOI SLT services?
4. Could the theoretical service delivery model laid out by Snow et al. (2015a) be applied in English YOIs?

Phase 2 was divided in to four sections; survey, interview, audit and case studies. Each section is reported on individually in this chapter before being drawn together in the subsequent discussion chapter.

I was the lead clinician at Service 2 and participated in the data collection, completing survey, audit, a case study and being interviewed following the same protocol (a colleague conducted the interview). Data from Service 2 is marked with an * as a reminder this is 'insider' data (Labaree, 2002) taken as a researcher-participant.

11.2. Section 1: Survey Data[15]

The responses from each question on the survey are detailed below. The order of questions reported has been slightly altered from the survey the participants completed to aid coherency of the presentation of the results (see Appendix 5). This section also includes clarification provided in the interviews which supplement the answers to the survey questions. An additional section has been added at the end in order to report the discussions about service frameworks were present in the interviews but not the survey. It was decided to report this

[15] The survey data has been published in *the Journal of Clinical Practice in Speech and Language Pathology*, the data is used here with the permission of the Speech Pathology Association of Australia who owns the copyright to the material.

data here as it fits more closely with the presentation of information about the services rather than within the thematic analysis.

Question 1: How many young people (15-18 years) are there currently within the YOI?

Participants were asked to select one category from a total of five categories (0-50; 51-100; 101-150; 151 -200; 200+ young people). These categories were derived from data reported by the Ministry of Justice (*Youth Justice Statistics 2016/17*, 2018). The three services varied in the size of the population they served. Table 1 shows the number of young people in each setting. The range was wide, from 101 to over 200 young people.

Question 2: What is the capacity within the YOI?

Participants were asked to select one category with the same categories available as in Question 1. Services 1 and 3 were both running at capacity, whilst Service 2* had a population significantly below capacity; the potential capacity was reported at over 201 young people but the current occupancy was reported as 101-150 young people (see Table 45).

It should be noted Service 2* is a split site, providing provision to under 18's and over 18's, the population at Service 2* including the over 18's is approximately 500. SLT services are provided to all individuals within the establishment.

Question 3: When was the SLT service developed?

Participants were asked to select one option from the following: Less than 1 year ago, one to five years ago, five to ten years ago and more than ten years ago.

Service 1 was a relatively new service; it had been established for less than a year. Services 2* and 3 were older having been established between five and ten years ago.

Table 45 - Service Overview

Service	Size of population	Whole time equivalent employed	Number of SLTs	NHS Banding Scale
1	151-200	0.5	1	7
2*	101-150 (500)	1.2	2	6 (1.0 WTE) 7 (0.2 WTE)
		(+0.1)	(volunteer)	
3	201+	0.5	3	6 (0.4 WTE) 7 (0.1 WTE)

Note. Service 2* is a split site, providing accommodation for under and over 18's. The SLT service is equally divided between the entire population. SLT = Speech and Language Therapist; NHS = National Health Service; WTE = Whole Time Equivalent.

Question 4: How much SLT provision do you have at each banding?

Participants were asked to select what banding SLTs were recruited to (NHS Bands 5 to 8) and report the amount of whole time equivalent (WTE) available at each band.

All three services employed SLTs at Band 6 and 7 (see Table 45), indicating specialist SLTs are required for these services. Service 1 employed just one SLT at Band 7. Whereas services 2* and 3 employed SLTs at Band 7 and at Band 6, with the Band 7 providing a management/supervision role with little/no client contact.

The size of the population served did not appear to equate with the number of days the SLTs were employed. Service 2* with the smallest population, of under 18's, employed a total of 1.2 WTE a week, a total of 7 days. Service 1 employed a total of 0.5 WTE, a total of 2.5 days a week and Service 3 with the largest population employed a total of 0.5 WTE, a total of 2.5 days a week. However, Service 2* was also commissioned to provide a SLT service to the 300 over 18's within the same establishment.

Service 1 had not changed in terms of SLT provision and banding since its inception. Service 2* had previously had 1 WTE equivalent at Band 7, with changes to provision occurring due to staff changes in role. Service 3 had initially had 0.2 WTE provision at Band 7, before growing to 0.4 WTE and finally arriving at the current structure comprising 0.5 WTE across three members of staff.

There was no clear pattern between the size of the population and the staffing of the service. All services had a Band 7 SLT leading the service.

Question 5: Are all young people eligible to be referred to the service?

This question required a yes/no response. All three SLT services adopted inclusive models meaning all young people in the YOI were eligible to access the SLT service. None of the services applied any exclusion criteria in their referral process.

Question 6: How do you get referrals to your service?

Participants were asked to select all options which applied to their service from the following list: blanket referral of all admissions; Comprehensive Health Assessment Tool (Shaw, Bailey, Tarbuck, Chitsabean, Theodosiou, Lennox, & et al, 2014) Part 5 screen (CHAT 5); other induction screening; and referral forms. Participants were asked to add other referral options used if relevant.

All three services used the CHAT 5 as part of their referral process. Services 1 and 2* also received referrals from other staff. Service 2* was the only service to include a self-referral form. Services 2* and 3 also operated other referral processes, listed in Table 46, including community referrals and more informal mechanisms.

Table 46 - Referral routes

Service	Blanket referral of all admissions	CHAT 5	Other induction screening	Referral form	Other
1	No	Yes	No	Staff referral	No
2*	No	Yes	No	Staff referral	Emails from community agencies
				Self-referral	Discussion with staff
3	No	Yes	No	No	Informally via education, casework, self-referral using set referral criteria

Note. CHAT = Comprehensive Health Assessment Tool.

In Service 1, their staff referral form was based on the SLCN screening tool from the ASSET Plus. Although they did not have a self-referral form specifically for SLT, self-referrals could be made by using the self-referral form for the Health and Wellbeing Team in which SLT services sat. Service 2* had two referral forms for staff; the first embedded within the CHAT which requires the clinician completing each section to consider what onward referrals are necessary, the other a form available to all staff on the shared drive. All referral forms, used within the establishment, are collected in an electronic shared area. The option to refer to SLT is on the Mental Health referral form as the SLT service is based within this team. A pictorial health care referral form for the young people within the establishment includes the option to refer specifically to the SLT service. Service 3 did not have a specific referral form instead accepting referral via email.

Both Service 2* and 3 accepted informal referrals following discussions with staff. Service 2* also had an agreement with Education anyone coming in with SLCN listed on their special educational needs list would automatically be picked up.

Question 7: Who do you accept referrals from?

Participants were asked to select all the options which applied to their service from the following list: self-referrals; prison staff; education; health; other agencies within the YOI; family and community agencies. Participants were asked to add other referral options if relevant.

Interestingly, despite operating a referral process (as reported in Question 6), all three services were inclusive in accepting referrals from a range of agencies, professionals and the young people themselves (see Table 47).

Table 47 - Referral sources

Service	Self-referrals	Prison staff	Education	Health	Other agencies within prison	Family	Community agencies	Other:
1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
2*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3	Yes	Yes	Yes	Yes	Yes	Yes	No	YOS

Note. YOS = Youth Offending Service.

Service 1 reported approximately 25% of their referrals came through the CHAT, 50% for Education and 25% from community youth offending teams. Service 2* reported approximately one third of their referrals came through the CHAT, a breakdown of the source of other referrals was not provided. Service 3 did not give a percentage breakdown but reported Education was the largest referral source, followed by the CHAT.

Question 8: Is screening of SLCN completed by an SLT?

Participants were required to select one choice from: yes, no, and sometimes. Service 2* reported screening was sometimes conducted by the SLT. In contrast, the SLTs in Services 1 and 3 did not complete any screening for SLCN. As Service 2* sat within the Mental Health team the SLT was sometimes allocated to complete the CHAT 5 as part of their broader role.

Question 9: Who completes screening assessments for SLCN?

Participants were asked to select all options which applied to their service from the following list: Primary Care Nurse; Mental Health Nurse; other mental health care professional; other primary health care professional; education staff; prison staff; and young person. Participants were asked to add if there were any other staff group who also completed screening.

All three services reported screening for SLCN was completed by mental health professionals and education staff (see Table 48).

Table 48 - SLCN Screening

Service	Primary care nurse	Other primary care professional	Mental health nurse	Other MH professional	Education	Prison	Young person
1	No	No	Yes	No	Yes	No	No
2*	No	No	Yes	Yes	Yes	No	No
3	No	No	Yes	No	Yes	No	No

Note. MH = Mental Health.

Question 10: What assessment tools do you use?

Participants were asked to list all assessment tools used. The three services reported using a range of speech, language and communication assessments (see Table 49). The CELF-4 UK (Semel, Wiig, & Secord, 2006) was used in all three services, with the non-standardised Broadmoor Screening Assessment (Bryan, 1998) used in Services 1 and 2*. Services 1 and 3 used a local assessment developed in-service. Service 2* reported using the widest range of assessment tools including assessments of autism and speech.

Table 49 - Assessment Tools

Assessment	Service 1	Service 2*	Service 3
Autism Spectrum Quotient Questionnaire (AQ Adult-50) (Baron-Cohen, 2001)	✗	✓	✗
British Picture Vocabulary Scales (Dunn, Dunn, Whetton, & Burley, 1997)	✗	✗	✓
Broadmoor Screening Assessment (Bryan, 1998)	✓	✓	✗
Clinical Evaluation of Language Fundamentals 4 UK (Semel et al., 2006)	✓	✓	✓
CELF 5 Metalinguistics (Wiig & Secord, 2014)	✗	✗	✓
Locally developed assessment	✓	✗	✓
Perception of Stuttering Inventory (Woolf, 1967)	✗	✓	✗
Phonological Screening Assessment (Stevens, 2001)	✗	✓	✗
Talkabout social skills questionnaire (Kelly & Sains, 2009)	✗	✓	✗
The Awareness of Social Inference Test (McDonald, Flanagan, & Rollins, 2002)	✗	✓	✗

Note. AQ = Autism Quotient Questionnaire; CELF = Clinical Evaluation of Language Fundamentals.

Service 1 initially reported the use of two assessment tools, the Broadmoor screening tool (Bryan, 1998), with the CELF-4 UK (Semel et al., 2006) used occasionally. In the interview they clarified the most commonly used assessment tool was a 10 question self-rating tool developed by a former colleague employed in a secondary school. This tool was found useful as it led to discussion of communication skills. Service 2* reported the use of a broad range of assessment tools, formally the Broadmoor screening tool (Bryan, 1998) was the predominate choice for the whole population but in the last two years the CELF (Semel et al., 2006) core language sub tests had been the default assessment choice for the under 18 population. The service were currently in the process of revising the Broadmoor screening tool (Bryan, 1998) to make it more concise. Service 3 predominantly used a local screening assessment originally developed in a community youth justice setting. The screening tool comprised of; problem solving, understanding of time concepts, word definitions, language processing and narrative skills.

Question 11: How are interventions provided?

Participants were asked to indicate on a Likert scale (one -10) whether intervention was predominantly individually delivered or at a group level.

In each service, interventions were provided however the method of delivery differed (see Table 50). The predominant model of SLT intervention was individual in Services 2* and 3. Service 1's intervention was divided equally between individual and group delivery.

Table 50 - Intervention delivery

Service	Predominant Method	Percentage
Service 1	Groups & 1:1	50/50
Service 2*	1:1	90/10
Service 3	1:1	100

Both Service 2* and 3 stated they had run more groups previously but due to changes in the wider prison regime this had become increasingly difficult.

Question 12: What SLT interventions do you offer?

Participants were asked to list as many options as applicable (shown in Table 51). Participants were asked to add if other interventions were offered.

As displayed in Table 51, whilst there were differences in how interventions were delivered there were similarities in what interventions focused on. All three services delivered interventions targeted at stuttering, vocabulary, language, and pragmatics. Services differed in

the areas of speech, developing communication skills for education, emotional awareness and coping skills and classroom support. Interestingly, none of the services delivered interventions in the areas of developing communication skills for offending behaviour programs and developing skills for employability.

Table 51 - Intervention Focus

	Service 1	Service 2*	Service 3
Speech sounds	No	Yes	Yes
Stammering	Yes	Yes	Yes
Vocabulary	Yes	Yes	Yes
Language	Yes	Yes	Yes
Pragmatics	Yes	Yes	Yes
Memory	No	Yes	Yes
Social communication skills	Yes	Yes	Yes
Developing communication skills for Education	Yes	Yes	No
Developing communication skills for Offending Behaviour Programmes	No	No	No
Developing communication skills for Employability	No	No	No
Emotional awareness and coping skills	Yes	No	No
Classroom support	Yes	No	No
Other	No	Yes- Life Skills with OT	No

Note. OT = Occupational Therapist.

Service 1 stated they fed most of their clients in to a 'Games Group' they co-facilitated with other professionals. This was described as a social interaction group rather than traditional SLT. If the client was unable to join a group, individual intervention was provided using resources gathered from training courses, previous roles and colleagues within the prison. Interventions not listed as provided were not explicitly excluded, other than speech sounds. Service 1 indicated access to clients affected the interventions provided.

Service 2* stated interventions not listed as provided in Question 12 were not explicitly excluded and it was rather a resource issue. They could see the benefit in providing all interventions and talked about wanting to work with offending behaviour programme providers but being limited by time and resources.

Service 3 stated interventions were generally provided by the learning support assistant who had set packages they delivered. The SLTs would provide intervention for specialist areas such as stammering or if an individual was particularly complex, for example if they had an uneven language profile. Service 3 also highlighted limited resources as restricting the breadth of their interventions.

Question 13: What services do you provide?

Participants were asked to indicate all of the services provided from the following list; screening, assessment, individual intervention, group intervention, staff training, advice and consultation, accessible information. Participants were asked to add if other services were provided.

In addition to assessment and intervention services, detailed above, all three services reported providing; advice and consultation, staff training and accessible information (see Table 52). Service 3 was the only service reported not to deliver interventions at a group level. A full list of services reported is shown in Table 52. No additional services were reported.

Table 52 - Services Provided

Service	Screening	Assessment	1:1 intervention	Group intervention	Staff training	Advice & Consultation	Accessible Information
1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2*	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	No	Yes	Yes	Yes

Service 1 and 2* both reported the most common activity outside of patient contact was attending meetings. In Service 1 time was also spent developing recommendations for individuals who declined and assessment and providing training in Education. In Service 2* training was provided within healthcare, for education and also to the wider prison. Service 3 did not make reference to attending any meetings, rather liaison and report writing. Service 3 mentioned they had previously worked on developing accessible information and providing staff training but this had not happened recently.

Question 14: What percentage of time is spent in direct patient contact?

Participants were asked to indicate on a Likert scale (one -10) what percentage of time was spent in direct contact and what percentage of time was taken providing indirect services.

Services reported between 50-70% of their time was spent in direct contact. Service 1 stated 50% of their time was spent in direct contact whilst Services 2* and 3 both reported spending 70% of time in direct contact. The additional services, listed in Question 13, and non-SLT related activity constituted between 30-50% of their time.

All services were shown to provide broadly similar assessment and intervention services. However, the method of gaining referrals and providing interventions differed. The service with only one highly specialist SLT provided the most group provision. The service with the smallest population but the greatest amount of intervention time employed the broadest

range of assessment tools. This service was the only one to use assessment tools for speech and stuttering although all services stated they provided intervention in these areas.

Interview Question 1: Service Frameworks - Do you think we can/should lift frameworks from the community?

All interviewees could identify a rationale and benefits for using community based service frameworks in the YOIs, however Service 2* and 3 felt adaptations would be required for these models to be implemented successfully. Service 2* highlighted the service users in the YOI are the same individuals who require the service in the community and therefore a distinct service framework should not be required based on the client group. However, due to constraints of the prison regime adaptations may be required. Service 1 made specific reference to the Tiered system (Gascoigne, 2013) as a potential model, in particular the benefits of the universal tier in a population with such high levels of need and limited resources.

Interview Question 2: Response to Intervention Framework - What do you think about the model? Feasible in English YOIs? If no, feasible with adaptations? Do you think a better model exists?

Interviewees were provided with a copy of the Snow et al. (2015a) article and interview questions prior to the interview so they could read the article and prepare their answer. The merits of the model were recognised by all respondents. The particular merits being perceived as the inclusive nature of the model meaning it would be difficult for individuals who were struggling to get missed. However, all felt more resources and additional modifications would be required for it to work effectively in English YOIs. One possible barrier for the implementation of this model was identified as time. Many young people's stay is less than 3 months and therefore if their communication needs had not been highlighted prior to custody they would not have the opportunity to progress through the tiers to receive specialist support, if required. "The YOI thing is a lot young people just come and go and it's quite rushed so I don't know how that would work because of that." (S1)

An additional limitation raised is the model is based within Education and not all of the young people access the education facilities, in Service 2* only 60% of the young people regularly attended the main education provision. This was due to keep apart issues, attending other appointments and staffing issues (Her Majesty's Inspectorate of Prisons, 2018a). Benefits of the model included sharing the responsibility for supporting SLCN across the whole staff group. This would also mean the provision would be less affected by one member of staff's absence.

Furthermore, support being embedded in education provision would mean it would not affect the 30 hours of mandatory provision.

11.3. Section 2: Interview data

Interviews were conducted with the lead clinician at each English YOI providing SLT services. The resulting transcripts were analysed using reflexive thematic analysis (Braun & Clarke, 2006). A definition of each of the four overarching themes is presented below, followed by an in-depth summary of the findings.

- *Theme 1: Understanding*
- *Theme 2: Collaboration is key*
- *Theme 3: Under pressure*
- *Theme 4: Constant change*

The *understanding* theme was the dominant theme, affecting each of the others. This theme was sub-divided in to three further themes; a hidden disability, the role and a light is on. Extracts from the interviews are used both to give voice to the SLTs but also to validate the interpretative adequacy of the analytic process undertaken.

11.3.1. Theme Definitions

Understanding – This theme encapsulates how SLCN are a hidden disability not well understood by the wider population (sub theme one – *a hidden disability*). In addition, the role of SLT within the criminal justice system (CJS) is not well defined and understood (sub theme two – *the role*). However, raising awareness of SLCN and the role of the SLT could have benefits for all (sub theme three – *a light is on*).

Collaboration is key - In each of the interviews, the clinician highlighted the need to engage key partners in order to develop and maintain an effective service. The SLT service is part of a larger workforce including colleagues in health, education providers, prison officers, prison governors and commissioners.

Under pressure – Clinicians all reported feeling under pressure from a variety of different areas to provide an effective service.

Constant change – The three clinicians acknowledged a certain level of change is to be expected. However clinicians all reported this was more evident within this setting and this brought challenges.

11.3.2.Theme 1: Understanding

A hidden disability

SLCN are often described as a 'hidden disability' but interviewees also reported the whole service appeared ‘hidden’. This is illustrated in the following comment, "Speech and language therapy kind of was, it didn't figure on any bodies radar at that point, surprise, surprise."(S3[16]) So when commissioning of services was taking place the SLT was required to remind all parties of the benefits of the service rather than it being incorporated from the outset.

Research tells us the majority of this population will have SLCN (Bryan et al., 2007) and that it is most likely to have gone unrecognised previously. One difficulty in identifying these young people is staff can have the tendency to become accustomed to this level of functioning and accept it as the new ‘norm’. Also, many young people have been living with these difficulties for so long there is "the masking effect" (S3) which makes it even more difficult to pick up on.

SLCN can be hidden from others, and in addition it may well be hidden from the individual who is experiencing it. Interviewees highlighted the need for "a lot of like self-awareness, so them recognising when they're having difficulties and strategies about how to manage that communication breakdown and how to ask for support" (S2*). Developing this understanding can have a broader impact, for the young person, than just communication, "to understand when someone is joking with you and when someone is actually trying to start a fight with you is a very important distinction to be able make in order to feel safe" (S2*).

As people are unclear as to what SLCN are, this can lead to referrals that are loosely related to language and communication but not related to the SLT role. The interviewee from Service 2* gave an example of this, "we don't accept them all, so sometimes it'll be 'has dyslexia', so we'll send that back and explain that that needs to go through education. Or it might be 'doesn't speak English very well, and we go back and get some clarity and actually it's a second language thing". More obvious /‘visible’ language difficulties are the ones that tend to get referred but these may not actually be appropriate referrals for an SLT service. The need to educate other staff about the 'disability' element was highlighted, individuals were being referred when they mumbled even if this did not interfere with intelligibility and the individual was unconcerned. Clinicians felt clear they should be prioritising individuals where there was a significant impact on their levels of activity and/or participation.

[16] For the interview data quotes from the transcript for the lead clinician from Service 1 are indicated by the abbreviation S1, S2 for the lead clinician from Service 2* (who is also the researcher) and S3 for the lead clinician in Service 3.

The young people in this setting are complex individuals and likely to have multiple needs, as SLCN are not necessarily well understood and are generally hidden they can get overlooked. SLCN being a hidden disability is illustrated here "I think we are missing out on some of those where their behaviour is so problematic and difficult that everyone's like 'Ooh, we need to address that first' and so they're not referring on to anywhere else." S2*

Concerns were expressed that as SLCN are often hidden this can lead to assumptions. An example was given from Service 2* relating to SLCN screening conducted by Education staff on induction. One member of staff was screening all individuals, whereas the second member of induction staff was only completing the screening where they believed they may be an issue. This was in spite of an agreement all individuals should be screened. If we are only looking for what can be 'seen' there is a danger a large proportion of those that have previously gone unidentified will remain so.

The role

SLT in a custodial setting in England is not well established. The role is new and not well defined within the profession, and even less so to those in the CJS. Bringing skills and knowledge from previous posts was required in order to define and refine the role in the custodial setting. There was a lack of clarity around what is required in the role, "a real confusion around what I could do." (S1) The clinician found themselves being pushed towards a medical model and providing a 'cure' whilst aware they were unable to provide this. The SLT themselves needs to be very clear on what they can provide as, two of the interviewees commented, it can lead to difficulties creating and maintaining professional boundaries. It is incumbent on the SLT to create those boundaries;

> if you're not disciplined about what is your goal for this session is, it can become a chat about the week and sorting through their issues and problems. And you're not actually doing the speech and language therapy. You are helping and supporting them, but you are not doing what you are specifically there for. (S2*)

Part of the role was seen as providing clarity about what services SLT were offered. Healthcare and the wider prison services want clarity about when to refer and what the referral criteria are. This can be difficult in SLT where a severe impairment in one area can necessitate a referral, but milder impairments in several areas may not require a referral. Without definite referral criteria it may appear to other professionals that the SLT role lacks clarity.

A lack of understanding about the role can be an impediment but it was also seen as an opportunity, "my manager said on the first day 'So you're a language and speech thingy. Why do I want one of those?'" (S2*) This was viewed as an opportunity to structure the service as indicated by evidence and clinical experience rather than having to fit in with an established structure and to educate the wider staff group on the benefits of SLT.

Education and healthcare staff were unclear about how to interpret the screening tools they were employing. Difficulties in understanding screening results were identified; "they are being asked to make some clinical judgement about the quality of the narrative [in the CHAT], which I think is quite hard as a non-SLT" S2* This then meant a significant number of referrals were not appropriate. Writing the full narrative sample whilst the young person is speaking is by itself a difficult skill. Then identifying whether the information provided is sufficient, whether the grammar is accurate and whether the range of vocabulary employed is adequate is tough when the assessor has not had any specific training in language development or even in the use of the tool. In addition, as the majority of young people within the establishment are likely to have SLCN you can become accustomed to this new norm and not recognise the difficulties.

Two interviewees spoke of the broader role of the SLT in this setting, such as building self-esteem in young people who do have good communication skills but lack confidence in this area. As one interviewee put it, "to really encourage them that they really had some very good skills, for some of them I felt it was a real confidence thing" (S1). The clinician used the assessment results as a method of reflecting back to the individual their strengths. Young people in this environment have generally experienced a lot of failure throughout their lives and may have difficulty perceiving their strengths.

It was not just a lack of understanding about the SLT role that was reported, but because there are so many agencies working within the environment there was a broader lack of knowledge and understanding about roles, " in an ideal world you'd have everyone on board, everyone would know who delivered what" (S2*). It was identified that a danger of this broader lack of understanding of others roles can lead to overlap, with an impact on already limited resources. Another issue related through the interviews was, speech and language training being delivered by a prison officer when there was an SLT in post, and was offering to deliver training in their specialist area. This training was part of a wider initiative designed for sites where no SLT service was present. Although an SLT service was present in Service 1 they found

themselves unable to get involved with the established training, despite specialist knowledge and training in this area.

Transforming Youth Custody (*Transforming Youth Custody*, 2014) specifically stipulates SLT can occur as part of the 30 hours of education provision. However, "when Transforming Youth Custody came in and we were told we couldn't see them [the boys] in protected time and all of that, then it became really difficult" (S3). This can be partially explained by a lack of understanding of SLT, as Education and prison staff did not automatically see how SLT supported young people to access Education services.

There was also a lack of clarity as to where the SLT service should sit more broadly; whether this was within education, primary care or mental health. Two services had been moved, from Primary Care to Mental Health or vice versa. This was not seen as helpful when trying to get a service understood and embedded. Supporting speech, language and communication is a broad role and therefore the service could equally belong within any of these teams. The breadth of the role is both a strength and a weakness, this breadth can cause difficulties when attempting to become established within a new setting.

A better understanding of the role leads to better collaboration with benefits for all. Improved understanding of the role can be achieved through; training for staff and service users, written information about the service being available to all and seeing the benefits of accessing the service for a young person. Being invited to planning meetings for the young person is also important to establish the role within this setting. Attending the meetings enables the SLT to demonstrate how understanding an individual's speech, language and communication profile could be beneficial to their rehabilitation and education programme. However as the role was not always well understood it was difficult to get consistently invited to these meetings.

The focus of SLT intervention was identified as a point of contention in Service 1, with conflict between functional and curative models of service provision. The SLT was arguing for a more functional approach given the clients' age and the best available evidence, whilst the rest of the team were operating under a more medical model. The conflict regarding the SLT role led to this interviewee leaving their post, "I didn't feel like this is really meaningful and I'm managing to give speech and language therapy and it's reaching the ones it needs to reach." (S1) Whilst the SLT service is required to operate within a wider service, the lead clinician should be afforded the freedom to develop the most effective service to maximise the communication potential of the individuals they are working with.

Overall, the role of the SLT is not currently well understood within this setting by the staff group or the service users. The role is not yet well established within this setting and clarity is required within the profession and more widely in order to become embedded. The SLT role needs to be well understood in order to work effectively and have a meaningful impact.

The light is on

The power of an individual or individuals gaining an understanding of; the role of SLT, the impact of SLCN, and the benefits of addressing these needs was seen as powerful by all interviewees. As highlighted under the previous theme an increased understanding was deemed valuable. This was equally valuable for the SLT, staff members and the young people.

Specific members of staff were identified as having a clear understanding of the role, this also brought benefits for service delivery; "when I see the referral has come from that person I'm confident that that is an appropriate referral" (S2*). When staff have a good understanding of the role they are able to act as an advocate for the SLT service and develop broader understanding.

It can make a huge difference to the service user when they develop their meta-awareness and understand their SLCN. The young person can then learn to manage their SLCN with support.

> One young person I'm thinking of, who, he couldn't tell [if people were joking], so he'd punch them and then he'd think about whether it might've been a joke or not, and then gradually we worked, so he'd think first, and then we got to the point where he could think, think 'That was a mean thing' and leave it. (S2*)

By developing their understanding of their SLCN this young person was able to feel safer within the prison environment, he also felt more able to understand himself and others' behaviours. These changes led to reduced conflict which in turn reduced the work load of the prison officers working with the young person. The decrease in adjudications which resulted from the increased understanding also results in a cost benefit for the service. This one example shows the myriad of benefits of an increased understanding of SLCN and the role of the SLT.

Training was seen as a valuable tool to increase understanding. Training has the capacity to change access to services for an individual but also to have a broader impact on practice. Training can facilitate access at a universal level, if staff are aware what complex language looks like then they can modify their language to make it more accessible to everyone. An example of this was given when, SLCN training was given to Education staff and "the Maths

teachers were like 'What's that got to do with us?' and then by the end of the session they were like 'Ahh, (. . .) the maths questions are the hardest questions' " (S2*). Those working in domains not directly linked to language can often miss that language is central to the majority of work addressing the rehabilitation of young people in custody. Education and offending behaviour programmes are largely verbally mediated and if staff are unaware of the SLCN experienced by this population and how this can create barriers to access the young people are unlikely to maximally benefit from this support.

Whilst understanding of SLCN and the SLT role are important there is also the requirement for capacity to implement beneficial changes. Service 3 was clear in some areas "there is the will to change things" but a lack of capacity within the service meant they were currently unable to move forward.

It is important for the service users and staff group to have an understanding of the role, but essentially the SLT must believe in their capacity to have a positive effect, to drive the service forward. One interviewee had recently left their post, they commented "what does it even mean to give speech and language therapy to that population." (S1) Without belief in the benefits of SLT in this environment it is hard to maintain a successful service. SLT in this client group is unlikely to be curative, accepting the kind of impact you can have is helpful in maintaining belief in the value of the role; "You are trying to influence a whole part of this person's life and if you can only have a little influence on a little bit of it, but if you've got that then that's a success." (S3)

As there is limited access to SLT, and a population with high levels of need, working at a universal and targeted level could prove effective. If the wider staff group are clear on the SLT role and its benefit then they can act as champions and increase the impact, "they (prison officers) are out there helping these young people and they let you know how they are, and they can maybe help train other people and they can become champions for that." (S1) The prison officers spend the most time with the young people and therefore are in a position to recognise those with SLCN, provide support and monitor whether the benefits of specialist interventions have been generalised.

Understanding of SLCN and the SLT role has an impact on the clinician, the young person and everyone in the environment. Understanding also has an impact on the following themes.

11.3.3.Theme 2: Collaboration is key

Collaboration with other agencies is important as there are a huge number of services working within each establishment, serving a large population and SLT is just a small cog in this large wheel. Collaboration is important to remove barriers. When others can see the benefit in the service you are providing then they will support you to remove barriers. Although it was acknowledged the regime can lead to barriers that weren't always easily overcome, such as a reduction in staffing numbers. Service 3 recalled issues regarding training "there were massive problems about officers being released for it and so it didn't happen".

Time is required for the SLT to become embedded in a service and create these relationships. All services identified dangers in not collaborating and instead silo working. A challenge to collaboration alongside time were challenges presented by the recommissioning cycle; especially as different services went through the recommissioning cycles at different times. Education was an area where all interviewees could see the benefits of closer collaboration; again time and the requirement for 30 hours education were cited as barriers. Another issue with collaboration was that often it was reliant on a specific individual within a service, "the person who was in charge of SEN in education, at the YOI, was off for a long time and nobody really picked up that and the referrals were dropping off". (S3)

Collaboration is also important for creating greater influence and impact. By working together we develop understanding of each other's roles and how these apply within the specific context. Collaboration was seen as a benchmark of success,

> I think it would be seeing that [officers understand], that would make such a big difference. It would be being able to see much greater understanding of communication needs in the staff because they are ones with the young people, who could make a really big difference. (S1)

There were more possibilities for collaboration identified within each establishment, however service capacity and the regime were seen as barriers to realising these opportunities. For example, benefits could be seen for co-facilitating offending behaviour programmes and also preparatory SLT intervention.

Collaboration is important to joint working. Joint working is both enjoyable and helpful and could support the generalisation of therapy targets. Benefits of working with health, education and prison staff were identified. A desire for greater collaboration was identified, for example Service 2* highlighted a desire to do more on offender behaviour programmes, "if we were

able to I would really like to work with the team to do a modified JETS programme". Service 3 had used collaboration to increase capacity by working with Education they had secured some LSA time to deliver intervention programmes.

In addition to collaboration with agencies working within the prison, there is a need for collaboration with the young person identified. Two services explicitly mentioned the clinician and young people as very different people; "I was so different from them" (S1). There were concerns this difference may affect collaboration, but the effect was found to be negligible. It was rare the young person would simply decline to engage; when they did then collaboration between staff working with the young person was crucial to meet the individual's communication needs. Collaboration is central to negotiating meaningful goals and reviewing progress. The young people enjoyed the opportunity of time dedicated to them and their needs.

Collaboration was highlighted as a key feature in a successful service and in an ideal world this could involve "shutting down the prison for a week, getting all the staff who work in to that prison around a table thinking about - Right, what are your goals? How are you going about it? What could we do to work together to enrich that programme, not duplicate it?" (S2*) It was recognised however, this was not a feasible option. Collaboration is especially important in this context as services are working in complex systems with complex individuals who have a myriad of needs, this requires a team approach to successfully support the individual.

11.3.4.Theme 3: Under pressure

In this theme a number of pressure points were identified; pressure from within the team, wider service pressures, external pressures, time pressures and the effects of this pressure. A lack of understanding about the SLT role was observed to create additional pressure, especially when your team or the wider service is expecting a cure for individuals referred to the service.

Two services reported feeling under pressure from those within their team, leading eventually to the clinician in Service 1 leaving their post; "I never succeeded in doing the service I wanted, because, one of the issues was the massive amount of pressure from my team" (S1). One of the reasons for this pressure came from the initial expectation all individuals would get an SLT assessment; whilst this may be desirable, it was not feasible with the level of staffing available. Difficulties were "compounded by very unrealistic expectations of what I could do by certain people in my team (. . . .) that expectation of - 'Why have we employed you if you are not going to do therapy?'" (S1)

Service 3 also reported pressure to deliver service in a way they knew wouldn't work, based on their clinical expertise, but having to fight within own team to deliver an effective service "rather than spread it ridiculously thinly (. . .), and not achieve anything" (S3). Service 3 worked across all services for young people in contact with the CJS in their geographical area. Based on this knowledge they were attempting to prioritise early access to services, but there was pressure from within the YOI to divide the services equally between the different settings. Different funding streams for services working with the same individuals create pressures to divide services not based on clinical evidence but rather financial decisions.

There were also pressures about who the SLT should be working with and not just how they should work. In Service 2* all individuals with ASD and Learning Disabilities referred to the mental health service would be triaged to SLT. This was done as these conditions have SLCN as a core element, rather than looking at the specific needs of the individual. This demonstrates that the team had some understanding of SLCN and appreciation of the value of the SLT but that this understanding was lacking in accuracy. An autistic individual presenting with anxiety may have benefited more from referral to OT and allowed the SLT to spend more time with another individual. All services talked about pressures affecting the way the service was being delivered, specifically services were being forced to be reactive rather reflective and a focus on a medical model of treat and cure, rather than maximising an individual's communication potential.

Pressures did not solely come from within the team, reductions in the number of staff in the wider service were reported as having an impact on service delivery. The SLTs didn't feel like they could ask other staff to assist them when they also had pressures on them. Additionally, changes in wider service delivery caused a negative impact on SLT services, with Service Three stating "it's so frustrating when things aren't broken we are forced to fit within another way of working".

Broader pressure was also felt from sources external to the prison. In one case, the interviewee commented "I just feel frustrated, even now, when I read stuff about working with young offenders, cuz I know it is a really massive drive for the RCSLT but sometimes I just read it and think it's over simplistic." (S1) The interviewee believed marketing from the governing body about the potential for SLT to; transform young people's lives, reduce re-offending and create huge cost savings had affected how SLT was seen by her colleagues. She felt pressure to attain these lofty targets but did not necessarily believe they were attainable with the current levels of service provision and structure. In order to achieve some of these targets a long-term

strategy would be necessary (for example working with the Youth Justice Board to modify the language load in all of the offending behaviour programmes). The recommissioning cycle was seen as a source of additional pressure, as there was then a focus on the short term.

Extra capacity was identified as a way to reduce pressure, having limited time available meant the need for prioritisation and "*trade off"* (S3). The 'trade off' being that by providing staff training, they would not have the capacity to provide individual assessment at this time and therefore a waiting list would grow. The danger being, with a limited length of stay and a waiting list, the individuals would leave prior to completing the assessment. In addition to this, there was also pressure to be a team member and attend meetings and complete generic tasks. Balancing tasks was seen as a constant juggling act.

The length of stay was also identified as a pressure source, "a lot of young people just come and go and it's quite rushed" (S1). Due to the quick turnaround this increases pressure to see people quickly. However these clients are complex individuals who may have trust issues, ideally you would want time to build a rapport and trust before doing an assessment but this was not often possible. Also, other services are under pressure to produce reports in a timely manner and therefore they may also exert pressure on SLT to get things done quickly. Amongst interviewees there was conflict identified between the need to get things completed quickly against the need to provide a quality service.

The need to take the time to step back and reflect on what you are doing and why was highlighted. However, the time was not available. Reflective time was seen as important for best practice; providing the opportunity to reflect upon assessment results in order to plan the best intervention approach, involving the appropriate members of the team. Reflection time was encroached upon by restrictions in the regime, short length of stay, staffing levels, physical and environmental constraints.

In addition to the short length of stay, another pressure was the recent change in requirements for education. Compulsory time in education had increased from 15 to 30 hours in August 2015, this limits the time other professionals are able to see individuals. Then there is competition in that time for everyone to get to see the young people. An additional pressure on the time theme was everything takes longer in this context; from getting the client to you, getting security clearance to set up groups to getting new members of staff in. The final pressure on the theme of time was based around assessment; all services discussed pressure around how long to spend on assessment. They described conflict between conducting a

comprehensive assessment to fully understand an individual's strengths and weaknesses against the pressure to ensure an assessment was completed. Attention difficulties amongst the population were raised, thus necessitating shorter sessions. However, there were often issues getting access to the young people for a subsequent assessment session therefore two services had abbreviated their assessment tool and the third service was in the process of shortening their core assessment tool.

Two services spoke about the considerable impact of pressure on them. They reported frustration about being unable to make the desired impact, "I am aware that what we do offer is a drop in the ocean but we can't do anything else but really." S3 This had an impact on them both personally and professionally, reporting they "Felt jaded, wore me down" S1. In more than one case, it was reported this had led to an individual leaving their post. An SLT had reported to the lead clinician in Service 3 'I can't do it anymore, I'm never going in again' whilst in Service 1 the interviewee reported they had felt "so wasted and degraded professionally and even within my own team." they had left the post.

A need for flexibility was highlighted in this setting for managing the pressure. The environment is generally reactive, changes to plans are always happening and therefore the service has to move with these changes. Accepting what is possible was also felt to be helpful for managing pressures, "I think you've got to accept you are not going to make a huge, huge difference for these kids but if you can make that tiny bit of difference" S3.

11.3.5.Theme 4: Constant change

Change was referenced by all interviewees as having an impact on service delivery and this was hard to keep track of as it was constant and happened at all levels. Changes in service priorities, staffing and structure were observed as happening at all levels and having a knock on effect on SLT services. Health services including SLT are subject to recommissioning every two to three years, which often leads to a new overall service provider. The frontline staff would move across to the new service provider, under the Transfer of Undertakings (Protection of Employment) Regulations 1981, but there would be changes in management. These new employers came in and wanted to alter patterns of working to emphasise it was a 'new' service. Two services had experienced moving between primary and mental health care services during this cycle. Furthermore, commissioners made annual changes in their requirements for reporting leading to a change in service priorities. Education services and other services working in to the prison environment would also undergo recommissioning. However, this was often on a different cycle to healthcare so not all new service providers

would start at the same time. In addition to these regular changes, there were also government initiatives that created change. All services spoke of the significant impact of the new requirements for 30 hours of education per week (*Transforming Youth Custody*, 2014); "there's been a lot of change to the way things work with sort of TYC and such, and the way Education works" (S3). This change in wider service provision had led to enforced changes for the SLT services. The cycle of recommissioning and new government initiatives was seen as a process without an end point. The lack of a stable, change free period was seen as problematic, affecting service delivery; "I guess it's been a bit kind of reactive to the changes that have happened within the prison and the changes that have happened within healthcare" (S2*). A need for flexibility and creative thinking for responding to change in a positive manner was identified. For example, Service 2* reported the prison used to shut the regime down for half a day, twice a year, to release prison staff for training; this was no longer possible so they were having to find a work around to continue to provide staff training. Instead of having 90 minute training sessions delivered by two members of staff, three members of staff were now attending three simultaneous meetings to provide 20 minute bitesize sessions.

Establishing a service model that works in the environment is challenging as they were constantly having to respond to changes. Changes within the wider service have an impact on local service delivery; "we've had to rejig the service because we can't provide so many clinic sessions so it's sort of ongoing, changing" (S2*). The constant changes impacted on trying to get new projects off the ground, as a change in staffing or regime could affect the whole thing. "That's where a lot of the false starts have come in, we've kind of gone 'Yeh, we can do this and we can do that' and then things haven't gone very far and we haven't got the resources so it has fallen by the wayside."(S3) Screening processes for SLCN have also undergone significant change. In Service 2* there had initially been no systematic screen for SLCN within healthcare, there had then been a brief screening completed by primary care nurses before the introduction of a nationwide mandatory screen delivered by mental health staff. These changes all affect the overall service strategy and do not allow for processes to become embedded and well understood by the whole staff group. Two services mentioned they had previously run groups but were unable to do so currently because changes in the regime had made these impractical, rather than groups not being found useful.

As the role of the SLT in criminal justice is a new field research is limited but is starting to emerge. This evidence is frequently based on theory and/or from different countries with different criminal justice systems and so there are difficulties applying this to English systems.

The intervention model suggested by Snow et al. (2015a) was deemed impracticable in the current system without modification. With future proposed changes towards a secure schools model (Taylor, 2016) in the youth estate this 'new' service model could then be implemented successfully.

An implication for a largely part-time workforce in a constantly changing environment was the ability to keep track of all of the changes; "they didn't use to do it, and it's only just in the last couple of months that they've started to do it, and because I'm part time I hadn't found out till last week that they actually were doing it at all" S2*. All clinicians used the word 'evolve' in the course of their interview. The ability to evolve was identified as key in responding to the constant changes.

11.3.6.Summary of Interview Data

SLT was seen as a beneficial addition to the services offered to young people in English YOIs. However a number of barriers were identified. SLT is a new addition to service provision in this setting and as such limited evidence exists and understanding of the role is not widespread. With limited service provision available universal services were identified as valuable. Staff training is a key tool in developing universally accessible services but there are difficulties with providing training to a staff group who are understaffed and have a myriad of other statutory duties to complete. Supporting individuals with previously unrecognised SLCN in a timely manner was seen as a key element of successful service delivery. Evidence for appropriate service models and intervention methods for this client group are required.

11.4. Section 3: Audit data

Audit data was collected from Service 2* and 3 across six months between August 2017 and January 2018. As previously stated Service 2* covers a split site, the data presented here includes provision to both under and over 18's. It was not possible to collect data from Service 1 as planned, as the post was vacant during this period.

Service 2* had 1.2 WTE SLT provision for the 500 individuals within the establishment.

Service 3 had 0.5 WTE SLT provision for the 200+ individuals within the establishment.

11.4.1.Contacts

Tables 54 and 55 show how many contacts were offered in each service, each month and how many of these contacts actually took place. Over the period of the audit Service 2* offered on

average 48 contacts per month equating to 2 contacts per day[17]. Service 3 offered on average 13 contacts per month which equates to 1.3 contacts per day. The level of service provision differs between the two sites; Service 2* has 1.2 WTE staff whilst Service 3 has only 0.5 WTE staff. In order to look at the difference in contact per hour of service provision the weekly working hours (37.5) were multiplied by the weeks of the year and divided by months, this gave an average working month of 162.5 hours for 1 WTE. Using this calculation, Service 2* has on average 195 hours of service provision per month available whilst Service 3 has 81.25 hours of service provision. Table 53 shows Service 3 provided an actual contact once every two and a half days (one every 20 hours) whilst Service 2* provided one and half actual contacts every day. This would equate to one WTE offering five contacts and providing two contacts per week in Service 3, and offering nine contacts and providing seven in Service 2*.

Table 53 - Contacts per day (for 1 WTE)

	Planned per day	Actual per day
Service 2*	1.75	1.5
Service 3	1.3	0.4

There was a significant difference between the percentage of contacts actually taking place in both services; in Service 2* three quarters of planned contacts took place (see Table 54) whilst less than a third of planned contacts actually took place in Service 3 (see Table 55).

Table 54 - Service 2* Monthly Averages

	Planned	Actual	Cancelled	Percentage took place
August	42	28	14	67%
September	41	37	4	90%
October	53	39	14	74%
November	57	39	18	68%
December	48	33	15	69%
January	48	39	9	81%
AVERAGE	**48**	**36**	**12.33**	**75%**

Table 55 - Service 3 Monthly Averages

	Planned	Actual	Cancelled	Percentage took place
August	14	5	9	36%
September	22	8	14	36%
October	20	5	15	25%
November	13	4	9	31%
December	4	0	4	0%
January	4	3	1	75%
AVERAGE	**13**	**4**	**8.67**	**31%**

[17] When calculated based on 20 contact days (40 sessions) per month for 1 WTE

Table 56 shows the average length of a session was twice as long in Service 2* as compared to Service 3, with a mean of 32 minutes across both services. When looking at the percentage of time spent in direct contact with clients, 13.7% of time in Service 2* was spent in direct contact as compared to 2.2% of time in Service 3.

Table 56 - Contact time per month in minutes

	Service 2*	Av session	Service 3	Av session	Total
August	990	35	130	26	1120
September	1445	39	210	26	1655
October	1925	49	125	25	2050
November	1995	51	100	25	2095
December	1580	48	0	0	1580
January	1695	43	65	22	1760
AVERAGE	**1605**	**44**	**105**	**21**	**1710**

Note. Av = average.

11.4.2.Referrals

Each service operated an open referral system accepting referrals from staff and service users. Over the six month audit period, Service 2* received 44 referrals, whilst Service 3 received 29. Table 57 shows the highest number of referrals in any one month was 10, whilst the lowest was zero. The monthly mean across both sites was six.

Table 57 - Referrals

	Service 2*	Service 3
August	5	9
September	7	5
October	9	7
November	5	4
December	8	0
January	10	4
Mean per month	**7**	**5**

Table 58 demonstrates both services received the highest number of referrals from mental health services. Service 3 had referrals from fewer sources; they did not receive any self-referrals, or any referrals from the drug and substance misuse team, physical healthcare, psychology or youth offending teams during the audit. The 'other' category included referrals from the reception meeting (n = 1), missing data (n = 2) and a referral from the ASSET speech, language and communication screen (n = 1).

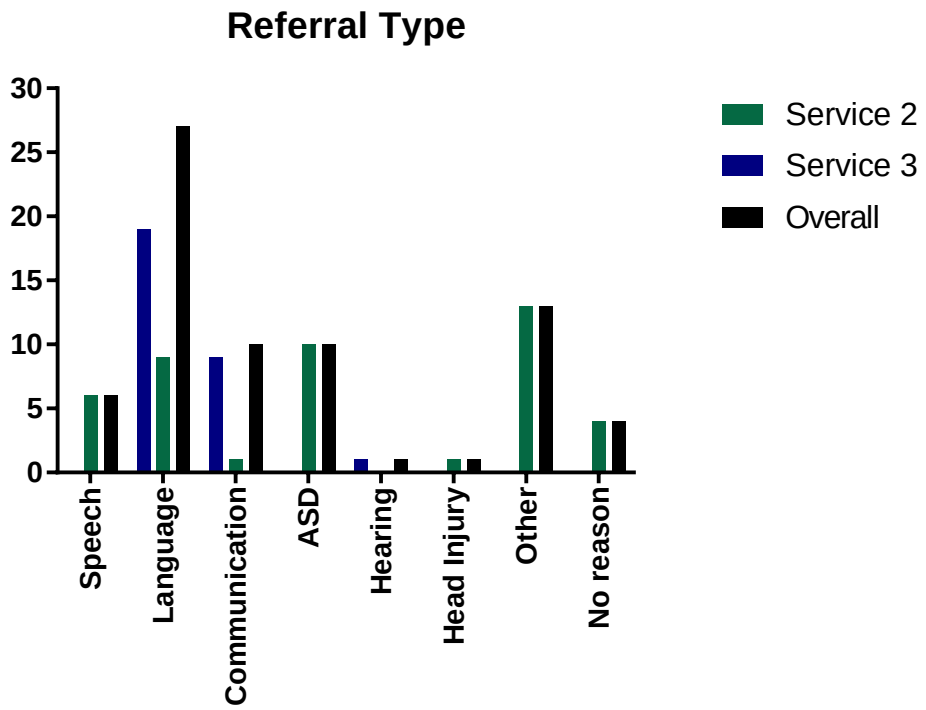
Table 58 - Referral source by service

Referral Source	Service 2*	Service 3	**TOTAL**
CAMHS/CMHT	12	16	**28**
Casework	5	1	**6**
CHAT	4	7	**11**
Drug and substance misuse team	2	0	**2**
Education	5	2	**7**
Other	4	0	**4**
Physical healthcare	2	0	**2**
Psychology	1	0	**1**
Self-referral	3	0	**3**
SLT	1	2	**3**
YOI/Prison Service	3	1	**4**
YOT	2	0	**2**
TOTAL	**44**	**29**	**73**

Note. CAMHS = Child and adolescent mental health service, CMHT = Community mental health team, CHAT = Comprehensive health assessment tool, SLT = Speech and language therapy, YOI = Youth offending institution, YOT = Youth offending team.

Figure 32 shows the most common reason given for referral to SLT was for language difficulties (37.9%). However, in Service 2* the most common referral reason was in the other category. For two of these referrals no reason was given for referral. Four referrals in this category stated they had scored highly on a screening tool for SLCN but gave no further details. One referral was a specific request for an SLT assessment to contribute to an Education and Health Care Plan (EHCP) application, and another simply requested support for the individual. Two referrals broadly stated the individual was being referred for SLCN. Others were more specific; learning disability, processing and memory, mental health or head injury. There was no evidence any of these referrals were declined, although in some cases further information was requested.

Figure 32 - Reason for referral to SLT



Note. ASD = Autism Spectrum Disorder.

11.4.3.Session Type

The majority of sessions in both Service 2* and 3 were individual. In Service 3 these individual sessions were delivered by both SLTs and Learning support assistants (LSA). In Service 2* on average 85% of sessions each month were individual sessions (range 69-90%), whilst all sessions were individual in Service 3. In addition to individual sessions in Service 2*, sessions were also provided 2:1 (5%) and in groups (5%), Mental Health training (1%) was provided to clients and professionals meetings (4%) attended. There were 15 group contacts over the audit period which comprised of; 6 group therapy sessions (n=11) and 1 training session (n=4). Table 59 shows group sessions were better attended than individual sessions. All 2:1 sessions were employed for autism assessment sessions and were either run by two SLTs, or an SLT with a psychiatrist. All meetings, groups and training sessions had 100% attendance rates.

Table 59 - Percentage of sessions attended by type

Month	Individual	% attended	Other		% attended
August	38	68.42	2:1	4	50
			TOTAL	4	50
September	32	87.5	Meeting	6	100
			2:1	3	100
			TOTAL	9	100
October	47	70.21	Meeting	1	100
			2:1	5	100
			TOTAL	6	100
November	56	69.09	Meeting	1	100
			2:1	1	0
			TOTAL	2	50
December	40	62.5	Meeting	1	100
			Group	7 (3)	100
			TOTAL	8	100
January	33	72.73	Meeting	2	100
			2:1	1	100
			Group	8 (3)	100
			Training	4 (1)	100
			TOTAL	15	100

Sessions were either recorded as planned or unplanned. Within Service 2*, 85% of sessions were recorded as planned, whilst all sessions at Service 3 were recorded as unplanned. Table 60 shows there was no difference in attendance rates, whether sessions were planned or unplanned.

Table 60 - Attendance rates by un/planned sessions

Month	Planned	% attended	Unplanned	% attended	TOTAL	% attended
August	35	71.43	7	57.14	42	67
September	31	90.32	10	90	41	90
October	44	81.82	9	66.67	53	74
November	51	72.55	6	66.67	57	68
December	43	65.11	5	100	48	69
January	42	90.48	6	83.33	48	81
TOTAL	**246**	**78.62**	**43**	**77.3**	**289**	**74.83**

Type of intervention session

A range of different session types were offered in Service 2* and 3, the most common of these being intervention sessions (*n* = 140), followed by SLT assessment sessions (*n* = 115). More details about the types of intervention sessions are given in Table 61.

Table 61 - Session type offered

	Aug	Sept	Oct	Nov	Dec	Jan	TOTAL
SLT Assessment	20	24	24	25	13	9	115
ASD Assessment	4	3	9	3	3	5	27
Intervention	15	24	28	34	22	17	140
Consultation	10	6	7	2	10	1	36
Professionals Meeting	2	1	0	1	2	6	12
Psycho-Education	3	3	2	2	0	7	17
Training	1	0	1	0	0	5	7
Other	1	2	2	3	1	2	11
TOTAL	**56**	**63**	**73**	**70**	**51**	**52**	**365**

Note. SLT = Speech and language therapy; ASD = Autism spectrum disorder.

It is notable less SLT assessment sessions took place (43%) when compared to other session types, as shown in Table 62. Whereas less than half of the SLT assessment sessions planned took place all of the professionals meetings, training and other sessions took place. The 'Other' sessions category included attending ACCT reviews and GOOD meetings, meeting with clients to develop training packages and supporting colleagues in 2:1 sessions.

Table 62 - Planned v actual sessions by type

Session type	Planned	Actual	% Took place
SLT Assessment	115	50	43.48
ASD Assessment	27	18	66.67
Intervention	140	101	72.14
Consultation	36	28	77.78
Professionals Meeting	12	12	100
Psycho-Education	17	13	76.47
Training	7	7	100
Other	11	11	100
TOTAL	**365**	**240**	**79.57**

Note. SLT = Speech and language therapy; ASD = Autism spectrum disorder.

Table 63 shows there were also differences between the types of sessions offered in Service 2* and Service 3. Service 3 only offered SLT assessment and intervention sessions with the vast majority (90%) of planned sessions being assessment sessions, whilst Service 2* offered a broader range of services with the predominant (46%) type of session being intervention sessions.

Table 63 - Sessions by type in each service

	Service 2*		Service 3	
	Planned	Actual	Planned	Actual
SLT Assessment	46	29	69	21
ASD Assessment	27	18	0	0
Intervention	132	97	8	4
Consultation	36	28	0	0
Professionals Meeting	12	12	0	0
Psycho-Education	17	13	0	0
Training	7	7	0	0
Other	11	11	0	0
TOTAL	**288**	**215**	**77**	**25**

Note. SLT = Speech and Language Therapy; ASD = Autism Spectrum Disorder.

There were a variety of reasons for non-attendance including the client declining, the client being unavailable and the establishment being unable to facilitate the session. The most common reasons for cancellations were the client was unavailable due to an internal visit or the unit was unable to facilitate the session. The category 'Other' included the client having been released prior to the session, having been involved in a fight and officers not waiting for the client to get ready for the session. More details about reasons for cancellations can be found in Table 64.

Table 64 - Reasons for cancellations by month

	Aug	Sept	Oct	Nov	Dec	Jan	**AVERAGE**
Declined - does not want to engage	3	1	6	2	1	6	**3.17**
Declined - unwell	1	0	0	3	2	0	**1**
Unavailable - external activity	4	1	0	1	0	1	**1.17**
Unavailable - internal activity	9	8	3	7	2	2	**5.17**
Education unable to facilitate	0	0	7	6	1	0	**2.33**
Unit able to facilitate	5	6	12	7	11	0	**6.83**
Specialist unit unable to facilitate	0	1	0	0	1	0	**0.33**
Other	1	1	1	2	0	1	**1**
TOTAL	**23**	**18**	**29**	**28**	**18**	**10**	**2.63**

Again, the reasons for cancellations between the services appeared to differ. The main reason for cancellations in both services was the unit was unable to facilitate the session however there were more refusals from clients in Service 2* and more issues with Education being able to facilitate sessions in Service 3. Table 65 provides a full breakdown of reasons for cancellation by service.

Table 65 - Reasons for cancellation by service

	Service 2*	Service 3
Declined - does not want to engage	18	1
Declined - unwell	6	0
Unavailable - external activity	6	1
Unavailable - internal activity	17	14
Education unable to facilitate	1	13
Unit able to facilitate	22	19
Specialist unit unable to facilitate	0	2
Other	4	2
TOTAL	**74**	**52**

By clinician

There were eight clinicians working across the two sites during the audit. Each clinician is referred to by an abbreviation which includes the number of their service followed by a letter (e.g. S2A = Service 2 Therapist A). Five of these clinicians were qualified SLTs, directly employed by the healthcare provider. In addition, Service 2* had support from a highly experienced SLT (S2B) who volunteered one session a week and Service 3 had access to support from two LSAs (S3C, S3D) employed by Education. In Service 3 the Band 7 service lead did not have any client contact. A breakdown of the planned and actual contacts by clinician is shown in Table 66.

Table 66 - Sessions by clinician

	Aug		Sept		Oct		Nov		Dec		Jan		TOTAL		**% A**
	P	A	P	A	P	A	P	A	P	A	P	A	P	A	
S2A (1.0)	25	16	20	19	43	30	46	32	38	24	36	29	208	150	**72.11**
S2B (0.1)	10	7	12	9	1	1	6	3	7	6	3	3	39	29	**74.36**
S2C* (0.2)	7	5	9	9	9	8	5	4	2	2	9	7	41	35	**85.37**
S3A (0.2)	10	2	8	2	11	3	6	1	0	0	3	3	38	11	**28.95**
S3B (0.2)	4	3	8	3	8	1	7	3	4	0	1	0	32	10	**31.25**
S3C	0	0	3	0	0	0	0	0	0	0	0	0	3	0	**0**
S3D	0	0	3	3	1	1	0	0	0	0	0	0	4	4	**100**

Note. Aug = August, Sept = September, Oct = October, Nov = November, Dec = December, Jan = January, % A = Percentage of sessions that took place, P = Planned, A = Actual.

Clinicians S2C*, S3A and S3B were all employed 0.2 WTE and planned an equivalent number of sessions across the audit period, however markedly more of S2C*'s sessions actually took place, as shown in Table 67.

Table 67 - Cancellations by 0.2 clinician

Clinician	Planned	Actual	Cancellations
S2C* (0.2)	41	35	6
S3A (0.2)	38	11	27
S3B (0.2)	32	10	22

11.5. Section 4: Case Studies

The following six case studies aim to provide more detail about how SLT is delivered in custodial youth justice settings in England and what types of approaches are used. Case studies 1-4 are from Service 2* and case studies 5 and 6 are from Service 3. Four case studies show a complete episode of care, while Case Study 4 has only one group session documented and Case Study 5 has incomplete information about the provision of therapy delivered by the LSA. Case studies cover a range of different SLCN and include assessment and intervention programmes, Table 68 gives further details.

Table 68 - Case Study overview

	Ref Source	Type of SLCN	Intervention	Mode	No of sessions	Total time (mins)
1	CHAT	Stammer	Ax + Therapy	Individual	2 + 7	510
2		Speech	Therapy	Individual	13	430
3	Primary Care	ASD	Ax	Individual	6	195
4	NA	Social Communication	Therapy	Group	1	60
5	CAMHS	Language	Ax	Individual	1	25
6	CAMHS	Language	Ax + Therapy	Individual	1 + 4	155

Note. Ref source = referral source; SLCN = speech, language and communication needs; CHAT = Comprehensive health assessment tool; Ax = assessment; ASD = Autism spectrum disorder; NA = not applicable; CAMHS = Child and adolescent mental health services.

In Phase 1 demographic details were collected about referrals to the service. In that cohort there were a high proportion of individuals who had SEN (46.7%), had been excluded from school (80+%), had had contact with mental health services (51.1%), had been LAC (42.2%) and came from a Black, Asian and minority ethnic (BAME) background (71.1%). Previous research (Snow & Powell, 2011) indicated an increased level of SLCN amongst individuals who had committed violent offences. Therefore this data was requested as part of the case studies, this data is summarised in Table 69.

Table 69 - Demographic Data

	SEN	Exclusion	MH	LAC	BAME	Violent
1	Yes	Yes	Yes	NR	Yes	Yes
2	NR	NR	NR	NR	Yes	NR
3	Yes	Yes	Yes	No	No	Yes
4	NR	NR	Yes	NR	Yes	Yes
5	No	NR	No	NR	Yes	No
6	NR	Yes	Yes	Yes	NR	Yes
TOTAL	**33%**	**50%**	**67%**	**17%**	**67%**	**67%**

Note. SEN = Special education needs; MH = Mental health; LAC = Looked after child; BAME = Black, Asian and minority ethnic groups; NR = Not recorded.

The individuals involved in the case study series also appear to have a higher incidence of these attributes than the general public, but the proportion of young people identified as LAC is lower than in Phase 1. Background data for the case studies was collected by the respective clinicians from the health care records and from the client.

11.5.1.Case Study 1

Case study 1 was presented by S2A, the full-time clinician at Service 2.

Overview

Client: Freddie

Age: 18 years and 6 months

Education: Achieved no GCSE's: reported he did 'bad' at school. Reported he left school around the age of nine – appears to have engaged in education intermittently since then. Reported he had a statement of Special Educational Needs and had a teaching assistant in secondary school. Excluded from college for 'slapping a teacher who was chatting shit'

Mental Health: Impression of consultant psychiatrist: 'although the possibility of a low normal intelligence, or even a borderline one, cannot be ruled out, he did not present as significantly impaired by a low intelligence. He demonstrated good use of language and understanding. There was no evidence of psychosis or affective disorder. Likely to have developed antisocial personality traits.'

Family & Society: Young black male with a long history of criminal offences. Mother died at a young age. He lived with various family members intermittently. He was living at a hostel for ex-offenders before coming into custody again.

Offending: Index offence – possession of two knives. He explained he was carrying them for protection as he had been shot before and felt under threat. Long history of criminality,

including serving a previous prison sentence. Current sentence - in custody for three months before being transferred to an Immigration Removal Centre.

Physical Health: n/a

Referral

Referral source: Comprehensive Healthcare Assessment Tool completed by an Assistant Psychologist

Reason for referral: stammering

Assessment

Assessment tools: Perceptions of Stuttering Inventory and Wright and Ayre Stuttering Self-Rating Profile (WASSP)

Assessment summary:

Perceptions of Stuttering Inventory: This self-rated questionnaire asks a patient if they demonstrate certain behaviours associated with stammering. These behaviours are placed in the categories of 'Avoidance', 'Expectancy' and 'Struggle'. There are 60 questions; 20 for each category.

Freddie indicated he displays behaviours in all 3 categories. He scored highest on 'Struggle' (17/20) suggesting much of his difficulty is saying words fluently. He scored 8/20 for 'Avoidance' and 12/20 for Expectancy.

Below are some of the behaviours Freddie indicated he does:

Avoidance: avoiding talking to friends or staff, asking questions, speaking in front of people and using gesture e.g. nodding to avoid talking.

Expectancy: start talking by laughing or coughing first, always thinking 'I'm going to stammer', practising words before saying them, over thinking what he wants to say for fear of stammering.

Struggle: repeating the first sound, the word getting stuck in his stomach and throat, using starters and fillers like 'you know' or 'urrs and uumms', avoiding eye contact and twitching.

WASSP: Freddie rated his stuttering behaviours as well as his thoughts and feelings about stammering. Freddie indicated feelings of; embarrassment, anger, helplessness and frustration

are 'very severe'. He also indicated he has fairly strong negative thoughts before and after he stammers.

Time taken for assessment: (no of sessions and minutes): 1 hour and 30 minutes across 2 sessions.

Therapy

Treatment aims: Improve confidence when communicating with others, become more fluent

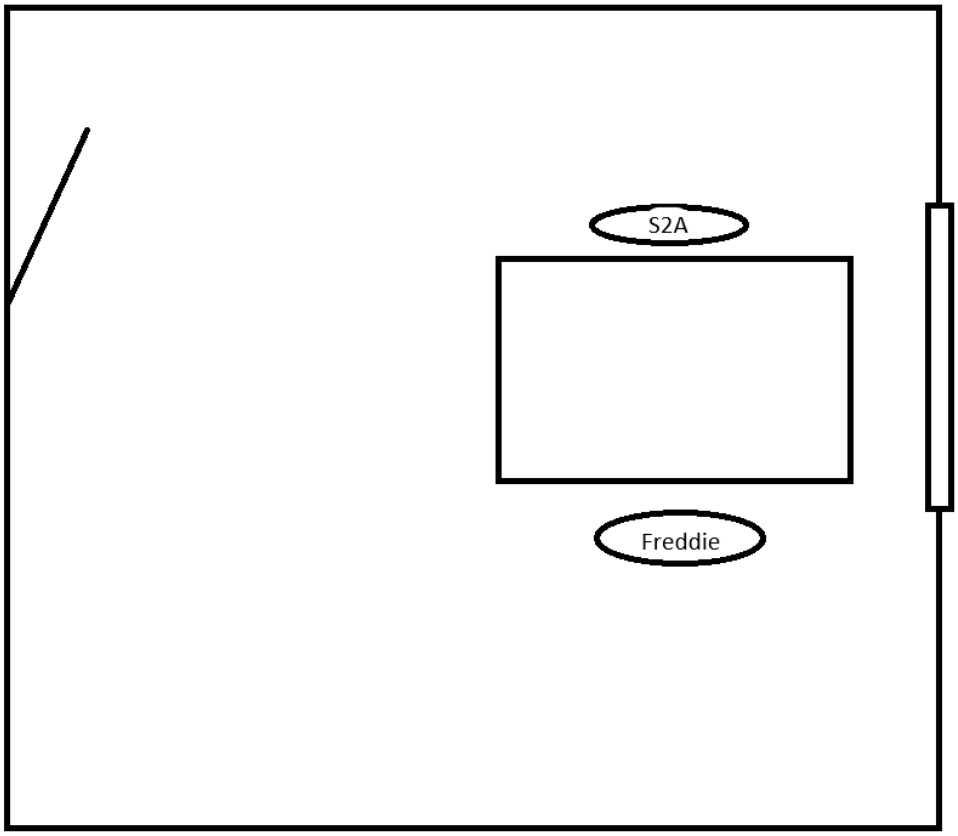
Sessions: (no of sessions and minutes): 10 sessions of approx. 60minutes

Sessions cancelled: (and reason): 3 sessions cancelled because unit were unable to facilitate this

Weeks in therapy: 8 weeks

Therapy provider: 1:1 in clinic, for room set up see Figure 33

Figure 33 - Clinic Room Layout, Case Study 1



Session 1

Aim - To explore difficulties with communication

Engagement - Freddie presents with a stammer and is eager to seek support for this. Freddie reports he has previously worked with a SLT. However, Freddie could not recall any strategies taught or the much of the work he completed. He recalled he was encouraged to slow down his rate of speech as well as practise relaxation techniques. Freddie completed 'Perceptions of Stuttering Inventory'. This self-rated questionnaire asks a patient if they demonstrate certain behaviours associated with stammering. These behaviours are placed in the categories of 'Avoidance', 'Expectancy' and 'Struggle'. There are 60 questions; 20 for each category. Freddie indicated he displays behaviours in all three categories. He scored highest on 'Struggle' (17/20) suggesting much of his difficulty is saying words fluently.

Below are some of the behaviours Freddie indicated he does:

Avoidance: avoiding talking to friends or staff, asking questions, speaking in front of people and using gesture e.g. nodding to avoid talking.

Expectancy: start talking by laughing or coughing first, always thinking 'I'm going to stammer', practising words before saying them, over thinking what he wants to say for fear of stammering.

Struggle: repeating the first sound, the word getting stuck in his stomach and throat, using starters and fillers like 'you know' or 'urrs and uumms', avoiding eye contact and twitching.

We also practised diaphragmatic breathing today and Freddie was encouraged to practise this until our next session. I noted Freddie required the questions to be simplified before answering. Freddie also benefitted from SLT checking his understanding. He appears to have language difficulties. However, his primary concern is his stammering.

Plan: We agreed to continue input on stammering.

Session 2

Aim - To continue therapy for stammering

Engagement - For a pre-measure, Freddie completed a WASSP Rating sheet today. Freddie rated his stuttering behaviours as well as his thoughts and feelings about stammering. Freddie indicated feelings of; embarrassment, anger, helplessness and frustration are 'very severe'. He also indicated he has fairly strong negative thoughts about his stammer, before and after he stammers. Today we explored facts about stammering, explored how speech sounds are made, continued to practise diaphragmatic breathing and also practised stammering voluntarily (sound/word repetition, prolongation and blocking). Freddie engaged well in the session and we agreed to continue therapeutic input. His homework is to continue to practise diaphragmatic breathing.

Plan: Continue therapeutic input.

Session 3

Aim - To continue therapy for stammering

Engagement - Freddie was given a 'Stammering Workbook' today. We completed an ice-berg. For this I encouraged Freddie to reflect and write the stammering behaviours people can see on the tip on the iceberg and other feelings and behaviours people can't see beneath the tip of the iceberg. We also continued to practise diaphragmatic breathing and stammering

voluntarily. I introduced the 'easy onset' technique today. Freddie reported he stammers on his name which he finds very frustrating. We therefore practised the easy onset technique with the sound at the beginning of his first name. Freddie made a good effort at this. Freddie was encouraged to practise this as homework. To build awareness of what Freddie does when he stammers, I encouraged him to stop when he thinks he has stammered and then we explored what the features of the stammer were including where the tension was, what the voice was doing, what happened to the sound and what the articulators were doing. Freddie worked really hard today and was praised for his efforts.

Plan: Continue therapeutic input.

Session 4

Aim - Today's session focussed on desensitisation and practising the easy onset technique introduced in the last session.

Presentation - Freddie appeared in good spirits. He remained appropriate in demeanour throughout the session.

Engagement - Freddie appeared motivated to engage. Freddie brought along his workbook and had completed his homework. Of note, Freddie indicated his current thoughts on stammering are 'it is bad'. We spoke about this and I shared that I hoped to help him reconsider this view at the end of therapy. Today we watched a video showing children and young people who stammer. I supported Freddie to recognise some of the stammering behaviours being shown. Freddie was able to recognise when some young people were blocking, using body movements and repeating sounds and syllables. We revisited Freddie's iceberg. Freddie added to his iceberg that he sometimes repeats syllables. I encouraged Freddie to present his iceberg to me using I statements. e.g. 'I block', 'I feel embarrassed'. Freddie was able to do this appropriately. We finished the session by practising the easy onset technique using the 'p' sound. Freddie was encouraged to produce the 'p' sound forcefully to start off with. Freddie was able to notice the tension was created between his lips. He was then supported to use the easy onset technique to reduce the tension. Freddie made a good attempt at this. Freddie was encouraged to practise this.

Plan: Continue therapy sessions next week.

Session 5

Aims

- To continue work around desensitisation

- To introduce soft contact technique

Presentation - Freddie appeared in good spirits throughout the session.

Engagement - Freddie engaged well in the session. Freddie could independently label and demonstrate different forms of stammering e.g. blocking, repetition of sounds, repetition of syllables. Freddie shared from the video he was shown last week, he could appreciate people stammer in different ways. When asked, Freddie was able to tell me some of his stammering behaviours. We continued the session by exploring different speech sounds. We considered what speech articulators are used in producing them and where any tension and/or friction may lie. I then introduced the 'soft contact' technique. i.e. I encouraged Freddie to touch the articulators lightly and softly when producing sounds such as 'plosives' (/k/, /d/, /t/, etc.) and labials (/p/, /m/ etc.) After this, we practised producing these sounds with tension and releasing this tension on queue. Freddie worked well on this and with prompting and modelling was successful at doing this. We also put Freddie's rate of speech on a scale zero - seven. We practised speech at zero (very slow connected speech which sounds unnatural) through to seven (very fast paced speech). Freddie recognised when he decreased his pace of speech to a four or three he was more fluent. Freddie was praised for his attendance and participation today. We discussed inviting Freddie's friend into the next session as part of desensitisation. Freddie will be encouraged to talk about what he does when he stammers, demonstrate voluntary stammering and demonstrate some of the techniques covered so far.

Plan: Continue therapeutic intervention.

Session 6

Aim - To continue work on desensitisation

Engagement - Freddie attended the session with his peer today. Freddie was encouraged to share his 'iceberg' with his friend using 'I statements' e.g. 'I block'. Freddie appeared somewhat shy but was able to describe his stammering behaviours. Freddie also spoke about the different strategies he is currently using. Freddie's friend was keen to find out more about stammering. He reported he thought it only happens when people are nervous or are in a rush to get their words out. I explained a person who stammers is likely to be stammer more if they

speak quickly or are anxious. I clarified however that is not the main cause for stammering. Freddie's friend shared he has a friend who stammers. He reported his friend had stammered in a music video and they left it in because they liked how it sounded. Freddie appeared to respond well to this. Freddie worked well in the session today.

Plan: Continue therapeutic intervention.

Session 7

Aim - To continue stammering intervention with Freddie.

Presentation - Freddie feeling stressed about issues with immigration. Freddie benefitted from some reassurance. I supported Freddie to formulate a plan about who to contact for support as well as questions he may want to ask. On the whole, Freddie engaged well in the session.

Engagement - Freddie was able to recall some of his stammering behaviours and demonstrate these voluntarily. We worked on using prolonged speech, soft contact and the easy onset technique today. We also worked on slowing down Freddie's pace of speech. Additionally, we used Cognitive Behavioural Therapy (CBT) principles to explain how unhelpful thoughts may perpetuate stammering whilst helpful thoughts may help with fluency. Throughout the session, Freddie was encouraged to tally up when he stammered and describe the stammering behaviour. This was to continue to increase Freddie's awareness of when he stammers. After this, Freddie was encouraged to say the stammered word / sentence again adopting any of the strategies being worked on. Freddie commented he found slowing his pace of speech makes him more fluent. We also chose one avoidance behaviour to address in sessions. This is for Freddie to continue to say what he wants to say even though he stammers. He previously reported sometimes he would stop talking. Freddie was praised for his attendance and participation today.

Plan: Continue therapeutic input

Freddie requested a break from therapy due to stress relating to immigration issues. Freddie was transferred to an Immigration Removal Centre two weeks after this. This meant therapy and post therapy measures were not able to be completed.

11.5.2.Case Study 2

Case study 2 was presented by S2B, a volunteer SLT at Service 2.

Overview

Client: Sam

Age: 21;05

Sam was first seen by S2B in March 2017, but had been seen by S2C for an articulation assessment and initial consultation in February 2017.

Diagnosis: Interdental S and Z

Presentation:

Sam was a softly spoken 19 year old Asian male; he had a calm demeanour, was polite and had good eye contact. He was well motivated to attend for regular speech, language and communication therapy sessions, and was very aware of his interdental S. People would frequently ask him to repeat what he said. He liked rapping and therefore wanted his speech to sound as clear as possible.

After a few weeks Sam complained about his poor memory, and admitted to having been a cannabis user. It was therefore agreed that memory assessment, exercises and strategies could be included in his speech, language and communication therapy sessions.

Further assessment showed a mild memory impairment, but one about which Sam was very aware, and was keen to address.

Assessment

1. Articulation – The articulation screening test confirmed the only speech sounds needing intervention were the S and Z sounds, in all phonetic contexts; both sounds were consistently interdental, with the tongue clearly visible.
2. Memory – The Clinical Evaluation of Language Fundamentals Working Memory sub-test was used in August 2017

   Standard score = 91

   Percentile Rank = 27

   Number Recall (forwards): below average

   Familiar sequences: average

Therapy

Treatment aims:

Production of S and Z in isolation

Production in syllables, both initially and finally

Production in all positions in short words

Production in phrases, sentences, and finally general conversation

Strategies to assist with limited auditory and visual memory.

Intervention approach:

A mirror was used in early sessions to enable accurate production of the target sounds. The visual feedback enabled Sam to become accustomed to the kinaesthetic feedback of new tongue placement.

Sam agreed to work on new sound production between our meetings and therefore worksheets and wordlists were provided, and sometimes created jointly.

Picture sequences and small objects were used for the memory work.

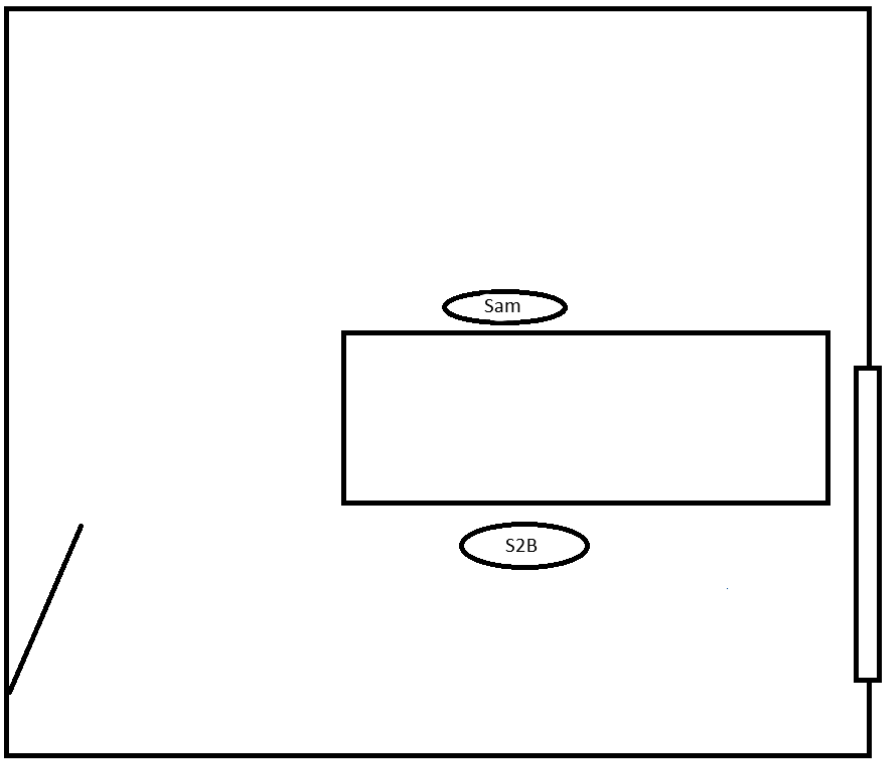
Sessions: (no of sessions and minutes): 13 sessions, totalling, 430 minutes

Sessions cancelled: (and reason): 3 sessions cancelled, 2 due to client's wishes, 1 due to 'keep apart' issues.

Weeks in therapy: Unknown

Therapy provider: 1:1 in clinic, for room set up see Figure 34

Figure 34- Clinic Room Layout, Case Study 2



Sessions

An overview of the sessions provided is given in Table 70 including; the length of each session, the goals for that session, whether these were achieved and general observations

Table 70 - Overview of therapy sessions

Session	Minutes	Goals	Achieved	Observations
1	40	Stimulate S in isolation	Yes	Sam to continue practising daily
2	35	S and Z production	Yes	Short word lists provided for continued practise. Rhyming words requested too.
3	40			DNA but message sent saying he would like to attend next week
4	40	S and Z in short phrases	Yes	Admits to not practising. Depressed. Moved to new wing. Word list given
5	35	S and Z in longer phrases	Yes	Articulation of small function words discussed (IS, WAS, AS, BECAUSE etc.)
6	45	S and Z in sentences. Strategy given - using fingers to help with Short Term Memory tasks	Yes for both	Memory assessment and therapy requested, discussed and agreed.
6 7	NA			DNA – but wishes to continue attending
8 9	45 40	Visual and auditory memory tasks 5 items S and Z in general conversation	Yes for both	
10	40	S and Z in rapid question/answer exercise Visual Memory 6 items; Auditory Memory 5 items; Tactile Memory 6 items	Yes	Small objects used for memory exercises (coin, clip, stone and small candle)
11	35	Revised S and Z in complex sentences	Yes	Memory tasks still at same level. Used cartoon to illustrate sequential visual memory
12	NA			Unable to attend – 'keep apart' issue
13	35	Revision of S and Z work and memory strategies. Discussion re: expressing himself clearly, especially at interview	Yes	Agreed to having a practise interview for final session before his, but failed to attend

Note. DNA = Do Not Attend; NA = Not Applicable.

Summary: Sam had completed a successful course of speech, language and communication therapy; he had developed good insight into his articulation and how to self-monitor and correct it. His family noticed increased clarity and he was generally more confident in expressing himself. Sam had also learnt a range of strategies to help with memory tasks. He was looking forward to getting advice about employment.

11.5.3.Case Study 3

Case study 3 was presented by S2C*, the lead clinician at Service 2.

Overview

Client: Brett

Age: 20;11

Education: Brett attended a mainstream school for his primary education. Age 11 he transferred to, what his Mum described as 'a special school', a Pupil Referral Unit (PRU). Miss B said Brett had received a statement but she was unsure what the primary reason for this was. Having spoken with the school they have no record of him having had a statement although he did receive additional support for his behavioural needs. Miss B states Brett received a diagnosis of Irlen syndrome whilst at the PRU.

Mental Health: Brett had a long history of contact with mental health services for a number of different issues including: depression, anxiety, hearing voices, substance misuse and Emotionally Unstable Personality Disorder.

Mum reports Brett was diagnosed with depression by the GP aged 14 and then at 16 was diagnosed with emotional detachment disorder whilst living in supported accommodation. Brett had moved to the supported accommodation following the deterioration of his relationship with his mother. Records from mental health services indicate he was also diagnosed with Emotionally Unstable Personality Disorder in 2016. Brett was prescribed anti-depressants in 2014 to manage his mood. Brett has reported hearing voices for several years and was taking Olanzapine to manage these.

Mum said she had thought Brett was possibly autistic ever since he was a toddler; she reported he was very attached to routines, struggled to understand multi part instructions and would line his toys up. He also would not speak to others, only speaking to his Mum. She took Brett to CAMHS when he was around 9 years of age and then again around 12 years due

to her concerns. She said they were unable to complete an assessment as he would not speak to the CAMHS team.

From the CAMHS records, in accordance with reports from Mum, they list concerns around behavioural issues and tantrums and there was also record of contact with SLT services due to delayed language development.

Family & Society: Brett lived with his mother until he was 16. Brett is an only child. He has not had any contact with his biological father and Ms B could not provide any information about this side of his family. Mum has a history of depression and anxiety. There is no known family history of autism.

Brett said he did not get on with his mother's former partner, but gets on well with his mother's new partner. Brett reports he is close to his mother but he felt she was not always there for him throughout his childhood, leading to him moving to supported accommodation aged 16.He has never been a looked after child. He is white British. He had similar peers in supported accommodation with whom he'd take illicit substances.

Offending: Robbery x 2. Previous convictions for common assault, vandalism

Index Offence Category: Robbery, 2 ½ years in custody, Violent

Physical Health: Irlen syndrome

Referral

Referral source: Primary Care

Reason for referral: Had started an autism assessment at previous prison

Assessment

Assessment tools: Autism Diagnostic Observation Scale (ADOS-2), developmental history and Adult Autism Quotient Questionnaire (AQ 50).

Assessment summary: An assessment was carried out by the MDT comprising of; Consultant Forensic Psychiatrist, SLT and Senior SLT. The assessment comprised of:

- Interviews with Brett
- A developmental history taken from Brett's Mum (Miss B)
- The Autism Diagnostic Observation Schedule (ADOS)

- The Adult Autism-Spectrum Quotient questionnaire (AQ 50)

- Review of available documentation

Brett willingly engaged in the assessment process.

Autism Diagnostic Observation Scale (ADOS-2)

Brett completed the ADOS over two assessment sessions; these sessions were led by S2C with S2A observing.

The ADOS has 4 modules, which module is administered is dependent on the level of the individual's spontaneous speech. Brett is a fluent speaker and was therefore assessed with a Module 4 ADOS. Whilst the ADOS is designed to pick up presentations of both Autism and broader autism spectrum conditions, it has a fairly high threshold thus more able individuals with Aspergers Syndrome do not always meet the cut-off on the algorithm. Brett did not meet the threshold for autism or autism spectrum conditions.

During the assessment Brett repeatedly spoke about his love of routines and how it upset him if his routine was broken. Brett also spoke about the difficulties he experienced talking to others, he said he found it hard to start conversations and he would interrupt a lot. Brett also discussed the fact he was not good with money and found it difficult to budget which had led to him losing his housing in the past.

Brett appeared very anxious about his performance and asked the week after the test whether he had got it 'right' even though we had explained there were no wrong or right answers.

Despite these difficulties Brett engaged fully in the assessment and engaged the second member of the assessment team in conversation during the 'break'. Brett volunteered personal information, above and beyond that required for the assessment, and seemed genuinely interested in the examiners views and experiences. Although Brett had said he found new people and new situations difficult, Brett was able to take part in conversation very easily.

ADOS Classification

The ADOS Module 4 algorithm addresses communication, impairments in reciprocal social interaction, imagination/creativity, and stereotyped behaviours/restricted interests. The algorithm is based on DSM-IV/ICD-10 criteria for autism. Autism is a possible diagnosis if the individual is at or above the cut-off on the communication and reciprocal social interaction

sections, and also shows presence of imagination impairments and/or stereotyped/repetitive behaviours. The ADOS algorithm also has the ability to indicate a diagnosis of broader autism spectrum conditions (ASC).

Table 71 - ADOS Scores

	Autism cut-off	ASC cut-off	Brett
Communication	**3**	**2**	**1**
Reciprocal social interaction	**6**	**4**	**3**
TOTAL	**10**	**7**	**4**
Imagination Creativity			0
Stereotyped behaviours and restricted interests			0

Note. ASC = Autism spectrum condition

On the ADOS, Brett does not meet the overall autism and autism spectrum conditions (ASC) cut-off scores.

The Adult Autism Spectrum Quotient (AQ 50)

The AQ was completed by Brett at his previous prison.

The AQ is a 50 item self-rating questionnaire developed to identify individuals with high functioning autism and Asperger Syndrome. The AQ has 10 questions each relating to five areas: social skills, attention switching, attention to detail, communication and imagination. The higher the score in each area the higher the level of difficulties the individual reports experiencing. A score over 32/50 is considered significant; 80% of individuals with ASC scored 32+ whereas only 2% of controls did.

Brett scored 37/50 on this assessment which is above the designated cut off for high functioning autism or Aspergers. Brett's scores were comparable to individuals with high functioning autism or Aspergers for social skills, attention switching and attention to detail. Brett's scores were above the average generally seen in individuals with high functioning autism or Aspergers for communication. Brett had scores in line with the general population for imagination.

As the assessment was not completed at Service 2 no further details about the assessment and how Brett engaged in this part of the assessment are available.

Table 72 - AQ 50 (Adult) Scores

	Score
Social Skills	7/10
Attention Switching	9/10
Attention to detail	8/10
Communication	**10/10**
Imagination	3/10
TOTAL	37/50

Note. AQ = Autism Quotient Questionnaire.

After completing the interviews, a review of records and the assessments we met as a team to discuss the results.

The results from the AQ assessments were indicative of autism. However, the results from the ADOS were not suggestive of a diagnosis of autism. During the assessment process Brett disclosed he had experienced adverse childhood experiences (ACES), it was felt his presentation was consistent with these experiences. Therefore a diagnosis of autism is not indicated.

Diagnosis: NA

Recommendations

- Support to manage anxiety
- Psychology to support Brett to develop a formulation so he can better understand his presentation
- SLT to support development of/ and confidence in social communication skills
- Support to discuss ACES when/if Brett feels ready to do so

Brett read the report and accepted it as an accurate representation of our meetings. Brett asked for the report to be shared with his mother and prison officers on his Unit. He did not feel he would like support at the current time regarding his social communication skills. He was willing to work with Psychology around a formulation but not to discuss previous ACES.

Primary areas of need: Social communication skills

Time taken for assessment: 6 sessions, totalling 260 minutes

4 x assessment with Brett = 195 mins

1 x developmental history with mother = 45 mins

1 x report feedback and checking content = 20 mins

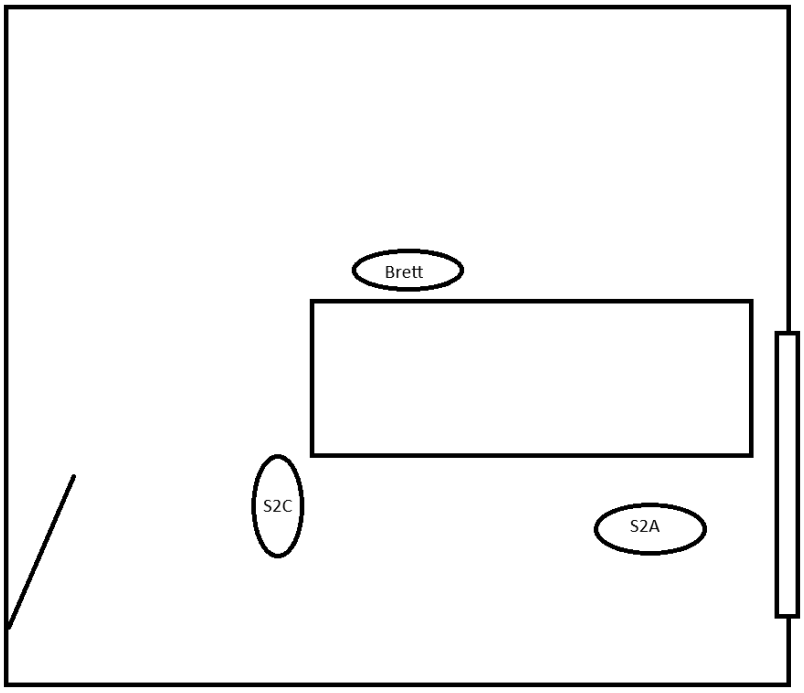
Session 1

Took place. 2:1 session. 45 mins

Where: Primary care, Clinic room 1

Room set up: See Figure 35

Figure 35 - Clinic Room 1 Layout, Case Study 3



Target: Complete ADOS. Partially achieved

Materials: ADOS Module 4 and accessories

General presentation: Initially anxious (expressed verbally and behaviour consistent with this), then relaxed and fully engaged in assessment.

Progress: ADOS partially completed prior to session being interrupted by external visitors.

Session 2

Took place. 2:1 session. 90 mins

Where: Primary care, Clinic room 1

Room set up: See Figure 35

Target: Complete ADOS. Achieved

Materials: ADOS Module 4 and accessories

General presentation: Relaxed, making jokes, eager to continue with assessment. Some anxiety noted in question asking.

Progress: ADOS completed and follow-up appointment arranged

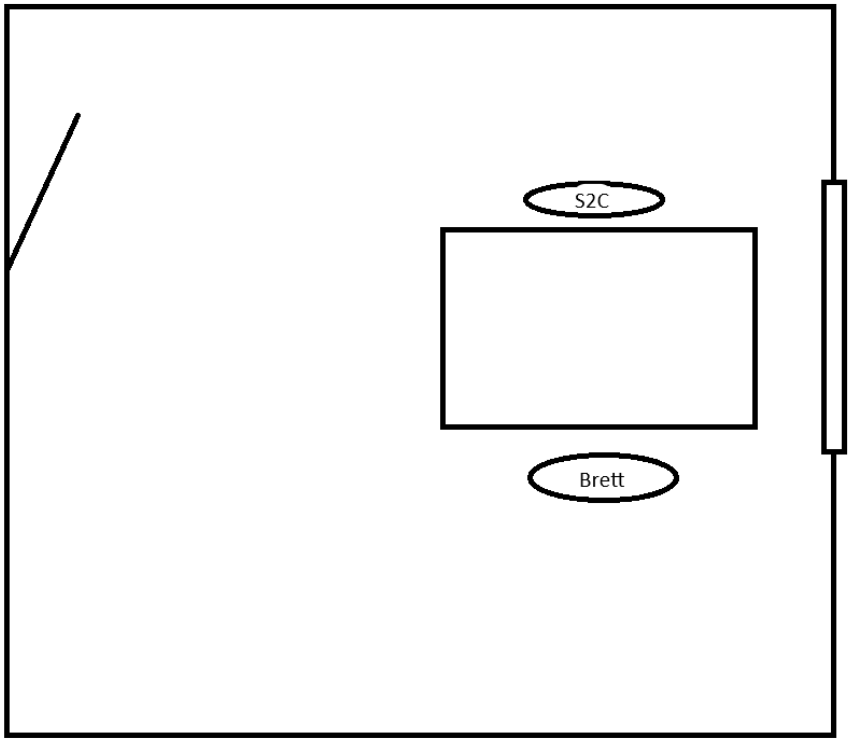
Session 3

Took place. 1:1 session. 30 mins

Where: Primary care, Clinic room 2

Room set up: see Figure 36

Figure 36 - Clinic Room 2 Layout, Case Study 3



Target: Gather developmental history. Achieved

Materials: Pen and paper

General presentation: Relaxed, eager to continue with assessment. Some anxiety noted in question asking.

Progress: Developmental history gathered

Session 4

Took place. 1:1 session. 30 mins

Where: Primary care, Clinic room 2

Room set up: See Figure 36

Target: Gather information about current functioning and Brett's opinion about potential autism diagnosis. Achieved

Materials: Pen and paper

General presentation: Relaxed, eager to continue with assessment. Some anxiety noted in question asking.

Progress: All information gathering required from Brett for assessment completed.

Session 5

Took place. Brett not present. 45 mins

Where: Phone call

Room set up: NA. Phone call between S2C and client's mother

Target: Gather developmental history. Achieved

Materials: Autism Quotient Questionnaire (Child), Pen and Paper

General presentation: NA

Progress: Developmental history and milestones gathered from family member

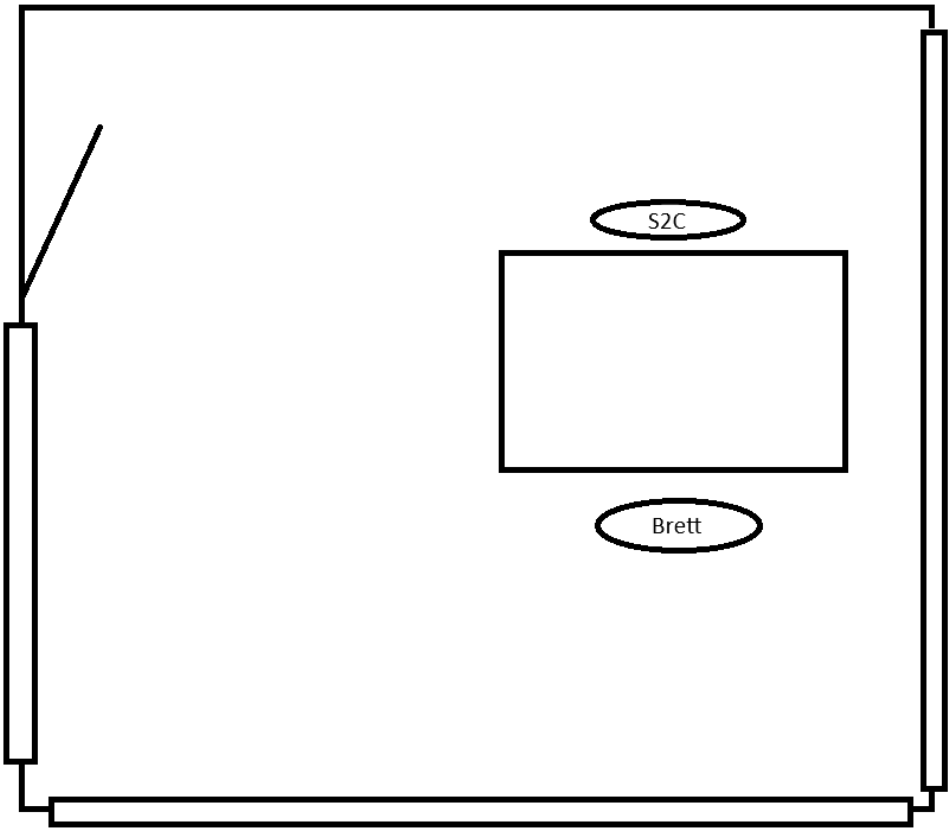
Session 6

Took place. 1:1 session. 20 mins

Where: Unit meeting room

Room set up: Shown in Figure 37

Figure 37 - Unit Meeting Room Layout, Case Study 3



Target: Feedback assessment report, check content and offer onward support. Achieved

Materials: Draft report

General presentation: Appeared rushed, stated he wanted to finish quickly to join off unit session.

Progress: Report content agreed as accurate, Brett accepted findings but declined ongoing support from SLT.

11.5.4.Case Study 4

Case study 4 was presented by SSLT, a student clinician on placement at Service 2.

Overview

Client: Salim

Age: 21 years

Education: Not known; Salim reported to have started school in the UK at age 14.

Mental Health: Salim is currently on the inpatient unit to be in a safe space; he has an open Assessment, Care in Custody and Teamwork (ACCT). An ACCT is opened when an individual is deemed to present an immediate risk to themselves. Salim has suffered from depression, Post-Traumatic Stress Disorder (PTSD) and suicidal thoughts since trauma in Afghanistan. He spent a year in a secure mental health facility in 2015. Currently seen as low risk, Salim has self-harmed to cope with flashbacks and anxiety, has been prescribed antipsychotic medication, and has had ongoing psychology sessions whilst serving his sentence.

Family & Society: Salim is an orphaned refugee from Afghanistan. His first language is Dari (similar to Farsi). His spoken English is reported to have improved greatly in the past year and is now at a functional level. Some family remains in Afghanistan. He witnessed close family members being killed in an explosion by the Taliban. Salim suffered a traumatic journey to the UK via a people smuggler. He has never had a visitor in prison.

Offending: First time offender.

Index Offence: Possession of an imitation firearm, with intent to cause violence.

Length of stay: 5 months.

Physical Health: No significant health information on file; generally fit and well.

Referral

Referral source: From liaison with community psychiatric nurses on unit.

Reason for referral: Member of social communication group provided to all patients on the unit.

Assessment

Assessment tools: Communication questionnaire; discussion around his goals regarding what he would like to achieve whilst in prison and when released.

Assessment summary: Speaks English as an additional language; suffers from PTSD and other mental health difficulties. He sometimes struggles to use effective body language and eye contact. Salim requires additional time and encouragement to contribute in group settings and to express his needs.

Primary areas of need: Salim has identified goals he wishes to achieve, these include working towards taking his driving theory test.

Therapy

Treatment aims: To encourage and support Salim in practising and developing good communication skills.

Intervention approach: Functional goals chosen by the client and approached by the SSLT in a holistic, solution-focused way.

Sessions cancelled: Arrived late to one group due to another appointment.

Weeks in therapy: Has attended most weekly groups, each lasting approximately one hour, for the last 3 months.

Therapy provider: SSLT supported by S2A; sometimes with a prison officer or mental health nurse sitting in.

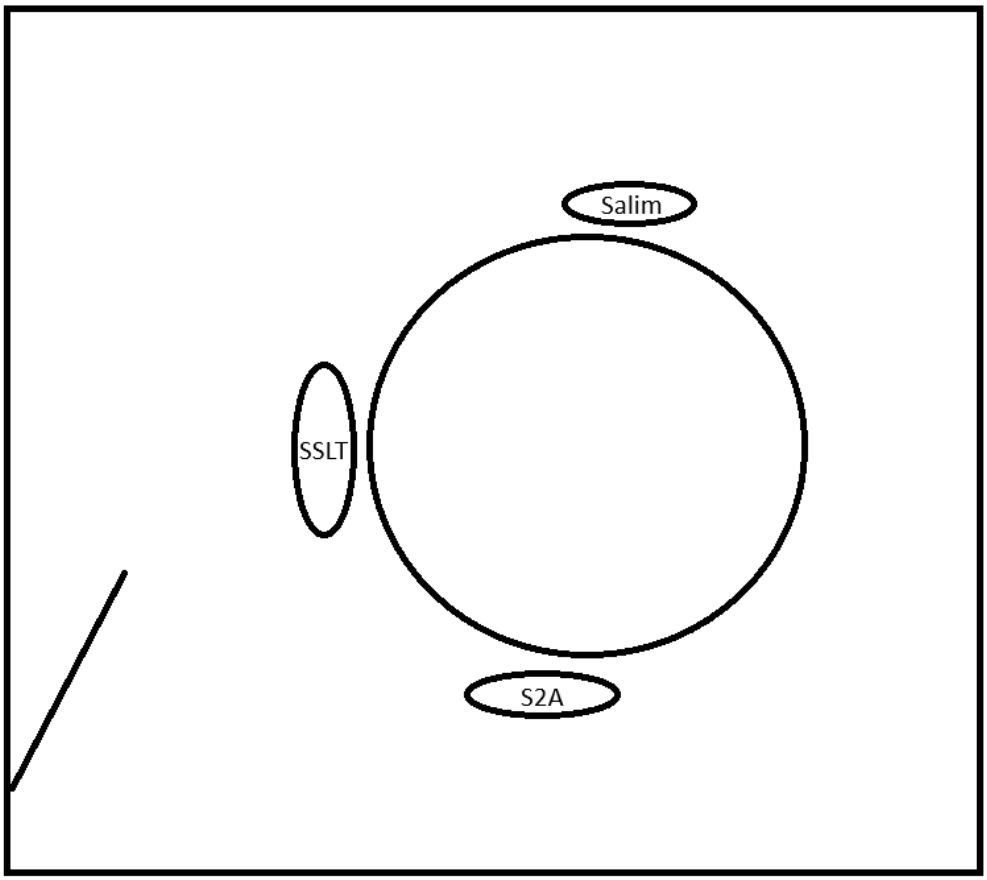
Session description

Where: Inpatient group room

Present: Student SLT, S2A and Salim. It was intended to be group but Salim was the only member present.

Room set up: See Figure 38

Figure 38 - Group Room Layout, Case Study 4



Target: To discuss necessary skills to pass driving theory test; to identify unfamiliar vocabulary within test questions and explore strategies of remembering them; to identify Salim's own skills in maintaining conversations and support him to express areas of need in communication.

Achieved: ✓

Materials: Practice theory test and resources, paper and pens, icebreaker game.

General presentation: Client's choice of session structure and flexibility within activities.

Progress: Very good engagement and motivation; made good progress within session and demonstrated good self-awareness. Salim reported to have not had many conversations this week, but was able to talk about interacting with peers. With support, he could identify his own skills in successful conversations, such as turn taking and staying on relevant topics.

Theory test quiz: Having requested to work on his driving theory test in previous sessions, Salim demonstrated good motivation and seemed happy to attempt some practice questions. He could select unfamiliar words and attempt to explain their meaning. Salim appeared to listen attentively to the student clinician's explanations, supported by gestures and contextual information, and explained vocabulary in his own words at the end of the session, suggesting a good understanding and retention of the terms. He kept the information sheets and quiz for his own revision.

11.5.5.Case Study 5

This case study was completed by S3A in Service 3.

Overview

Client: Xavier

Age: 17 years 10 months

Education: Xavier has no SEN statement or EHCP. He has led a transient lifestyle which has meant his education has been very fragmented since he was primary school age. He previously went to a primary school when he was living at a fixed address for a time when younger and more recently the last time he was in education was when he attended High school. This was up until he was 15 after which time he moved and has not returned to education. Xavier himself states his basic reading and writing is passable and he can write a letter even if some of the more difficult words might be misspelled. He is wanting to try gain qualifications however and recognises improving his basic skills might help in achieving this. It is to his credit that he has been attending and engaging with education whilst in Service 3 and has achieved his entry level 2 qualifications in Maths and English. In the longer term, Xavier states he wants to be in employment and has aspirations of running his own handyman type business.

Mental Health: No mental health concerns noted on CHAT. Reported he was using £40 per day cannabis prior to sentence, but no cannabis use for 28 days prior to coming in to custody.

Family & Society: Traveller background

Offending: Index Offence - Burglary with intent to steal x two, attempt burglary, robbery, theft from shop

Length of stay: Nine months

Physical Health: No physical health concerns noted on CHAT. Reported head injury three years ago (dazed and confused but no hospital). Reported previous involvement in boxing and bare knuckle fighting,

Referral

Referral source: CAMHS Occupational Therapist (OT) within the YOI

Reason for referral: OT concerned about his understanding

Assessment

Assessment tools: The Communication screening tool used at Service 3. The screen consists of understanding time, days, months and the sequencing of them. Verbal reasoning question, understanding word meanings and listening and remembering information

Assessment summary: Assessment took 25 minutes, with some wing distractions.

Primary areas of need: He requires 1:1 work to support him to tell the time using an analogue clock and support when processing information. Information should be repeated and supported in a visual format to give him the best chance of understanding. It should be checked he has understood what's been arranged, rather than assuming he has. He needs information to be broken down into chunks to help him process it. He also requires prompts to get and maintain his attention. He couldn't tell the time on an analogue watch and reports he can't tell the time unless it is on the hour or half past. He says a digital clock is easier for him.

Time taken for assessment: One session (25 minutes)

Therapy

Treatment aims: Develop listening and attention skills which affect his ability to understand and process verbal language.

Intervention approach: 1:1 support with education LSA (S3C/D).

Sessions: Unknown

Sessions cancelled: Unknown

Weeks in therapy: 14 weeks since he was handed over to the LSA. Unsure if he was seen weekly as limited contact with LSA, and other services also being offered.

Therapy provider: 1:1 with LSA, based within the prison education team.

11.5.6.Case Study 6

This case study was completed by S3B in Service 3.

Overview

Client: Trent

Age: 18;01

Education: Permanently excluded from school in Year 7. Left school with no qualifications. Currently on 1:1 education in the YOI due to disruptive behaviour. Does not have an EHCP

Mental Health: Trent reports previous ADHD diagnosis, medicated with Ritalin & Concerta. Currently on waiting list for ADHD assessment at YOI. No other mental health concerns noted. £40 daily drug use reported (skunk, cocaine and others).

Family & Society: History of involvement with Social Services. Trent was in semi-independent living prior to YOI. He currently has no contact with family. There is a history of being subjected to physical and sexual abuse.

Offending: Sexual offences

Length of sentence: 18 month DTO

Physical Health: Reported seizures

Referral

Referral source: CAMHS

Reason for referral: receptive language

Assessment

Assessment tools: Communication Skills Screen for Service 3 (see description in Case study 5).

Assessment summary: 1:1 assessment carried out by SLT on the wing in a recreation area.

Primary areas of need: Vocabulary, memory and understanding

Time taken for assessment: One session, 15 mins

Therapy

Treatment aims: To work on increasing his vocabulary and to help his memory/understanding skills

Intervention approach: Indirect, to be delivered by LSA (S3C/D)

Sessions: 4 (30-40 mins)

Sessions cancelled: Unknown

Weeks in therapy: Unknown

Therapy provider: Individual sessions to be offered by the LSA on the wing.

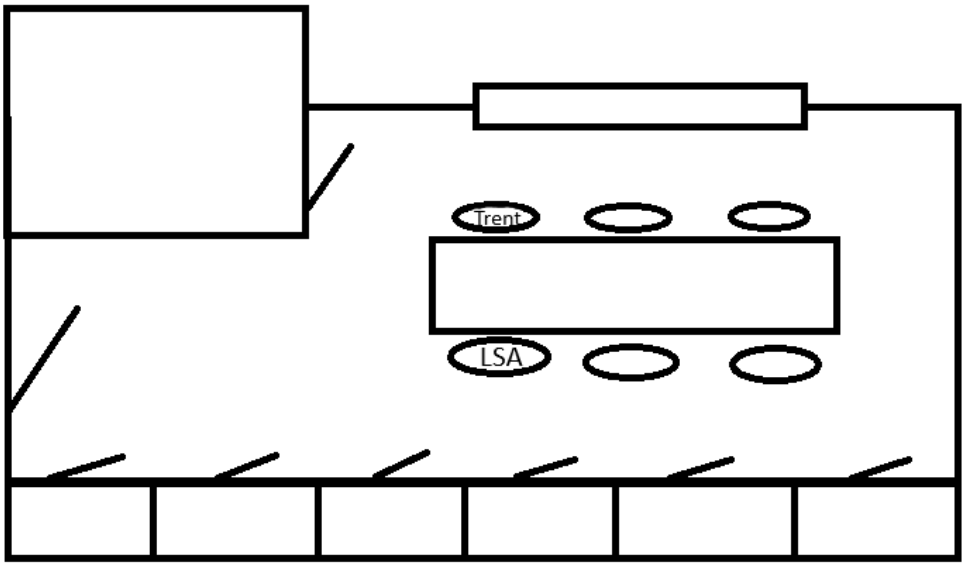
Session description

Where: Spur

Present: Trent and LSA

Room set up: See Figure 39

Figure 39 - Spur Layout, Case Study 6



Summary: The below is a summary of the intervention provided by LSA:

I did manage some sessions with Trent in September of last year when he was allocated Outreach education on the spur, but since he was reallocated to education and started to attend a new course he has refused to engage and therefore I have removed him from my caseload.

In all, we completed four sessions, each of which would have lasted 30 – 40 minutes, although it has to be said Trent was very reluctant to engage. I assessed him as having a reading age of 10 years 3 months, but he wouldn't complete the spelling assessment.

The sessions we did have all took place on the spur where we were seated at the dining tables. There was always an Officer present on the spur, but I never felt the need for the officer to be seated at the table with us.

We did complete a number of inferential comprehension tasks – at times Trent seemed to enjoy the challenge of answering questions based purely on the picture clues, but at other times he really struggled with concentration and motivation and would flit between a variety of tasks. He did show a preference for ascertaining information from pictures rather than from text.

11.5.7. Summary of case studies

The case studies demonstrate the range of work completed by SLTs in this setting. The case studies also serve to highlight the additional difficulties experienced by these individuals including ACES, educational failure and mental health difficulties. Clients were seen individually and in groups, for assessment and therapy and for a range of speech, language and communication difficulties. There is a significant range in the type and quantity of input between case studies. It is unclear from the information provided whether the quantity of input is based on service pressures, client's preference, clinical need or other factors. Therapists working in criminal justice settings have been referred to as specialist generalists. This appears a fitting title as they are required to work across a broad range of SLCN within a specialist field.

12. Investigating the provision of SLT services to young people in YOIs in England - Discussion

12.1. Introduction

This chapter discusses the findings from Phase 2 of the study, including methodological limitations and directions for further research. Firstly, this chapter investigates how the results address the research questions before focussing on specific issues encountered during the study. Methodological limitations of Phase 2 will be dealt with by looking at each element in turn; the survey, the interview, the audit and the case studies.

The principle objective of this phase was:

• To examine the purpose, structure and function of SLT services in English YOIs

The secondary research objectives were to answer the following questions:

1. What are the similarities and differences between SLT services in English YOIs?
2. Is there an evidence base underpinning the interventions offered in these SLT services?
3. Is there a role for community based service models in YOI SLT services?
4. Could the theoretical framework laid out by Snow, Sanger, Caire, Eadie and Dinslage (2015a) be applied in English YOIs?

Finally this chapter will conclude with recommendations on clinical implications and directions for future research.

12.2. Phase 2 Summary

Phase 2 investigated the provision of SLT services in the three established SLT services in YOIs in England. In order to gather information about the services provided data was gathered from; a survey, semi-structured interviews, service audit and single case studies. Data was collected from the three YOIs for the survey and semi-structured interviews. Due to a vacancy in one service it was only possible to gather service audit data and single case studies from two sites. This is the first study to systematically describe how these SLT services are structured and how services are delivered.

12.3. Examining the purpose, structure and function of speech and language therapy services in English YOIs

Whilst there were many differences in the structure and function of the SLT services all saw their purpose as to maximise the communication potential of the individual and to raise awareness of SLCN across the estate. All services provided assessment and direct therapy to individuals and offered training to the wider workforce. All services were inclusive and operated with no exclusion criteria. Additionally all services were based within the wider healthcare department, although there was some differences as to whether SLT services should be based within primary care or mental health. SLCN can have wide ranging impacts (Clegg et al., 2005) one of these is an impact on mental well-being (Beitchman et al., 2014). It is therefore not surprising there was discussion as to where SLT services were best placed. It could also be argued SLT services would be best placed within Education, especially if trying to implement an adapted RTI model (Snow et al., 2015a).

Regarding structure, all services had a Band 7 SLT leading the service; in Service 1 and 2 the Band 7 provided management support alongside a clinical caseload, in Service 3 the Band 7 did not have a clinical caseload within the YOI. However, the lead clinician had previously worked within the establishment and their current clinical caseload was within the criminal justice field. As previously stated, all services provided direct and indirect services with an emphasis on direct services as reported in the survey and interviews. The lead clinician in Service 1 felt given limited resources it would have been beneficial to concentrate on indirect work, raising the skills of the wider workforce, however there was pressure from the healthcare department to concentrate on direct input. Whilst all services prioritised direct input there were difficulties in providing this as demonstrated in the audit through the percentage of DNAs (0-57%).

12.4. What are the similarities and differences between SLT services in English YOIs ?

Before addressing this question is it is important to first address differences and similarities between the YOIs where these SLT services are being provided. Comparisons are provided across the key fields in Table 73, data is taken from the most recent reports from Her Majesty's Inspectorate of Prisons (HMIP) for the respective institutions(Her Majesty's Inspectorate of Prisons, 2017, 2018a, 2018b). There are similarities between the YOIs with regard to the percentage of individuals attending education, those sentenced to 3 months or below and the percentage of individuals who self-identify as having a disability. There are however marked differences in the size of the population the SLT service is serving and the percentage of

individuals identifying as being from BAME backgrounds (see Table 73). The data around BAME may be relevant as research has found individuals from these backgrounds have higher levels of SLCN (Bellair et al., 2014). So whilst Service 3 has the largest population, Services 1 and 2 have a greater proportion of BAME individuals so levels of need may be more similar than they initially appear.

Table 73 - Comparison of YOIs

	Population	BAME %	Unit Size	Attending Education %	Most common length of stay - sentenced	3 months or below % - sentenced	Disability %
Service 1	161	62	7-30	78	3-6 months	35	16
Service 2	140	71	14-36	76	6-12 months	39	15
Service 3	231	40	48-60	82	6-12 months	32	20

Note. BAME = Black, Asian and minority ethnic groups.

There were differences between each service in terms of; the number of SLTs, the amount of service provision per individual, how referrals were received, assessments tools used, and the method of intervention. The SLT services all had a similar amount of amount of service provision in terms of WTE (although Service 2 looks like it has a lot more provision, 1.2 WTE, it must be remembered this operates across a split site offering a service to both under and over 18's) but this was divided between significantly different sized populations (140-231). The service was delivered by one therapist in Service 1 but three therapists in Service 2 and 3. Whilst there are superficial similarities between Services 2 and 3 the workforce looks very different. Service 2 had a lead clinician offering direct input, a full-time Band 6 and additional support from a highly experienced volunteer. Service 3 had a lead clinician who did not offer direct input and two Band 6 therapists each providing one days input. Although no service had exclusion criteria the referral process was different in each, Service 1 and 2 had a specific referral form for staff whilst Service 3 accepted written or verbal referrals without a form. Service 2 was the only service to have a specific referral form for young people to refer themselves in. All services spoke about the needs for a brief and broad assessment tool and each service was using a non-standardised, locally adapted, tool to do this. There was however significant differences in the use of additional assessment tools, all services reported they used the CELF-4 UK (Semel et al., 2006) but Service 1 and 3 made limited use of additional screening

tools whilst Service 2 reported using additional speech and communication specific assessment tools. All services provided intervention however Service 1 provided this mainly through groups whilst Service 2 and 3 provided largely 1:1 interventions. The 1:1 interventions in Service 2 were provided by the SLTs whereas in Service 3 the majority of intervention sessions were provided by the LSAs.

In spite of the many differences all services were staffed by skilled SLTs, did not have exclusion criteria and provided intervention for a broad range of speech, language and communication impairments.

12.5. Is there an evidence base underpinning the interventions offered in these SLT services?

As discussed earlier in this chapter, there is a limited evidence base for service intervention with this age group (Joffe, 2015) and even less evidence for intervention for SLT with young people in contact with the CJS (Coles, Gillett, Murray, & Turner, 2017). There is some evidence for the efficacy of SLT interventions with young people in the community in England (Gregory & Bryan, 2011); with improvements being seen in the young people's communication skills and also engagement with other services (Bryan & Gregory, 2013). Within the custodial population there is currently no published evidence from England except for a promising case study on the benefits of SLT and psychology provision to a young person with Asperger's syndrome (Chief Medical Officer, 2012). There is also a case study from the British Stammering Association in Scotland on the benefit of SLT therapy for stammering in prison (Burgess, 2016). The primary paper on the benefits of SLT intervention in custodial youth justice comes from Australia (Snow & Woodward, 2016) and has been used in this study as the template for the case study design. Whilst this paper shows benefits for some of the individuals with language assessments and benefits extending beyond communication for staff (Snow, Bagley, & White, 2017) this remains a case series study design which is considered the lowest level of evidence (Evans, 2003).

The four case studies presented here, from a total of six, with an intervention component include; stammering, speech, social communication, memory and comprehension. As mentioned earlier there is an article (Burgess, 2016) on the benefits of stammering therapy for this population, however they provided the intervention through telehealth and therefore the two cases are not comparable. The stammering case study presented here uses acceptance and commitment therapy (ACT) as the evidence base (Cheasman, Everard, & Simpson, 2013).

The speech intervention was based around the hierarchy of production stages (Van Riper, 1978). It is not clear what the theoretical underpinning is for the social communication group provided on the mental health inpatient group, however there is significant evidence for the benefits of social skills training with this client group (Kurtz & Mueser, 2008). Finally a set package of intervention was provided by the LSA to support the memory and comprehension skills in the final intervention case study, weak evidence exists on the efficacy of indirect SLT provision. McCartney et al (2011) found intervention provided by others using a set package were not as effective as direct SLT but part of the difference may have been due to the amount of provision offered. The paper suggests over 20 hours of provision would be required to observe significant improvements, less than two hours was offered in the case study presented.

Whilst very limited evidence exists on the efficacy of intervention to this specific client group therapists were drawing from the wider evidence base to develop intervention programmes for the clients. There is not currently a specific evidence base which underpins intervention with this client group, therefore SLTs have to apply evidence-based principles from the best available sources. SLTs working with this client group should be aware of, and apply, the evidence base for intervention with adolescents (Joffe & Nippold, 2012) and working with those with mental health/behavioural needs (Bryan, 2005; France & Kramer, 2001; Horan et al., 2009) where appropriate. SLTs working in this area would benefit from more evidence on; interventions with adolescents and those with additional needs (e.g. behavioural and/or mental health) in the absence of evidence for this specific client group. Future research should focus on beginning to develop the evidence base for this client group.

12.6. Is there a role for community based service models in YOI SLT services?

There is no definitive model for service provision in custodial youth justice setting, there has been one paper (Snow et al., 2015a), discussed in Chapter 5, published on a theoretical model but there are no published accounts of current service provision. Therefore clinicians building services in this area have had to devise and adapt existing models. The lead clinicians interviewed in this study all described bringing service models from their clinical experience and adapting them for use in this setting. A recurring theme in the interviews was whichever model is adopted there is a need for flexibility within the model.

A common model of service provision in the community is the tiered system (Gascoigne, 2013). The current SLT services represent a small resource within a population with high levels of need (Anderson et al., 2016), given the size of the current services there could be an

argument to provide more of a focus at the Universal level. This argument was proposed by the lead clinician in Service 1 and the role of SLT in public health has become an area for discussion in recent times (Law, Reilly, & Snow, 2013). In contrast, there could be an argument for working at the specialist level, creating the opportunity for impactful, successes with individuals which could then be used to argue for more funding. What is clear is, with the current level of service provision, services would be unable to work effectively at all levels.

A potential model for both the community and youth justice settings was provided by Ebbels et al. (2018), this model incorporates the tiered model and the RTI model adding in an extra level (3b) which incorporates the specialist interventions delivered by others, as seen in Service 3. However, this model has many of the limitations discussed in relation to the Snow et al. (2015a) paper, including the time taken to move between Tiers and the fact it remains a theoretical model.

12.7. Could the theoretical framework laid out by Snow, Sanger, Caire, Eadie and Dinslage (2015a) be applied in English YOIs?

A critique of the Snow et al. (2015a) paper was presented in section 5.7.3, this laid out many potential barriers to implementing the model within English YOIs. Despite this the lead clinicians could all see the merits of this system and how being further embedded in the education provision could bring benefits for the SLT service, education and the young people. However, all conceded limited SLT resources and the percentage of young people serving short sentences produced significant barriers to the implementation of this model in English YOIs. There is currently a move within youth justice towards a secure school model (Taylor, 2016). There is potential within this new model to embed the adapted RTI model presented by Snow et al. (2015a).

12.8. Methodological Limitations

There were a number of limitations that became apparent through data collection process these are described below in relation to each element of Phase 2.

12.8.1. Survey

When considering the results presented from the survey data it is necessary to remember these findings are based on only three of the four YOIs in England. Whilst this represents all YOI SLT services within the country it remains a small sample. The justice systems and the remit of SLT services differs across countries (see Chapter 4 for further details); different

ideologies, working practices and structures may mean the results would not be applicable outside of the English and Welsh justice systems.

The design of the survey where many items were multiple choice, meant responses were restricted. The survey was followed up with an interview to allow for expansion and clarification. For example, on Question four when respondents were asked to record the size of their service increments of 0.2 were used which meant Service 1 and 3 were unable to accurately record their size, as they both had 0.5 WTE provision. Respondents also stated they were unclear as how to interpret some of the terminology used in the survey. As the survey was administered electronically there was not the opportunity at that point to ask about the intended meaning. For example, each clinician made slightly different distinctions between what they considered to constitute direct and indirect provision. If the survey had been trialled some of these issues may have been identified and resolved prior to roll out. However with the study including the semi-structured interview to follow, issues were clarified via discussion. In the future it would be beneficial to ensure terminology was clear to all participants and to provide a definition where there was ambiguity in the choice of terms. A pilot was not conducted in this case as there were only three sites and the researcher was the lead clinician at one of these sites, for larger samples a pilot would be required.

It was surprising there was a significant difference between the reporting on Question 14 and audit findings about the amount of time spent in direct contact with clients. In the survey respondents reported spending between 50-70% of their time in direct contact, whilst the audit showed between two – 14% of their time in direct contact. A possible explanation for this difference may be in the understanding of the term "direct contact". The audit simply reported time spent in face-to-face contact when a session took place, this did not account for time involved when; a session was cancelled, preparation for sessions, note writing, getting to sessions, waiting for clients and report writing. Whilst incorporating this time would increase the percentage of time in direct contact it is unlikely it would actually equate to the 50-70% reported in the survey.

12.8.2.Interview

The interview data analysis resulted in four main themes; understanding, collaboration is key, under pressure and constant change. Understanding was the overarching theme which united all of the data.

Before considering the results of the interview, it is important to also consider the relationship between the researcher, the interview and the interviewees. The lead researcher was also a

lead clinician within one of the research sites. Morrow (2005) discusses the criteria for trustworthiness in constructivist qualitative research including the need to acknowledge subjectivity. As a clinician in this field who believes in the benefit of SLT services I was wanting to demonstrate the potential for positive impact in my interview. However, reflecting on this whether I had been the researcher or not I would still have had this belief system and still wanted to respond in a positive way; both because of my beliefs and my personality. I acknowledged this personal bias but also tried to then view the transcripts in a neutral manner, thus 'under pressure' is seen as a core theme in spite of my potentially overly positive presentation. Another element referred to in Morrow's (2005) paper is researcher reflexivity, I was conscious at all times of the fact I was an 'insider' in the research process and therefore strived even harder to adhere to the guidance for trustworthy qualitative research and also consult 'insider' literature to understand how other researchers had managed this situation. I was reflecting at all times; on how questions were written, how I responded as an interviewee and also how the transcripts were then analysed. The Morrow (2005) paper also discusses the need for 'context, culture and rapport' in understanding the participants constructions; being an insider actually facilitates this process. After seven years of working in the setting I have an in-depth understanding of both the context and culture, and because this is a new, small field all of the therapists know or are aware of one another which facilitates the development of rapport. Therefore alongside the potential risks of being an 'insider' there are also potential benefits.

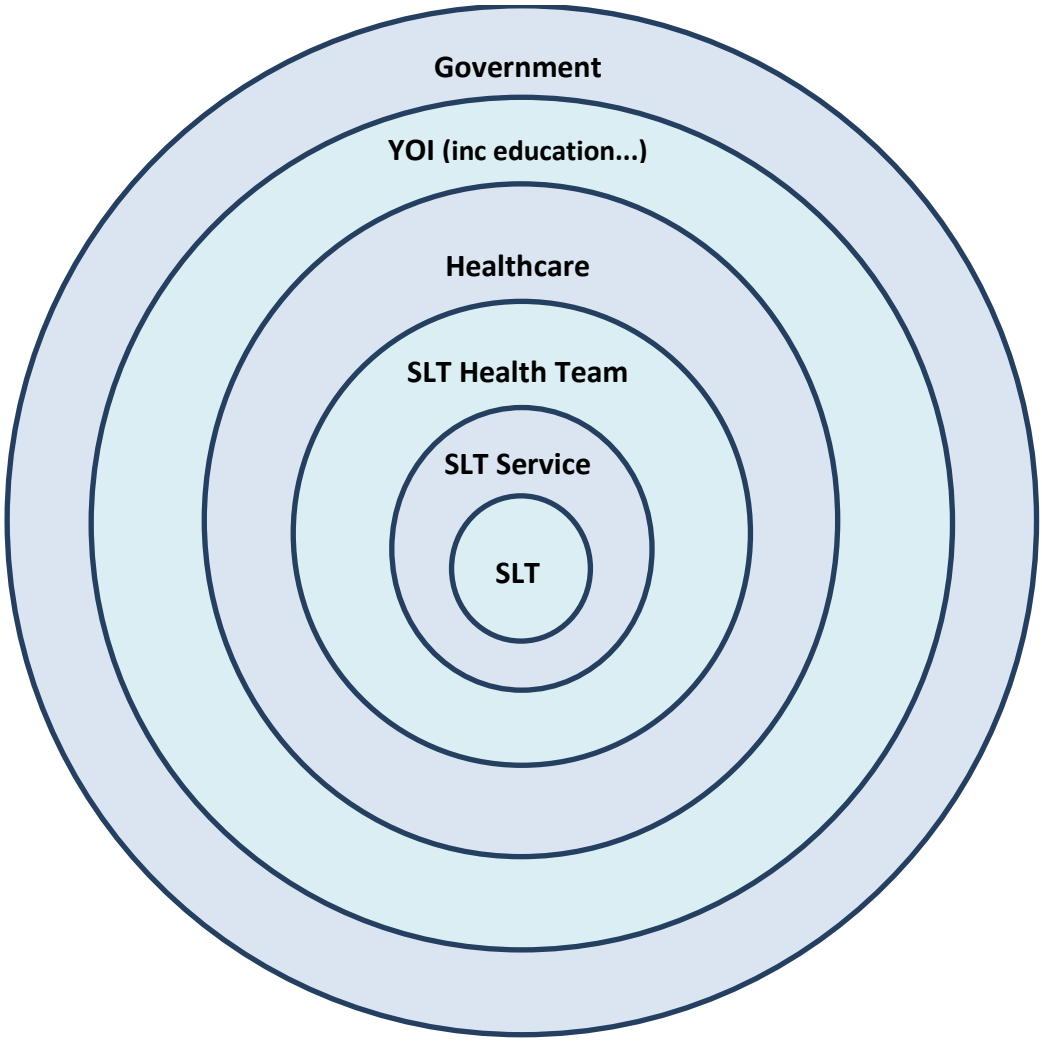
Labaree (2002) reviews the advantages and disadvantages of being an 'insider' in qualitative research. It is interesting to note, he is writing the paper whilst conducting research as an 'insider' and appears to concentrate on the positives whilst acknowledging some of the problems encountered. This view is the opposite to how I viewed the experience, I was keenly aware of the negative aspects of the potential to bias the research and thought relatively little about the potential benefits. Three key areas discussed in this paper are access, understanding and disclosure. As the CJS is very complex and can often be protective being an 'insider' led to benefits that I was aware of who to talk to and how to approach the process of access. As previously discussed the lead researcher having an in-depth knowledge of the system was helpful in many ways. However, Labaree (2002) highlights a potential disadvantage with regards to understanding. As an individual with regular exposure to the system, it is harder to remove yourself from this knowledge in order to ask potentially naive but incisive questions. It may have been helpful to speak to SLTs with no/limited knowledge of the CJS to check the questions to make sure no obvious questions had been omitted. Finally, the paper raises the

question of when and how to disclose you are working as an 'insider'. As I am well known clinician in the field and participants were approached via the Clinical Excellence Networks (CEN) disclosure was never required. The effect of being a known 'insider' conducting research must be considered. As stated earlier I may have potentially put a more positive slant on my responses as I was aware of why I was collecting the data. It must also be considered the other interviewees also responded differently to a known 'insider'. From reading the transcripts I feel being an open 'insider' led to a greater level of disclosure than would have been given to an 'outsider'. Whether there are more pros or cons of being an 'insider' may depend on your individual views, what is clear however is you must be transparent with the reader and allow them to interpret the data based upon the entirety of the information (Rance, Moller, & Clarke, 2017).

With respect to the results of the interviews, the understanding theme is the overarching theme impacting on all the other themes; understanding roles is crucial to establish collaboration, understanding can also work to reduce pressure and mitigate the effects of constant change.

It could be argued you would find the same themes in all services, in all contexts however there are additional layers in this setting that make relationships more complex (see Figure 40). This figure is based on Bronfenbrenner's model of "the ecology of human development" (Bronfenbrenner, 1981).

Figure 40 - Systems Levels



Note. YOI = Young Offender Institution; SLT = Speech and Language Therapy.

Not only is the SLT working within a team within a healthcare setting there were two healthcare providers in all services. Two of the SLT services had been part of both primary care and mental health teams before being moved. Furthermore, the healthcare system is just one of a number of agencies working in to the YOI. Therefore the SLT service is following its own pathway ensuring they adhere to the requirements of the Royal College of Speech and Language Therapists (RCSLT) and Health and Care Professions Council (HCPC), whilst also complying with broader NHS governance structures but ensuring these all align with the Ministry of Justice and local prison regulations. This complex structure means there are more relationships to build, more collaboration to be sought, a need for understanding from a greater range of professionals and finally changes are likely to be more frequent as the

number of structures the services are working within are greater. Therefore it is perhaps unsurprising the final theme to come out of the interview data was of feeling under pressure.

The interview data in this study supports observations from previous research that collaboration is a key factor in the success of both the SLT service and their broader impact (McCartney, 1999). McCartney (1999) found barriers to collaboration can occur at 'functional, structural and systems-environment levels' (p197). Barriers at a functional level were cited as differences in how education and SLT services functioned. This barrier is further exacerbated in the YOI environment where it is not just health and education services working together but also prison services and a myriad of voluntary agencies. Structural barriers were described as differences in how services address timing, amount and place of service delivery. Whilst structural barriers may be less in a custodial environment, as everyone is contained, the place of service delivery can still differ between healthcare, residential, education and other meeting rooms. In addition, the increase in education (*Transforming Youth Custody*, 2014) was cited by interviewees as increasing the structural barriers faced. This demonstrates how changes at the most distant level in Figure 40 can have a significant effect on service delivery. Interviewees also referred to differences in opinion, between professional groups, about whether behaviour should be addressed before, after or concurrently with SLCN affecting service provision. The systems-environment is referred to as differences in relationships with family/care providers. This difference is particularly evident in a custodial environment where the prison officer may be seen in a 'guard' role whereas the healthcare professional can be seen as a 'carer'. Managing these barriers can be especially difficult when SLTs are additionally managing local collaborations with their own team and broader healthcare service.

Realistic expectations and an understanding of the role of the SLT in this context can reduce pressure on the individual from themselves and from others. Therapists must keep up-to-date with the emerging literature on supporting adolescents. There has been limited research in to efficacy of SLT with adolescents, although evidence is now beginning to emerge (Ebbels et al., 2017; Joffe, 2008; Lowe, Henry, Müller, & Joffe, 2018; Spencer, Clegg, Lowe, & Stackhouse, 2017). They must also be aware of the links between mental health, behaviour and SLCN and also multicultural and bilingual research as these are all issues over-represented in this population (Anderson et al., 2016). The therapist in Service 1 stated they could see no reason for speech intervention ever being a priority in this clinical setting. Historically research may support this view point; Toppelberg and Shapiro (2000) found whilst disorders of grammar, semantics and pragmatics were associated with an increased risk of mental health difficulties

phonological deficits were not. However, more recent research has challenged this view finding individuals with speech disorders are also at an increased risk of contact with mental health services (Muir, Callaghan, Bor, Najman, & Williams, 2011; Pinborough-Zimmerman et al., 2007). It is therefore important for SLTs recruited in this area to be aware of the most up to date literature regarding the long terms impacts of SLCN. This information can then be shared with colleagues through training to ensure the whole team is aware of the need for support and the benefits of providing SLT.

An additional pressure coming through the interview data was time, specifically the increase to 30 hours of compulsory Education provision for all young people under the age of 18 in custody (*Transforming Youth Custody*, 2014). This additional requirement for Education provision has increased the competition to see individuals in the remaining time available. The word 'competition' was chosen specifically; ideally all service providers should be working together to provide the optimal service for the young person, however individual service pressures coupled with limited time led to competition. As there are other statutory requirements to fulfil (e.g. monthly progress meetings, LAC review meetings, court appointments) SLT is low on the priority list, as a non-statutory provision which is not well understood in this setting. Having a more robust evidence base would support better understanding of the role. In the meantime, if SLTs understand and can communicate the evidence base and have developed good relationships this puts them in a position to deliver a clear message about the role. They can argue that, although non-statutory, SLT should indeed be a priority as effective communication underpins the ability to successfully engage with all of the other services (Davies et al., 2004; O'Mahony, 2010).

The theme of 'constant change' highlighted the need to be flexible to make the service work. However this was often working within the context of an inflexible system where decisions are made that do not necessarily benefit the SLT or their service users. TYC (2014) can be seen as an example of this within the data. A positive move to make access to education equitable with those in the community had a negative effect on the ability of SLT to access their clients and deliver the service they are commissioned to provide. This constant need to adapt in a reactive rather than reflective manner was highlighted as a source of frustration. Staff need to be provided with appropriate managerial and clinical support to respond to these changes in a positive, creative and professional manner.

Overall, the experience of being an 'insider' in the process presented both advantages and limitations. The results identify themes similar to those found in other settings however there are additional layers of complexity experienced in this area.

12.8.3.Audit

Audit data was collected for a period of six months from Services 2 and 3 in order to give more detail about the number and type of referrals and what types of services were being provided.

The audit tool was piloted for two weeks, at both sites, to try and ensure any issues could be resolved prior to the start of data collection. Some issues such as duplicate fields were identified and resolved at this stage, see the Audit Procedure section 10.6.4. One issue not identified during the pilot and only became evident during data collection was not all therapists had a joint understanding of the 'consultation' field. The field was designed to collect data from sessions where the therapist spoke about a client's strengths and needs with another professional. It became clear S2A was not using the field in this way. After discussing this with the therapist, it was discovered they were using this field for initial meetings with a client prior to assessment. In the future it may be helpful to provide definitions with the fields to ensure each individual is recording data in the same way. This coding issues means the number of assessment sessions recorded in Service 2 are artificially low and, in contrast, consultations sessions are artificially elevated.

The audit fields allowed exploration of how closely the referrals reflect the research on SLCN in this population. Data regarding the number of new admissions; receptions and transfers, during the audit period was provided by NHS England (see Table74). If we accept the majority of referrals to SLT would be made within the first month of admission, comparing the admissions data to the number of referrals in the same month gives an indication of the percentage of young people being recognised with possible SLCN.

Table 74 - Percentage of admissions referred to SLT

	Service 2			Service 3		
	Receptions & Transfers	SLT Referrals	%	Receptions & Transfers	SLT Referrals	%
August	30	5	**20**	36	9	**25**
September	25	7	**28**	53	5	**9**
October	25	9	**36**	42	7	**17**
November	25	5	**20**	47	4	**9**
December	26	8	**31**	33	0	**0**
January	40	10	**25**	48	4	**8**
Average	**29**	**7**	**27**	**43**	**5**	**11**

Note. SLT = Speech and Language Therapy.

Service 2 had an average of 7 referrals a month throughout the audit period and Service 3 had an average of 5 referrals. The average number of monthly admissions to Service 2 during this time was 29. This represents 27% of the population being referred. The average number of monthly admissions to Service 3 during this time was higher at 43. This represents 11% of the population being referred. The literature suggests we could expect 60% of individuals to have SLCN and for the majority of these to be previously unidentified (Hughes et al., 2017), Phase 1 of this study found 58% of young people in Service 2 could be classified as being language impaired (a CELF CLS ≥ -1.5SD). In Service 2 approximately half that number were being referred to SLT services, whilst in Service 3 just over one sixth were being referred. Given SLCN are often described as a hidden disability it is perhaps unsurprising they are being under identified rather than over identified. In addition, the primary screening tool for SLCN in youth custody in England is the CHAT. The pilot for the CHAT (Lennox et al., 2013) found 34% of the young people (n = 93) being identified with possible SLCN. They found they had a significant number of false positive results (PPV = 38), and relatively few false negatives (NPV = 89). However, this was against a reference standard of 20%. Given international research (Anderson et al., 2016) has consistently found prevalence at or around 60% the reference standard appears low. The percentage of referrals in Service 2 however is broadly in line with the figures from the CHAT pilot. The percentage of referrals in Service 3 are lower, this could be related to the fact the SLTs within this service are part time and therefore the wider staff group may forget to refer or are conscious the service is limited and therefore hold a higher threshold for referral.

In Phase 1 I investigated the profile of SLCN; 58% of those assessed had language scores 1.5 standard deviations below the expected mean, 17.2% rated themselves below 50% on a social skills assessment and 20% were identified as having speech difficulties. Therefore we may expect referrals in the audit to be representative of these figures. There were indeed twice as many referrals for language (37.9%) than any other category. However, there were only 8% of referrals for speech as opposed to 13.7% of referrals for communication (social skills). In addition, there were 13.7% of referrals for ASD which may also be best described under the umbrella of communication. It is surprising the least amount of referrals were for speech, based both on the findings in Phase 1 but also the fact speech difficulties are perhaps the most 'visible' of the three dimensions of SLCN. The low number of speech referrals may reflect the views expressed by the lead clinician from Service 1 that speech difficulties would not be a priority with this client group rather than these needs not being seen/heard by the professionals coming in contact with them.

The data from the audit identified why sessions were cancelled; cancellations of SLT sessions on the units[18] were highlighted as a particular issue. However, it is not clear what the location of those sessions that took place were. Therefore, the higher number of cancellations on the Units may reflect the fact more sessions were planned in this environment. In order to consider service planning and where is best to base sessions, it would be helpful gather audit data about where sessions that did take place were conducted. As an 'insider' clinical experience suggests sessions arranged in healthcare settings were more likely to take place as there was staffing allocated to facilitate this, however this may not be the same across all settings.

There were marked differences in the percentages of session types which were planned and those that actually took place. Assessment sessions were the least likely to take place (43.5%), whilst 100% of training sessions and professionals meetings planned took place. The reasons sessions did not take place such as the individual being unavailable or a venue being unable to facilitate the session were not necessarily applicable to training sessions where a venue would have been pre-booked and attendees would be decided on based upon who was available at that time. There was generally a statutory requirement for the professionals meetings to take place and therefore cancellation was not a possibility. A possible explanation for the low attendance of assessment sessions may be related to referrals being made without the knowledge of the individual being referred.

In addition to differences in attendance for different session types, there was a difference between DNA rates in Service 2 (25.4%) and Service 3 (67.5%). It seems possible these results could be due to differences in how the services are provided. In Service 2, the staff are seen regularly and are well known. Therefore they have had the opportunity to build relationships with the wider staff group which can facilitate attendance. In addition, they may have better knowledge of the regime which enables them to devise workarounds. This hypothesis appears to be supported by the DNA rates from Swain (2017) of over 50%, where the SLT service was provided by the researcher who was previously unknown to the establishment. Another difference between services was, Service 3 planned predominantly assessment sessions (89.6%) as opposed to just 16 (28.5)% in Service 2, and assessment sessions had the lowest attendance rates. However, it is argued the attendance rates in Service 3 bring down the overall attendance rates at assessment sessions in general rather than the reverse, as the

[18] A unit refers to the residential area in which the young people live whilst within the YOI. These units include single rooms, a communal area, shower and laundry facilities, an office for the Prison officers and meeting rooms.

attendance rate for assessment sessions is 63% in Service 2 but just 30.4% in Service 3. Whilst the attendance rate in Service 2 is markedly higher for assessment sessions, the attendance rate for assessment sessions is still the lowest of all session types in Service 2.

There were variations in the audit noted between therapists but also for individual therapists. Within Service 2, it is noticeable there is an increase in contacts for therapist S2A over the first three months. At the start of the audit S2A was relatively new in to the service so the increase may reflect the therapists becoming settled in the new role. Therapist S2B volunteers for Service 2 and therefore there is more flexibility in the role. As S2B is available less consistently (as can be seen in the audit) there is a need to consider how this additional resource is used and to ensure the service does not become reliant on a volunteer. Contacts are lower for S2C during December due to extended annual leave.

Within Service 3, it is unclear if the data for S3C and S3D is an accurate portrayal of the services they provided. It appears unlikely to be accurate as contacts are only listed for October and November. As S3C and S3D are Learning Support Assistants employed by Education not healthcare it may be harder to keep track of their contacts. As contacts for Service 3 were significantly lower in December these were checked with the lead clinician, they did not report any particular changes in service provision or any annual leave.

12.8.4.Case studies

There is currently one published paper (Snow & Woodward, 2016) presenting a series of case studies of SLT delivery with young people in custodial settings. There are a number of differences and similarities between the set of case studies presented in this study and the published paper. Both present six case studies of SLT delivered to young people detained in a custodial setting with complex backgrounds. However there are some significant differences, the published paper comes from Australia rather than England (see section 4.6 for a discussion on the differences between the respective legal systems), they only present assessment and intervention cases and perhaps the greatest difference being the one therapist was going in specifically for research purposes whereas this current study presents pragmatic data collection from clinicians going about their everyday role. Whilst this may provide a more naturalistic view of service provision, there were difficulties encountered gathering the requested data from busy clinicians. Although data fields were mirrored from Snow and Woodward (2016) as much as possible, clinicians did not collect data for all fields and there is very limited information regarding outcome measures and service user feedback. Data was requested on outcome measures and service user feedback, however, the researcher did state

this was requested 'where available'. The information provided suggests the services are not routinely collecting outcome measures and service user feedback for every young person they work with.

One way of ensuring the young people were able to complete the intervention and provide feedback was by applying exclusion criteria. Snow and Woodward (2016) only selected cases where the length of stay was long enough to complete a 16 week intervention block, participants had to have completed most of their education in English and if they were from an Aboriginal and Torres Strait Islander (ATSI) background they had to have grown up in an urban area. It would not be possible or appropriate to include exclusion criteria into a service generally operating with no exclusion criteria. This does mean some of the case studies presented have an incomplete block of intervention and there are additional cultural and language considerations to be made when devising intervention programmes. Snow and Woodward (2016) acknowledge "future researchers will need to embrace, rather than avoid such complexity" (p405). Whilst Snow and Woodward (2016) did have exclusion criteria in place to maximise the chance of intervention being completed one of the cases did not complete their block of therapy due to factors beyond the authors control.

Another significant difference between the studies is the manner of assessment. In Snow and Woodward (2016) each individual completed an assessment battery comprised of; CELF-4 (Semel et al., 2006) core language, the Test of Language Competence (TLC) (Semel & Secord, 1989), the La Trobe Communication Questionnaire (Douglas, O'Flaherty, & Snow, 2000), the Kaufman Brief Intelligence Test (KBIT) (Kaufman & Kaufman, 1990) for non-verbal IQ and the Setting Communication Goals (SCG) tool and a therapeutic engagement tool. In the current study the clinicians employed assessment tools specific to the client rather than applying a set battery. Whilst this leads to issues with comparing outcomes for clients, this is a more client-centred approach and reflective of usual service delivery.

In Snow and Woodward (2016) the interventions took place over seven -16 weeks, with one - two sessions per week and sessions varied from 20-120 minutes. In the current study, four of the six cases included an intervention component with the interventions taking place over one-13 weeks with one - two sessions per week and sessions varying from 30-60 minutes. A comparison of the provision is shown in Table 75; the amount of intervention both in terms of number of sessions and minutes of intervention was shorter in the current study than in the published case study series. One of the conclusions from that study is interventions were

under dosed. Therefore, we must consider in clinical practice how we are able to provide sufficient dosage to have a beneficial impact.

Table 75 - Case Study comparison

	Snow and Woodward (2016) Mean	1	2	4	6
BAME/ATSI	4/6	Yes	Yes	Yes	NR
No of sessions	18.5	9 (2 + 7)	13	1	5 (1 + 4)
No of sessions cancelled	6 (24.5%)				
No of minutes of intervention	797	510	430	60	155
No of weeks in therapy	14.3				

Note. BAME = Black, Asian and minority ethnic groups; ATSI = Aboriginal and Torres Strait Islanders; NR = Not Recorded.

Glogowska, Campbell, Peters, Roulstone, & Enderby (2002) in their evaluation of service provision assert to truly address the question of the effectiveness of the SLT service it is necessary to include both outcome measures and the user's voice. In future studies this must be thought about more closely to ensure this data is captured.

In the future directions section of their paper Snow and Woodward (2016) suggest "future researchers should seek to employ more rigorous experimental design elements." (p404) This current study does the opposite, however a strength of this design is it provides a picture of how clinical services are currently operating. There is often conflict between 'messy' clinical practice and 'clean' research design and future studies will have to consider how they balance these two elements.

12.9. Clinical Implications and Directions for future research

As discussed in this chapter, services are not resourced to provide Tier 3, specialist intervention, to the numbers indicated in the prevalence data. Interviewees argued for the potential benefits of increasing levels of universal provision in the absence of additional SLT resources. Providing more universal resources reduces the risk of individuals in need receiving no support at all. Universal provision also has the benefit of educating the wider workforce about SLT and its potential benefits. An example of the benefits of universal provision was seen at Feltham where autism support, which was previously delivered by mental health, was shared amongst the entire prison estate (Lewis, Hughes, Foster, & Turner, 2016).

Whilst the introduction of a systematic SLCN screening tool has been a welcome advancement, this study supports previous research (Hughes et al., 2017; Lennox et al., 2013) finding the tool's accuracy is limited. The CHAT SLCN screening tool would benefit from further refinement

to ensure it is best able to identify those with the greatest needs. This study highlights the need for further guidance on the narrative section of this tool.

The interviews describe working as an SLT in this environment as a pressured and skilled task. SLTs working in this environment should be experienced Band 7's or have extensive prior experience of working in this environment. Therapists must also be resilient, to cope with the levels of pressure and constant change. Therapists should be supported with adequate managerial support and regular clinical supervision from a highly specialist SLT.

As previously stated, SLT resources are currently limited in this environment which restricts the ability to provide Tier 3 interventions. Where these interventions are provided the optimal dosage should be provided to maximise the potential for benefit. The case studies and DNA data from the audit demonstrate this is difficult to provide. Current evidence (Justice, Logan, Jiang, & Schmitt, 2017) suggests high intensity/low frequency or low intensity/high frequency are optimal. Given the high turnover of the population low intensity/high frequency may be the easiest to implement, however, where services have multiple part time therapists this model may not be practicable either.

DNAs affect the ability to provide optimal intervention dosage but also have a huge cost implication (Secondary Care Analysis Team, 2017). In the broader NHS digital solutions have been successfully trialled to reduce DNA rates however these solutions may be less effective in a prison environment. SLT staff being escort trained may assist in the reduction of DNAs as they are able to escort the young person where other staffing is not available. Additionally, having a brief meeting with the young person to explain the service and reason for referral prior to completing the assessment, as seen in the audit by S2A, may be beneficial.

Whilst clinicians felt the adapted RTI model set forward by Snow et al. (2015a) would be impracticable within the current system the development of the first secure school[19] presents on opportunity to test this model within an education focussed system.

As this is a relatively new field with little or nothing published about the service design, function or purpose there are lots of avenues for future research. From this study it is apparent it would be beneficial for future research to investigate subjects such as; the accuracy of screening tools currently employed, the optimal level of service provision, how theoretical models for service provision work in practice and the efficacy of SLT interventions in this area. In addition, this client group would benefit from an assessment tool tailored to

[19] https://www.gov.uk/government/news/applications-open-to-run-countrys-first-secure-school

their SLCN. Future directions and clinical implications are explored in more depth in the following chapter.

12.10. Conclusion

The four strands in Phase 2 have enabled a picture of the SLT services in English YOIs to be developed for the first time. Whilst there are many differences between the three services there are equally many commonalities. All services have drawn elements from community service models and interventions, as the individuals within these institutions form a cross section of society this appears appropriate. What is clear however is there are additional levels of complexity in this setting; both in terms of the individuals served and the systems. Future studies could explore how community models and interventions could be adapted in order to best meet these complexities.

13. Further Implications for Clinical Practice and Directions for Research: A proposed service delivery model for English Young Offender Institutions (YOIs)

This chapter brings together the findings from Phase 1 and 2 to make recommendations about future Speech and Language Therapy (SLT) service delivery in English Young Offender Institutions (YOIs).

13.1. Phase 1 Summary

Phase 1 consisted of secondary data analysis of SLT assessments and demographic data collected from a London region YOI. Data was collected from 45 individuals over a one year timeframe. This data was then analysed to investigate whether the male, juvenile, custodial population in the London region have comparable language difficulties to previously researched populations. The second aim was to explore the characteristics of the language profiles more closely. Demographic information was collected from existing healthcare records held at the YOI. This study extended previous studies by looking more closely at potential associations between Black, Asian and minority ethnic (BAME) groups, socioeconomic status (SES) and socio-cultural backgrounds, offending behaviour and individuals' speech, language and communication profiles.

This current study found young people in this London region YOI had high levels of language impairment not explained based on ethnicity, SES or age. The average core language score was 2 standard deviations below the mean, with 58% meeting an accepted clinical cut-off for a language impairment (≥ -1.5SD). This study demonstrates prevalence remains unchanged since the first study (Bryan et al., 2007) on prevalence in this population despite significant changes in the number of individuals in custody over the decade.

13.2. Phase 2 Summary

Phase 2 investigated the provision of SLT services nationally in the three established SLT services in YOIs in England. In order to gather information about the services provided data was collected from; a survey, semi-structured interviews, service audit and single case studies. Data was gathered from three YOIs for the survey and semi-structured interviews. Due to a vacancy in one service it was only possible to gather service audit data and single case studies from two sites. This is the first study to systematically describe how these SLT services are structured and how services are delivered.

The four strands in Phase 2 have enabled a picture of the SLT services in English YOIs to be developed for the first time. Whilst there are many differences between the three services there are equally many commonalities. All services have drawn elements from community service models and interventions. As the individuals within these institutions form a cross section of society this appears appropriate. What is clear however is there are additional levels of complexity in this setting; both in terms of the individuals served and the systems.

13.3. Service delivery models

This study has found whilst there are high levels of speech, language and communication needs (SLCN) found in this population there is no one service delivery model currently employed by SLT services. Interviews with the three lead clinicians highlighted if a particular model was advocated it would need to be implemented flexibly to accommodate changes (e.g. policy, regime, service provider) within the prison environment. A tiered model of service provision (Gascoigne, 2013) was suggested by the lead clinicians as a potential model that could capture the breadth of the services provided with flexibility to not require constant modifications to adapt to the aforementioned changes.

There is limited research about SLT service design and delivery in a custodial setting (Bryan & Mackenzie, 2008; Sanger et al., 2002), as discussed in Chapter 5. Sanger et al. (2002) suggested what services SLTs working in justice settings could provide based on a tiered service delivery model. The research covered five key areas: programme considerations, assessment, general intervention principles, consideration of pragmatic awareness of conversational interaction and multidisciplinary intervention approaches. Programme considerations underpin all of the other areas. Sanger et al. (2002) point out communication is "one piece of the puzzle" (p. 295), but one that is often not understood by the multidisciplinary team (MDT). Behavioural difficulties may mask the communication difficulties and take the focus away from SLCN. The authors suggest both direct and indirect services should be provided by the SLT to ensure SLCN are well understood by the MDT and they garner the appropriate support. Considerations for indirect services were; supporting the development of appropriate written and visual materials, also ensuring any verbal language used by staff is accessible. Considerations for direct services included planning together and developing broad, holistic and functional goals for therapy. The services reported in this study provided both direct and indirect services. Interviewees in the current study made reference to supporting colleagues indirectly in the same ways identified by Sanger et al. (2002). However, barriers to doing so were referenced; lead clinicians all reported it had become

increasingly difficult for staff to be released to access training. SLTs must then think creatively about how to devise training that is both useful and accessible. Options may include incorporating SLCN training in the broader staff induction programmes and developing e-learning or blended learning solutions staff are able to complete whilst in their everyday work environment. E-learning and blended learning solutions are increasingly popular due to their accessibility and flexibility (Bonk & Graham, 2006). However, additional attention must be paid to accessibility in the custodial environment due to limited access to workstations and restricted internet access for some staff.

Sanger et al. (2002) made recommendations for assessment to be multidimensional, incorporating skills and requirements of the individual's communication. Additionally, they advocate for the inclusion of a self-assessment tool. This study found there was no correlation between language scores and self-assessment, however the lead clinician from Service 1 recognised the self-report was a helpful tool to stimulate discussion and joint goal planning.

Sanger et al. (2002) developed a set of general intervention principles to underpin all episodes of care. These principles were; joint planning, for the young person to take ownership of their SLCN, SLT to have counselling skills and finally to develop the young person's meta-awareness. Research (Anderson et al., 2016) tells us, and this study confirms, the majority of this population have previously unrecognised SLCN and therefore the young people have not received any previous intervention. SLT services in this setting do not currently have the capacity to provide long term, intensive therapy as recommended by the evidence (S. H. Ebbels et al., 2017). Even where the SLT was solely delivering interventions for the purposes of research (Snow & Woodward, 2016; Swain, 2017) they were unable to meet the dosage suggested in the literature (Justice et al., 2017). Current evidence (Schmitt, Justice, & Logan, 2017), relating to paediatric SLT more broadly, shows the most effective treatment models are; high frequency/low dosage which is difficult to deliver with a part time workforce, or low frequency/high dosage which is impractical where the length of stay is generally short. Even if the SLT service was able to provide intervention at the suggested dosage it is unlikely the result would be 'curative' (Law, Tomblin, & Zhang, 2008). Therefore a focus on developing the individual's meta-awareness of their SLCN appears a logical focus for interventions. There is evidence emerging this can have a broad positive impact for young people within the criminal justice system (CJS, Bryan & Gregory, 2013; Chief Medical Officer, 2012; Gregory & Bryan, 2011). Sanger et al. (2002) highlight counselling as a core skill for SLTs in this field. Whilst counselling for low self-esteem may be more associated with psychology or occupational therapy, SLTs certainly should be aware of the impact of low self-esteem on motivation and

engagement and how SLCN may be intertwined with self-esteem (Hopkins et al., 2016; Mouridsen & Hauschild, 2009; Spencer et al., 2010).

Previous research by Sanger and colleagues (1999) showed although the young people were aware of pragmatic language 'rules' they were not consistently using these in conversation. Data available from this study does not provide any additional information on this. The original research was conducted with females, it would be interesting to conduct a similar study with males to see whether this produced the same findings. On the basis of their findings, Sanger et al. (2002) recommend awareness is assessed in order to prevent intervention being inappropriately targeted. As there are limited intervention resources available in English YOIs it is essential these resources are used effectively, consequently incorporating self-awareness in the assessment/intervention planning process is essential.

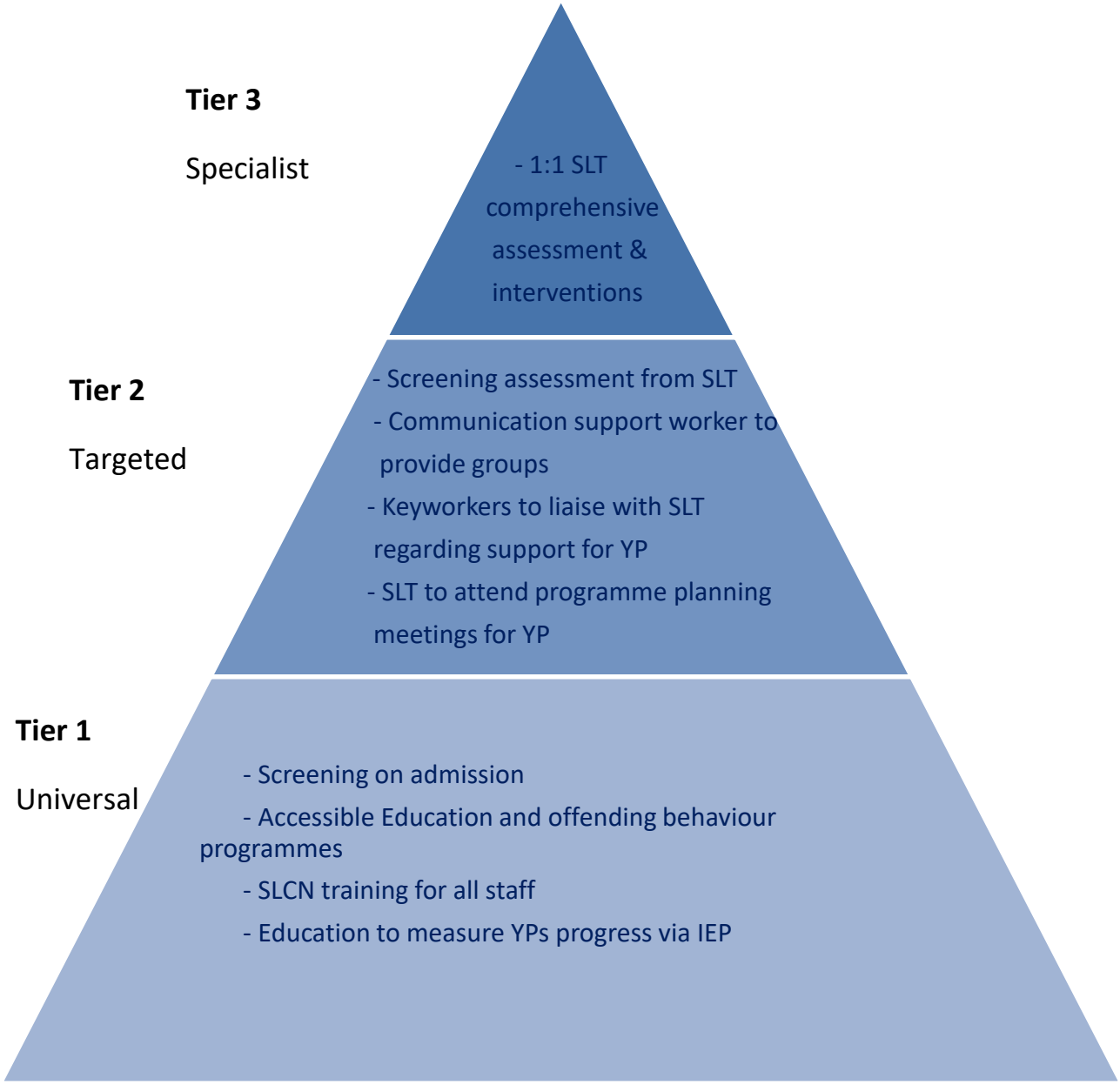
Finally, Sanger et al. (2002) advocate multidisciplinary intervention approaches, viewing them as critical to success “because of the interrelationships among language, behaviour and social skills.” (p. 299) In the current study, interviewees raised the benefits of multi-disciplinary team (MDT) working and could see potential for increased MDT working specifically regarding access to rehabilitation programmes and in Education. Despite seeing the benefits for MDT working there was no evidence of this in the audit data or case studies for Service 3 and limited evidence in Service 2. MDT working is difficult where provision is limited and staff are employed part-time. Additionally, a barrier in MDT working may be lack of clarity of the role of the SLT in this setting. A clear understanding and respect for individual’s respective roles has been found to be essential to successful MDT working (Strunk, Leisen, & Schubert, 2017).

Although the adapted response to intervention (RTI) model described by Snow et al. (2015a), as a potential service delivery model in this setting, is also based on a tiered model it was not felt to be a workable model in English YOIs with the current levels of service provision.

13.4. A proposed tiered model for English YOIs

The SLT services which could be provided and have been indicated by previous research and the current study are incorporated in to Figure 41 below. A tiered model has been employed as it was advocated by the lead clinicians within this study and is much used within community paediatric SLT services (*Bercow: 10 Years On*, 2018).

Figure 41 - Tiers of provision



Note. SLT = Speech and Language Therapy; YP = Young People; SLCN = Speech, Language and Communication Needs; IEP = Individual Education Plan.

13.4.1.Tier 1

Tier 1 comprises universal provision received by all young people.

Screening on admission

Given the high prevalence of SLCN in conjunction with the high number that have previously gone unrecognised, as re-iterated in Phase 1 (see Section 8.7 and 8.12.1) screening on admission is essential for the young people entering the custodial setting. Recognition of SLCN

is especially important for this population as they are required to engage in education and offending behaviour programmes which are both heavily verbally mediated.

The Comprehensive Healthcare Assessment Tool (CHAT, Shaw, Bailey, Tarbuck, Chitsabean, Theodosiou, & Lennox, 2014) SLCN screen has been a mandatory requirement since 2014 for all admissions. However, Phase 1 demonstrated not all individuals who scored highly on this assessment were immediately referred to SLT (see section 8.16). Additionally, in Phase 2 the lead clinicians highlighted the difficulties for non-SLTs to score the narrative component of the assessment (see section 11.3.2). The CHAT SLCN screen would benefit from revision to improve the efficacy of the screening process.

Accessible education and offending behaviour programmes

Previous research has shown the language used in offending behaviour programmes is higher than the average language skills of young people in custody (Davies et al., 2004). The majority of young people in this setting have also been excluded from school (Her Majesty's Inspectorate of Prisons, 2018a). This could lead to the young people having negative perceptions about educational opportunities and these could be reinforced if they are unable to then access these opportunities due to language levels. The mean language performance of individuals in Phase 1 of this study was -2 SD on the Clinical Evaluation of Language Fundamentals (CELF-4 UK) Core Language Scale (Semel et al., 2006). Therefore education and offending behaviour programmes should contain language appropriate for individuals functioning at this level.

SLCN training for all staff

Lead clinicians in Phase 2 interviews suggested given limited resources the greatest impact for all young people with SLCN could be achieved through increasing universal services (see section 11.3.2). Universal services can not be provided if the wider staff group do not understand what SLCN are and how to support these, therefore staff training is required. This method has been found effective with YOIs to support individuals with autism (Lewis et al., 2016). SLCN have been found to not be widely understood within the general population again reinforcing the need for training (Bishop, 2017).

Education to measure Young Peoples progress via Individual Education Plans (IEP)

Young people in custodial settings spend 30 hours a week in Education (*Transforming Youth Custody*, 2014). This constitutes a significant proportion of their weekdays and could provide useful information to specialist providers about where to target their limited resources. As demonstrated in the Case Studies in Phase 2 (see section 11.6), Education and SLT services are

not always working together in the most effective ways to maximise impact for the young people. If IEPs were used to monitor progress this would support the SLT to identify which individuals would most benefit from Tier 2 and 3 support.

13.4.2.Tier 2

Tier 2 comprises targeted provision for those individuals deemed to have SLCN.

Screening assessment from SLT

In the interviews in Phase 2 lead clinicians highlighted the pressure on time (see section 11.3.4). Pressures related to; the young person's ability to concentrate for an extended period of time, availability of the young person and also length of stay within the establishment. All of these factors highlight the need for a brief screening assessment to be developed to provide SLTs with a broad picture of the young person's strengths and weaknesses in order to plan further assessment or intervention.

Communication support worker to provide groups

As shown in the survey in Phase 2 (see section 11.2) SLT resources are currently limited and therefore the ability to provide interventions is also limited. Service 1 was the only one currently providing groups. Service 2 and 3 had historically provided groups and found these to be effective. Transforming Youth Custody (*Transforming Youth Custody*, 2014) requires the young people to engage in 30 hours education a week, with one of the priorities being to build basic skills. Providing language groups to targeted individuals could help to support the development of basic skills and increase the capacity of the SLT service.

Keyworkers to liaise with SLT regarding support for Young People and attend programme planning meetings for Young People receiving SLT

Each young person within the YOI has a named keyworker who is responsible for overseeing their rehabilitation programme whilst in custody[20]. It is essential all aspects of that programme should be accessible to the young person. SLT can support the keyworker to ensure the language levels used are appropriate and therefore maximising the potential for gain from the rehabilitation programmes offered.

Where a young person is accessing support from SLT it is essential this is incorporated in the planning meetings. Planning meetings address support both in the custodial environment and upon return to the community. In Phase 2 interviews lead clinicians highlighted they were not

[20] https://www.gov.uk/young-people-in-custody/arriving-at-custody

always invited to these meetings (see section 11.3.3) this could adversely affect continuity of service provision for the young person.

13.4.3.Tier 3

Tier 3 consists of specialist provision for those with high levels of SLCN and complex needs.

1:1 SLT comprehensive assessment and interventions

As demonstrated in Phase 1 of this study there is a high prevalence of SLCN amongst this population and the majority have not previously received any SLT support (see section 8.12.1). In addition these individuals are likely to have had a number of Adverse Childhood Experiences (ACES, Justice Analytical Services, 2018) and a significant proportion have accessed mental health services (see section 8.19.6). These young people have complex backgrounds, have significant SLCN they have lived with for a long period of time and therefore 1:1 comprehensive assessment and intervention would be indicated (Ebbels et al., 2018; Ebbels et al., 2017).

13.4.4.A proposed tiered model for English YOIs - A Summary

As demonstrated above there are potential benefits for the young people and wider staff group from SLT services being provided at all Tiers. With current levels of service provision however it would not be possible to offer all of these services. It could be considered if unable to provide a service at all levels then providing Tier 1 services may be the most equitable. However, lead clinicians raised issues for the wider clinical team and commissioners with restricting Tier 3 services (see section 11.3.4).

13.5.Service Recommendations (Bryan & Mackenzie, 2008)

In 2008, the RCSLT published a document outlining recommendations for service delivery for young people at risk of offending (Bryan & Mackenzie, 2008), this report is discussed in Chapter 5. This document included a section on service provision to young people in custody, which included four key recommendations:

1. “The intermediary scheme should be extended to support defendants.
2. A speech and language therapist (SLT) should be appointed to work within each of the four secure training centres.
3. There is at least one full time specialist SLT working in every young offender institution.

4. Each young offender institution should provide a communication support worker to support and carry over the work of the specialist SLT." (Bryan & Mackenzie, 2008, pp. 8-9)

In 2009, the Youth Justice and Criminal Evidence Act (1999) was amended to enable defendants to gain access to support from intermediaries. However, this amendment has not been enacted and therefore there is no statutory provision as for victims and witnesses. There are now two secure training centres, both of which have access to part-time SLT provision. Recommendations three and four are the most pertinent to this current study. As is clear in this study, recommendation 3 has yet to be met. There are currently four English YOIs, three of which have access to SLT services. However, only one meets the recommendation of having a full time specialist SLT and this is at the minimum level recommended. It is interesting to note the only YOI which currently does not have access to SLT services is the site for the only two published studies on SLT in YOIs (Bryan et al., 2007; Hughes et al., 2017). Of the three SLT services available in English YOIs only one has access to a communication support worker, as advocated in recommendation four. Two members of the education team provide support to the SLTs in Service 3. The learning support assistants, working as communication support workers, carry out Tier 2 and 3 interventions provided by the SLT.

In addition to these recommendations, Bryan and Mackenzie (2008) suggest the SLTs within the YOI should be linking in with the SLT teams in the local community and youth offending services (YOS) to ensure continuity of service provision. The SLT should have a role providing support to young people to enable them to access both education and rehabilitation programmes. The role for SLTs training the wider workforce is also mentioned. SLT service provision within YOS has increased significantly since the 2008 report. However, there remains patchy provision and local SLT service provision has decreased and roles have been downgraded (Dorward & Money, 2018). There was evidence from audit data and interviews liaison with community SLT services was occurring.

13.6. Current recommendations

The recommendations detailed below are a synthesis of the findings from this study and the knowledge and recommendations in relevant, related literature to date.

13.6.1. Screening & Assessment

- Training to be provided for staff members completing CHAT SLCN screen – specifically for the 'narrative' task
- 'Screen out, not in' (Minnitt, 2018)

- Two tiers of SLT assessment to be provided:
    - Initial broad assessment
    - Comprehensive assessment to include self-assessment

13.6.2.Provision

- There is at least one full time highly specialist SLT working in every young offender institution
    - This should ideally be delivered by one full time member of staff
    - Where this is not possible, maximum of two members of staff to cover the full working week with a clear service lead
- SLTs working in a YOI to receive clinical/managerial support from an SLT with an understanding of the CJS
- SLTs to have an in-depth understanding of attachment, ACES and the long term sequelae of SLCN
- All staff who have contact with young people to have training on SLCN in their induction programme
- All teaching staff within the YOI to have an understanding of Information Carry Words (ICW) (Masidlover, 1979), High/Low frequency vocabulary and Blank's levels (Blank, 1978) as a minimum
- Blended learning solutions available for additional training
- Services to have open referral policy with referral forms for staff and young people

13.6.3.Tier 1

- An equivalent of Autism Accreditation to be adopted to ensure shared ownership for supporting young people's SLCN
- An SLT to be employed by the Youth Justice Board to support with the development of new rehabilitation programmes and other initiatives within the custodial estate
- All programmes delivered within the YOIs to be accessible, reflecting the average IQ is 85 and the average language scores around 70. Special consideration to be given to the use of independent literacy-based work

13.6.4.Tier 2

- Each YOI should provide a communication support worker, within education, to provide targeted interventions, supported and monitored by the SLT

13.6.5.Tier 3

- SLT to ensure interventions provided are adequately dosed and evidence based wherever possible

13.7.Summary

SLT can play a key role in provision to young people in English YOIs, however current service provision limits the potential for impact. With limited resources the SLT service may be best to focus at a Tier 3 level as this has the greatest potential to support the most individuals, however this would mean those with the greatest level of need would not get the input they required. Ideally service provision in this setting should be increased.

14. Conclusion

This study set out to re-examine the prevalence of SLCN in young people based within English YOIs (Phase 1) before exploring how SLT services are delivered to this client group (Phase 2).

Gaining ethical approval for each phase was a lengthy and complex procedure. There is learning to be taken from previous experiences that can help to navigate systems and mitigate delays, but it is not possible to avoid all delays due to continuously evolving processes. The IRAS ethics process is lengthy and the implications of going through the process for time limited projects such as a PhD should be considered. The time involved meant data collection continued into the fourth year. However, as is demonstrated in this study it is possible to go through the procedures within the timeframe with careful planning.

Although there had been considerable changes in the size of the YOI population since the first study with this client group was published (Bryan et al., 2007), this study found the prevalence of SLCN remained unchanged and in line with other research in the broader field (Anderson et al., 2016). Over half of the young people (58%) met threshold criteria for a language disorder (≥ 1.5 SD below the mean). Furthermore, the young people had additional needs representative of the youth justice literature (*Youth Justice Statistics 2016/17*, 2018) with large numbers having; been excluded from school (81%), accessed mental health services (51%), were looked after children (LAC, 42%), and misused illegal substances (85%).

Previous research identified either expressive or receptive language skills as more impaired, whereas in this study a more even language profile was found. As prevalence rates in both this study and the Bryan et al. (2007) were similar it may be beneficial for future research to further explore the profile of SLCN in order to consider which intervention approaches may be most appropriate for these young people. An important finding emerging from this study was language abilities between those referred and not referred on to the SLT service did not differ significantly.

This study is the first to examine current clinical SLT practice in a custodial environment. Previous prevalence (Bryan, 2004; Bryan et al., 2007) and intervention (Snow & Woodward, 2016; Swain, 2017) research has been conducted as an academic study rather than as part of clinical practice. This research has provided evidence of identification and prevalence rates and intervention possibilities but outside of a clinical context. Furthermore, before this study, evidence of methods of service delivery, to this client group, were purely theoretical. The research has shown whilst there were many differences in how SLT services were designed and

delivered a number of similarities were also apparent. All services viewed their purpose as maximising the communication potential of the individual and to raise awareness of SLCN across the YOI. All SLT services provided both direct and indirect services and operated with no exclusion criteria. This study has provided the first data on how SLT services are provided within this setting and the challenges faced in providing such services.

Research should now move on from prevalence to investigate identification of SLCN and the provision of interventions. Whilst the prevalence of SLCN in this population is consistently found to be around 60%, this study found between 11-27% of new admissions were being referred to SLT services. Future research could investigate the decision making process surrounding referral to SLT and how effective this is. Also, research to explore what SLT interventions can be provided in this setting and whether these interventions are effective. Phase 2 found no one service delivery model was being employed within this setting, although all services identified merit in a tiered service model. Future research should investigate whether the proposed model is feasible and applicable in English YOIs.

SLT services should work with their colleagues in health, education and the wider prison system to share expertise in SLCN and how all professionals can support young people with SLCN within their roles. Supporting SLCN at a universal level has the potential to benefit the young person, the staff working with them and in turn bring about cost savings. The Royal College of Speech and Language Therapists (RCSLT) should work closely with the Youth Justice Board (YJB) in the implementation of the secure schools agenda. The development of secure schools offers an opportunity to clinically test the adapted response-to-intervention (RTI) model proposed by Snow et al. (2015a) and endorsed by the lead clinicians in this study.

15. References

Abrams, D. S., Bertrand, M., & Mullainathan, S. (2012). Do Judges Vary in Their Treatment of Race? *The Journal of Legal Studies, 41*(2), 347-383. doi:10.1086/666006

Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms. (1997). (Vol. 74). San Francisco: Jossey-Bass.

American Psychiatric Association. (2013). The Diagnostic and Statistical Manual of Mental Disorders version 5. In.

Anderson, J., Daniel, M., Hoskins, L., Gillis, K., & Khen, S. (2013). Neuropsychological Test Performance of Ethnic Minority Juvenile Delinquents. *Archives of Clinical Neuropsychology, 28*(6), 9-9.

Anderson, S. A. S., Hawes, D. J., & Snow, P. C. (2016). Language impairments among youth offenders: A systematic review. *Children and Youth Services Review, 65*, 195-203. doi:http://dx.doi.org/10.1016/j.childyouth.2016.04.004

Armstrong, R. (2015). Intervention frameworks for offender populations. *International Journal of Language & Communication Disorders*. doi:10.1111/1460-6984.12162

Australian Bureau of Statistics. (2018). National Statistical Service Sample Size Calculator. Retrieved from http://www.nss.gov.au/nss/home.nsf/pages/Sample+Size+Calculator+Help?OpenDocument

Avila, R., Boccanfuso, V., & Metcalfe, S. (2011). Computerised Aptitude Test - Armed Services Vocational Aptitude Battery. Seaside, CA: Defense Manpower Data Center. Retrieved from: http://www.drmillslmu.com/Testing/SPR2000/asvab.htm

Baddeley, A., Emslie, H., & Nimmo-Smith, I. (1992). Speed and Capacity Of Language Processing (SCOLP). In: Pearson.

Bailey, J. (2008). First steps in qualitative data analysis: transcribing. *Family Practice, 25*(2), 127-131. doi:10.1093/fampra/cmn003

Bandes, S. A. (2016). Remorse and Criminal Justice. *Emotion Review, 8*(1), 14-19. doi:10.1177/1754073915601222

Basto-Pereira, M., Miranda, A., Ribeiro, S., & Maia, Â. (2016). Growing up with adversity: From juvenile justice involvement to criminal persistence and psychosocial problems in young adulthood. *Child Abuse & Neglect, 62*, 63-75. doi:10.1016/j.chiabu.2016.10.011

Baxter, P., & Norman, G. (2011). Self- assessment or self deception? A lack of association between nursing students' self- assessment and performance. *Journal of Advanced Nursing, 67*(11), 2406. doi:10.1111/j.1365-2648.2011.05658.x

Beitchman, J. H., Brownlie, E. B., & Lin, B. (2014). Age 31 Mental Health Outcomes of Childhood Language and Speech Disorders. *Journal of the American Academy of Child & Adolescent Psychiatry, 53*(10), 1102-1110. doi:10.1016/j.jaac.2014.07.006

Belenchia, T. A., & Crowe, T. A. (1983). Prevalence of speech and hearing disorders in a state penitentiary population. *Journal of Communication Disorders, 16*(4), 279-285. doi:10.1016/0021-9924(83)90012-6

Bellair, P. E., McNulty, T. L., & Piquero, A. R. (2014). Verbal Ability and Persistent Offending: A Race-specific Test of Moffitt's Theory. *Justice Quarterly*, 1-26. doi:10.1080/07418825.2014.918166

Bercow, J. (2008). *The Bercow Report : a review of services for children and young people (0-19) with speech, language and communication needs*. Retrieved from London: https://dera.ioe.ac.uk/8405/

Bercow: 10 Years On. (2018). Retrieved from https://www.bercow10yearson.com/

Bishop, D. V. M. (2003). Test for Reception of Grammar. In (2 ed.). San Antonio, Tx: The Psychological Corporation.

Bishop, D. V. M. (2017). Why is it so hard to reach agreement on terminology? The case of developmental language disorder (DLD): Terminology and the case of DLD. *International Journal of Language & Communication Disorders*. doi:10.1111/1460-6984.12335

Blank, M. (1978). *The language of learning : the preschool years*. New York (etc.) ; London: New York etc. ; London : Grune and Stratton, 1978.

Blanton, D., & Dagenais, P. (2007). Comparison of Language Skills of Adjudicated and Nonadjudicated Adolescent Males and Females. *Language, Speech & Hearing Services in Schools, 38*(4), 309-314.

Blasi, A., & Milton, K. (1991). The Development of the Sense of Self in Adolescence. *Journal of Personality, 59*(2), 217-242. doi:10.1111/j.1467-6494.1991.tb00774.x

Bloom, L. (1978). *Language development and language disorders*. New York: Wiley.

Bonk, C. J., & Graham, C. R. (2006). *The handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer.

Botting, N., Durkin, K., Toseeb, U., Pickles, A., & Conti-Ramsden, G. (2016). Emotional health, support, and self-efficacy in young adults with a history of language impairment. *British Journal of Developmental Psychology, 34*(4), 538-554. doi:10.1111/bjdp.12148

Bradley, K. (2009). *The Bradley Report: Lord Bradley's Review of People with Mental Health Problems or Learning Disabilities in the Criminal Justice System*. Retrieved from London: https://webarchive.nationalarchives.gov.uk/20130105193845/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_098698.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa

Brodie, A. (1999). *Behind bars : the hidden architecture of England's prisons*. Swindon: English Heritage.

Bronfenbrenner, U. (1981). *The ecology of human development : experiments by nature and design*. Cambridge, Mass. : Harvard University Press.

Broomfield, J., & Dodd, B. (2004). Children with speech and language disability: caseload characteristics. *International Journal of Language & Communication Disorders, 39*(3), 303-324. doi:doi:10.1080/13682820310001625589

Bryan, K. (2005). *Developing speech and language skills in medium secure settings*. Paper presented at the Multidisciplinary Seminar Series, London.

Bryan, K. (2004). Preliminary study of the prevalence of speech and language difficulties in young offenders. *International Journal of Language and Communication Disorders, 39*, 391-400. doi:10.1080/13682820410001666376

Bryan, K. (1998). *Broadmoor Screening Assessment*. University of Surrey.

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. doi:10.1080/13682820601053977

Bryan, K., Garvani, G., Gregory, J., & Kilner, K. (2015). Language difficulties and criminal justice: the need for earlier identification. *International Journal of Language and Communication Disorders, 50*, 763-775. doi:10.1111/1460-6984.12183

Bryan, K., & Gregory, J. (2013). Perceptions of staff on embedding speech and language therapy within a youth offending team. *Child Language Teaching and Therapy, 29*(3), 359-371. doi:10.1177/0265659013482930

Bryan, K., & Mackenzie, J. (2008). Meeting the speech language and communication needs of vulnerable young people: Model of service delivery for those at risk of offending and re-offending. In (pp. 12). London: Royal College of Speech and Language Therapists.

Burgess, S. (2016). Speech Therapy in Prison: The therapist's view Retrieved from: https://www.stammering.org/speaking-out/article/speech-therapy-prison-therapists-view

Burrows, S., & Yiga, I. (2012). *Youth Offending and Speech and Language Therapy (A Controlled Study)*. Ealing Council, London.

Cartwright, J., & Limandri, B. (1997). The Challenge of Multiple Roles in the Qualitative Clinician Researcher-Participant Client Relationship. In (Vol. 7, pp. 223-235). Thousand Oaks, CA.

Chambers, B., Cheung, A. C. K., & Slavin, R. E. (2015). *Literacy and Language Outcomes of Balanced and Developmental Approaches to Early Childhood Education: A Systematic Review*. Baltimore, MD:

Cheasman, C., Everard, R., & Simpson, S. (2013). *Stammering therapy from the inside : new perspectives on working with young people and adults*. Guildford, Surrey: J&R Press.

Chief Medical Officer. (2012). *Annual Report. Our Children Deserve Better:Prevention Pays*. London

Chitsabesan, P., Bailey, S., Williams, R., Kroll, L., Kenning, C., & Talbot, J. (2007). Learning disabilities and educational needs of juvenile offenders. *Journal of Children's Services, 2*(4), 4-17. doi:10.1108/17466660200700002

Chrzanowski, A., & Wallis, R. (2011). Understanding the Youth Justice System. In A. Stewart, T. Allard, & S. Dennison (Eds.), *Evidence Based Policy and Practice in Youth Justice*. Sydney: Federation Press.

Clegg, J., Hollis, C., Mawhood, L., & Rutter, M. (2005). Developmental Language Disorders-A Follow-Up in Later Adult Life. Cognitive, Language and Psychosocial Outcomes. *Journal of Child Psychology and Psychiatry*(2), 128-149. doi:10.1111/j.1469-7610.2004.00342.x

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. doi:10.1177/0265659008098664

Colbourne, L., & Sque, M. (2004). Split personalities: Role conflict between the nurse and the nurse researcher. *Journal of Research in Nursing, 9*(4), 297-304. doi:10.1177/136140960400900410

Coles, H., Gillett, K., Murray, G., & Turner, K. (2017). *Justice evidence base*. Retrieved from: http://www.rcslt.org/-/media/Project/RCSLT/justice-evidence-base2017-1.pdf

Collins, K. (2010). Advanced sampling designs in mixed research: current practices and emerging trends in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *SAGE handbook of mixed methods in social & behavioral research* (pp. 353-378). Thousand Oaks, CA: SAGE Publications.

Constantino, J. N. (2002). The Social Responsiveness Scale. In. Los Angeles: Western Psychological Services.

Conti-Ramsden, G., Mok, P. L. H., Pickles, A., & Durkin, K. (2013). Adolescents with a history of specific language impairment (SLI): strengths and difficulties in social, emotional and behavioral functioning. *Research in developmental disabilities, 34*(11), 4161. doi:10.1016/j.ridd.2013.08.043

Corwin, E., Cramer, R., Griffin, D., & Brodsky, S. (2012). Defendant Remorse, Need for Affect, and Juror Sentencing Decisions. *Journal Of The American Academy Of Psychiatry And The Law, 40*(1), 41-49.

Crawford, W. (1835). *Report of William Crawford, Esq., on the penitentiaries of the United States : addressed to His Majesty's Principal Secretary of State for the Home Department*. London

Creswell, J. (2010). Mapping the developing landscape of mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *SAGE handbook of mixed methods in social & behavioral research* (pp. 45-68). Thousand Oaks, CA: SAGE Publications, Inc.

Dandreaux, D., & Frick, P. (2009). Developmental Pathways to Conduct Problems: A Further Test of the Childhood and Adolescent-Onset Distinction. *Journal of Abnormal Child Psychology, 37*(3), 375-385. doi:10.1007/s10802-008-9261-5

Davies, K., Lewis, J., Byatt, J., Purvis, E., & Cole, B. (2004). *An evaluation of the literacy demands of general offending behaviour programmes*. (233). Research, Development and Statistics Directorate

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.

Dempsey, L., & Skarakis-Doyle, E. (2010). Developmental language impairment through the lens of the ICF: An integrated account of children's functioning. *Journal of communication disorders, 43*(5), 424-437.

Department of Education. (1992). *Education (Schools) Act*. London

Department of Education. (2001). *Special education needs (SEN) code of practice*. London

Dorward, M., & Money, D. (2018). Members first. *Bulletin, September*

Douglas, J. M., O'Flaherty, C. A., & Snow, P. C. (2000). Measuring perception of communicative ability: the development and evaluation of the La Trobe communication questionnaire. *Aphasiology, 14*(3), 251-268. doi:10.1080/026870300401469

Dunn, L. M., Dunn, L. M., Whetton, C., & Burley, J. (1997). British Picture Vocabulary Scale (BPVS). In (2 ed.). Windsor: NFER-Nelson.

Eastwood, L. (1985). Personality, intelligence and personal space among violent and non-violent delinquents. *Personality and Individual Differences, 6*(6), 717-723. doi:10.1016/0191-8869(85)90082-0

Ebbels, S. (2014a). Effectiveness of intervention for grammar in school-aged children with primary language impairments: A review of the evidence. *Child Language Teaching and Therapy, 30*(1), 7-40. doi:10.1177/0265659013512321

Ebbels, S. (2014b). Introducing the SLI debate. *International Journal of Language & Communication Disorders, 49*(4), 377-380. doi:10.1111/1460-6984.12119

Ebbels, S., McCartney, E., Slonims, V., Dockrell, J., & Norbury, C. (2018). Evidence-based pathways to interventions for children with language disorders. *International Journal of Language and Communication Disorders*.

Ebbels, S., Wright, L., Brockbank, S., Godfrey, C., Harris, C., Leniston, H., Leniston, H., Neary, K., Nicoll, H., Nicoll, L., Scott, J., Maric, N. (2017). Effectiveness of 1: 1 Speech and Language Therapy for Older Children with (Developmental) Language Disorder. *International Journal of Language & Communication Disorders, 52*(4), 528-539. doi:10.1111/1460-6984.12297

Enderby, P., & Pickstone, C. (2004). How many people have communication disorders and why does it matter? *International Journal of Speech-Language Pathology, 7*(1), 8-13. doi:10.1080/14417040500055086

Enderby, P. M. (2015). *Therapy outcome measures for rehabilitation professionals* (Third edition / Pamela Enderby and Alexandra John. ed.). Albury, Guildford: J&R Press Ltd.

Evans, D. (2003). Hierarchy of evidence: a framework for ranking evidence evaluating healthcare interventions. *Journal of Clinical Nursing, 12*(1), 77-84. doi:10.1046/j.1365-2702.2003.00662.x

Fanton, F. J. (2005). Juvenile Justice: New Models for Reform. *Juvenile Justice*. Retrieved from: http://www.macfound.org/press/publications/juvenile-justice-new-models-for-reform/

Field, A. (2009). *Discovering Statistics Using SPSS*: SAGE.

France, J., & Kramer, S. (2001). *Communication and Mental Illness: Repainting the picture*. London: Jessica Kingsley.

Fuchs, D., Mock, D., Morgan, P. L., & Young, C. L. (2003). Responsiveness-to- Intervention: Definitions, Evidence, and Implications for the Learning Disabilities Construct. *Learning Disabilities: Research & Practice, 18*(3), 157-171.

Gallagher, A. L., & Chiat, S. (2009). Evaluation of speech and language therapy interventions for pre- school children with specific language impairment: a comparison of outcomes following specialist intensive, nursery-based and no intervention. *International Journal*

of Language & Communication Disorders, 44(5), 616-638. doi:10.1080/13682820802276658

Games, F., Curran, A., & Porter, S. (2012). A small-scale pilot study into language difficulties in children who offend. *theory, research and practice in educational psychology, 28*(2), 127-140. doi:10.1080/02667363.2012.665355

Gascoigne, M. (2006). *Supporting children with speech, language and communication needs within integrated children's services*. Retrieved from London: https://www.mgaconsulting.org.uk/Supporting_children-website.pdf

Gascoigne, M. (2013). The Balanced System. Retrieved from: https://www.mgaconsulting.org.uk/balanced-system/

Glogowska, M., Campbell, R., Peters, T. J., Roulstone, S., & Enderby, P. (2002). A multimethod approach to the evaluation of community preschool speech and language therapy provision. *Child: Care, Health and Development, 28*(6), 513-521. doi:10.1046/j.1365-2214.2002.00297.x

Glogowska, M., Roulstone, S., Peters, T. J., & Enderby, P. (2006). Early speech- and language-impaired children: linguistic, literacy, and social outcomes. *Developmental Medicine & Child Neurology, 48*(6), 489-494. doi:10.1017/S0012162206001046

Gralton, E. (2014). Foetal alcohol spectrum disorder (FASD) - its relevance to forensic adolescent services. *Journal of Intellectual Disabilities and Offending Behaviour, 5*(3), 124-124.

Grayling, C. (2013). *Transforming Rehabilitation - a revolution in the way we manage offenders*. London

Gregory, J., & Bryan, K. (2009). Evaluation of the Leeds Speech and Language Therapy Service Provision within the Intensive Supervision and Surveillance Programme provided by the Leeds Youth Offending Team.

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. doi:10.3109/13682822.2010.490573

Grubbs, F. E. (1969). Procedures for Detecting Outlying Observations in Samples. *Technometrics, 11*(1), 1-21. doi:10.1080/00401706.1969.10490657

Hammill, D. D., Brown, V. L., Larsen, S. C., & Wiederholt, J. L. (1994). *Test of Adolescent and Adult Language* (3rd ed.). Austin, TX: Pro-Ed.

Hanson, W. E., Creswell, J. W., Plano Clark, V. L., Petska, K. S., & Creswell, J. D. (2005). Mixed Methods Research Designs in Counseling Psychology. *Journal of Counseling Psychology, 52*(2), 224-235. doi:10.1037/0022-0167.52.2.224

Harris, L. R., & Brown, G. T. L. (2013). Opportunities and obstacles to consider when using peer- and self- assessment to improve student learning: Case studies into teachers' implementation. *Teaching and Teacher Education, 36*, 101-111. doi:10.1016/j.tate.2013.07.008

Head Start Resource Center. (2011). *The Head Start Parent, Family, And Community Engagement Framework. Promoting Family Engagement And School Readiness, From Prenatal To Age 8.* Retrieved from: http://www.ohcac.org/HeadStart/HS_PARENT,_FAMILY,_AND_COMMUNITY_ENGAGEMENT_FRAMEWORK.pdf

Heidegger, M. (1962). *Being and time / translated by John Macquarrie & Edward Robinson*. London: London : S.C.M.Press, 1962.

Her Majesty's Inspectorate of Prisons. (2018a). *Unannounced inspection of HM YOI Feltham (Feltham A - Children and Young People)*.

Her Majesty's Inspectorate of Prisons. (2018b). *Unannounced inspection of HM YOI Wetherby and Keppel*.

Her Majesty's Inspectorate of Prisons. (2017). *Unannounced inspection of HM YOI Cookham Wood*.

Her Majesty's Inspectorate of Prisons. (2013). *HMP/YOI Feltham (Feltham A – children and young people)*. London

Hertfordshire Community NHS Trust. (2014). *The 3 Tier Model of Speech and Language Therapy Provision into Schools and Early Years Settings within Hertfordshire and West Essex*. Retrieved from: http://www.hertsgovernors.org/wp-content/uploads/2014/10/SLT-Provision-3-Tier-model.pdf

Hodges, B., Regehr, G., & Martin, D. (2001). Difficulties in Recognizing One's Own Incompetence: Novice Physicians Who Are Unskilled and Unaware of It. *Academic Medicine, 76*(10 Suppl), S87-S89.

Home Office. (2013). Police recorded crime and outcomes open data tables. Retrieved from: https://www.gov.uk/government/statistics/police-recorded-crime-open-data-tables

Hopkins, T., Clegg, J., & Stackhouse, J. (2018). Examining the association between language, expository discourse and offending behaviour: an investigation of direction, strength and independence. *International Journal of Language & Communication Disorders, 53*(1), 113-129. doi:10.1111/1460-6984.12330

Hopkins, T., Clegg, J., & Stackhouse, J. (2016). Young offenders' perspectives on their literacy and communication skills. *International Journal of Language & Communication Disorders, 51*(1), 95-109. doi:10.1111/1460-6984.12188

Horan, W. P., Kern, R. S., Shokat-Fadai, K., Sergi, M. J., Wynn, J. K., & Green, M. F. (2009). Social Cognitive Skills Training in Schizophrenia: An Initial Efficacy Study of Stabilized Outpatients. *Schizophrenia Research, 107*(1), 47-54. doi:10.1016/j.schres.2008.09.006

House of Commons. (1839). *Reports relating to Parkhurst Prison*. Cambridge: Parliament

Howe, S. G. (1847). *An essay on separate and congregate systems of prison discipline: being a report made to the Boston Prison Discipline Society*. Boston, US. Retrieved from: https://babel.hathitrust.org/cgi/pt?id=hvd.32044010678522;view=1up;seq=125

Hughes, N., Chitsabesan, P., Bryan, K., Borschmann, R., Swain, N., Lennox, C., & Shaw, J. (2017). Language impairment and comorbid vulnerabilities among young people in custody. *Journal of Child Psychology and Psychiatry, 58*(10), 1106-1113. doi:10.1111/jcpp.12791

Hughes, N., Williams, H., Chitsabesan, P., Davies, R., & Mounce, L. (2012). *Nobody made the connection: The prevalence of neurodisability in young people who offend*. Retrieved from London: https://www.childrenscommissioner.gov.uk/publication/nobody-made-the-connection/

Humber, E., & Snow, P. C. (2001). The oral language skills of young offenders: A pilot investigation. *Psychiatry, Psychology and Law, 8*(1), 1-11. doi:10.1080/13218710109524999

Irwin, A. (2010). Social constructionism. In R. Wodak, B. Johnstone, & P. Kerswill (Eds.), *The Sage Handbook of Sociolinguistics* (pp. 100-112): Sage.

Joffe, V. L. (2015). An international perspective: supporting adolescents with speech, language, and communication needs in the United Kingdom. *Seminars in speech and language, 36*(1), 74. doi:10.1055/s-0034-1396448

Joffe, V. L. (2011). *Narrative Improvement Programme*. London: Routledge.

Joffe, V. L. (2008). Some (but still insufficient) evidence exists for language interventions for school-age children with developmental speech and language impairments. *Evidence-Based Communication Assessment and Intervention, 2*(2), 76-80. doi:10.1080/17489530802252775

Joffe, V. L., & Nippold, M. A. (2012). Progress in Understanding Adolescent Language Disorders Prologue. *Language Speech and Hearing Services in Schools, 43*(4), 438-444. doi:10.1044/0161-1461(2012/12-0052)

Johnston, N. (2009). Evolving Function Early Use of Imprisonment as Punishment. *The Prison Journal, 89*(1), 10-34. doi:10.1177/0032885508329761

Justice Analytical Services. (2018). *Understanding Childhood Adversity, Resilience and Crime*. Retrieved from: https://www.gov.scot/publications/understanding-childhood-adversity-resilience-crime/

Justice, L. M., Logan, J., Jiang, H., & Schmitt, M. B. (2017). Algorithm-driven dosage decisions (AD 3): Optimizing treatment for children with language impairment. *American Journal of Speech-Language Pathology, 26*(1), 57-68. doi:10.1044/2016_AJSLP-15-0058

Kaal, H. L., Brand, E. F. J. M., & Nieuwenhuijzen, M. v. (2012). Serious juvenile offenders with and without intellectual disabilities. *Journal of Learning Disabilities and Offending Behaviour, 3*(2), 66-76. doi:10.1108/20420921211280051

Kane, J. (1996). Prison palace or 'Hell upon earth': Leicester County Gaol under the separate system 1846-1865. *Leicestershire Archaeological and Historical Society, 70*, p128-146.

Karniski, W. M., Levine, M. D., Clarke, S., Palfrey, J. S., & Meltzer, L. J. (1982). A study of neurodevelopmental findings in early adolescent delinquents. *Journal of Adolescent Health Care, 3*(3), 151-159. doi:10.1016/S0197-0070(82)80118-6

Kaufman, A. S., & Kaufman, N. L. (1990). *Kaufman Brief Intelligence Test*. Circle Pines, MN: American Guidance Service.

Kelly, A., & Sains, B. (2009). *Talkabout for Teenagers: Developing Social and Emotional Communication Skills*: Speechmark.

Kennedy, E. (2013). *Children and Young People in Custody*. London Retrieved from: https://www.justiceinspectorates.gov.uk/prisons/wp-content/uploads/sites/4/2014/03/hmip-children-young-people-in-custody-12-13.pdf

Kievit, R. A., Lindenberger, U., Goodyer, I. M., Jones, P. B., Fonagy, P., Bullmore, E. T., & Dolan, R. J. (2017). Mutualistic Coupling Between Vocabulary and Reasoning Supports Cognitive Development During Late Adolescence and Early Adulthood. *Psychological Science, 28*(10), 1419-1431. doi:10.1177/0956797617710785

Klem, M., Melby-Lervåg, M., Hagtvet, B., Lyster, S.-A. H., Gustafsson, J.-E., & Hulme, C. (2015). Sentence repetition is a measure of children's language skills rather than working memory limitations. *Developmental Science, 18*(1), 146-154. doi:10.1111/desc.12202

Knott, L. (2018). *Speech and language therapy in prison health*. Paper presented at the South Eastern Health and Social Care Trust, Northern Ireland.

Kurtz, M. M., & Mueser, K. T. (2008). A Meta-Analysis of Controlled Research on Social Skills Training for Schizophrenia. *Journal of Consulting and Clinical Psychology, 76*(3), 491-504. doi:10.1037/0022-006X.76.3.491

Labaree, R. V. (2002). The risk of ' going observationalist': negotiating the hidden dilemmas of being an insider participant observer. *Qualitative Research, 2*(1), 97-122. doi:10.1177/1468794102002001641

Laming, L. (2016). *In Care, Out of Trouble*. Retrieved from London: http://www.prisonreformtrust.org.uk/Portals/0/Documents/In%20care%20out%20of%20trouble%20summary.pdf

Lammy, D. (2017). *The Lammy Review: An independent review into the treatment of, and outcomes for, Black, Asian and Minority Ethnic individuals in the Criminal Justice System*. London Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643001/lammy-review-final-report.pdf

LaVigne, M., & Van Rybroek, G. (2014). 'He Got in My Face so I Shot Him': How defendants' language impairments impair attorney-client relationships. In *Univ. of Wisconsin Legal Studies Research Paper No. 1228* (pp. 45). Wisconsin: University of Wisconsin.

Law, J., Boyle, J., Harris, F., Harkness, A., & Nye, C. (1998). Screening for speech and language delay: a systematic review of the literature. *Health technology assessment, 2*(9), 1-184.

Law, J., Lindsay, G., Peacey, N., Gascoigne, M., Soloff, N., Radford, J., & Band, S. (2002). Consultation as a model for providing speech and language therapy in schools: a panacea or one step too far? *Child Language Teaching and Therapy, 18*(2), 145-163. doi:10.1191/0265659002ct232oa

Law, J., Reilly, S., & Snow, P. C. (2013). Child Speech, Language and Communication Need Re-Examined in a Public Health Context: A New Direction for the Speech and Language Therapy Profession. *International Journal of Language & Communication Disorders, 48*(5), 486-496. doi:10.1111/1460-6984.12027

Law, J., Rush, R., Schoon, I., & Parsons, S. (2009). Modeling Developmental Language Difficulties From School Entry Into Adulthood: Literacy, Mental Health, and Employment Outcomes. *Journal of Speech, Language, and Hearing Research, 52*(6), 1401-1416.

Law, J., Tomblin, J., & Zhang, X. (2008). Characterizing the Growth Trajectories of Language-Impaired Children Between 7 and 11 Years of Age. *Journal of Speech, Language, and Hearing Research, 51*(3), 739-749. doi:10.1044/1092-4388(2008/052)

Leadsom, A., Field, F., Burstow, P., & Lucas, C. (2013). *The 1001 Critical Days: the Importance of Conception to the Age of Two Period.* Retrieved from: http://www.1001criticaldays.co.uk/

Lee, W. (2013). *Talk of the Town Evaluation Report*. Retrieved from London: https://www.thecommunicationtrust.org.uk/media/32943/talk_of_the_town_evaluation_report.pdf

Lennox, C., King, C., Chitsabesan, P., Theodosiou, L., & Shaw, J. (2013). *The development and pilot of the Comprehensive Health Assessment Tool (CHAT): Young People in the Secure Estate*. Retrieved from Manchester: https://www.click2go.umip.com/i/coa/chat.html

Lewis, A. H., Hughes, C., Foster, M., & Turner, K. (2016). Improving the management of prisoners with autistic spectrum disorders (ASD). *Prison Service Journal*(226), 22-26.

Linares-Orama, N. (2005). Language-learning disorders and youth incarceration. *Journal of Communication Disorders, 38*(4), 311-319. doi:10.1016/j.jcomdis.2005.02.006

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. doi:10.1348/000709906X171127

Livanou, M., Furtado, V., & Singh, S. (2016). Prevalence and nature of mental disorders among young offenders in custody and community: A meta-analysis. In (Vol. 33, pp. S460). doi.org/10.1016/j.eurpsy.2016.01.1675

Locke, A., Ginsborg, J., & Peers, I. (2002). Development and disadvantage: implications for the early years and beyond. *International Journal of Language & Communication Disorders, 37*(1), 3-15. doi:10.1080/13682820110089911

London Metropolitan Archives. (2011). Prison Records. In (Vol. Information Leaflet Number 59). City of London: London Metropolitan Archives.

Loucks, N. (2007). *No One Knows - offenders with learning difficulties and learning disabilities - review of prevalence and associated needs*. Retrieved from London: http://www.prisonreformtrust.org.uk/WhatWeDo/ProjectsResearch/LearningdisabilitiesanddifficultiesNoOneKnowspublications

Lount, S. A., Hand, L., Purdy, S., & France, A. (2017). Tough talk: Youth offenders' perceptions of communicating in the Youth Justice system in New Zealand. *Australian & New Zealand Journal of Criminology*.

Lowe, H., Henry, L., Müller, L. M., & Joffe, V. L. (2018). Vocabulary intervention for adolescents with language disorder: a systematic review. *International Journal of Language & Communication Disorders, 53*, 199-217. doi:10.1111/1460-6984.12355

Lushey, C., Hyde-Dryden, G., Holmes, L., & Blackmore, J. (2017). *Evaluation of the No Wrong Door Innovation Programme Research report*. (51). Loughborough

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. doi:10.3109/13682820903105137

Masidlover, M. (1979). The Derbyshire language scheme: remedial teaching for language delayed children. *Child: Care, Health and Development, 5*(1), 9-16. doi:10.1111/j.1365-2214.1979.tb00105.x

McCartney, E. (1999). Scoping and Hoping: The Provision of Speech and Language Therapy Services for Children with Special Educational Needs. *British Journal of Special Education, 26*(4), 196-200.

McCartney, E., Boyle, J., Ellis, S., Bannatyne, S., & Turnbull, M. (2011). Indirect language therapy for children with persistent language impairment in mainstream primary schools: outcomes from a cohort intervention. *International Journal of Language & Communication Disorders, 46*(1), 74-82. doi:10.3109/13682820903560302

McCool, S., & Stevens, I. C. (2011). Identifying speech, language and communication needs among children and young people in residential care. *International Journal of Language & Communication Disorders, 46*(6), 665-674. doi:10.1111/j.1460-6984.2011.00037.x

McDaniel, S., Heil, K. M., Houchins, D. E., & Duchaine, E. L. (2011). A Guide to Implementing Response to Intervention in Long-Term Residential Juvenile Justice Schools. *Journal of Correctional Education, 62*(1), 51-68.

McGarvey, D. (2017). *Poverty safari : understanding the anger of Britain's underclass*. La Vergne: Luath Press Ltd.

McLynn, F. J., & McLynn, F. J. (1989). *Crime and punishment in eighteenth-century England*. London: London : Routledge, 1989.

McNulty, T. L., Bellair, P. E., & Watts, S. J. (2013). Neighborhood Disadvantage and Verbal Ability as Explanations of the Black–White Difference in Adolescent Violence. *Crime & Delinquency, 59*(1), 140-160. doi:10.1177/0011128712461472

Ministry of Justice. (1999). Youth Justice and Criminal Evidence Act. UK

Minnitt, D. (2018) *Supporting Young People with SLCN in the Justice System/Interviewer: C. Moser*. RCSLT Webinar Series.

Moffitt, T. E. (1994). Natural histories of delinquency. In E. G. M. Weitekamp & K.-J. Kerner (Eds.), *Cross-national longitudinal research on human development and criminal behavior* (pp. 3 - 61). Netherlands: Kluwer Academic Publishers.

Moffitt, T. E. (1990). The Neuropsychology of Juvenile Delinquency: A Critical Review. *Crime and Justice, 12*, 99-169.

Moffitt, T. E., Gabrielli, W. F., Mednick, S. A., & Schulsinger, F. (1981). Socioeconomic status, IQ, and delinquency. *Journal of Abnormal Psychology, 90*(2), 152-156. doi:10.1037/0021-843X.90.2.152

Moffitt, T. E., Lynam, D. R., & Silva, P. A. (1994). Neuropsychological tests predicting persistent male delinquency. *Criminology, 32*, 277-300.

Morrow, S. L. (2005). Quality and Trustworthiness in Qualitative Research in Counseling Psychology. *Journal of Counseling Psychology, 52*(2), 250-260. doi:10.1037/0022-0167.52.2.250

Morse, J. (2010). Procedures and practice of mixed method design: maintaining control, rigor, and complexity. In A. Tashakkori & C. Teddlie (Eds.), *SAGE handbook of mixed methods in social & behavioral research* (pp. 339-352). Thousand Oaks, CA: SAGE Publications.

Mottram, P. G. (2007). *HMP Liverpool, Styal and Hindley Study Report*. Retrieved from: https://www.choiceforum.org/docs/hmpliverpool.pdf

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. doi:10.1080/17549500802579095

Muir, C., Callaghan, M., Bor, W., Najman, J., & Williams, G. (2011). Speech concerns at 5 years and adult educational and mental health outcomes. *Journal of Paediatrics and Child Health, 47*(7), 423-428. doi:10.1111/j.1440-1754.2010.01994.x

Murad, M. H., Asi, N., Alsawas, M., & Alahdab, F. (2016). New evidence pyramid. *BMJ Evidence-Based Medicine*(21).

Muñoz, L. C., Frick, P. J., Kimonis, E. R., & Aucoin, K. J. (2008). Verbal ability and delinquency: testing the moderating role of psychopathic traits. *Journal of Child Psychology and Psychiatry, 49*(4), 414-421. doi:10.1111/j.1469-7610.2007.01847.x

Myers, W. C., & Mutch, P. J. (1992). Language disorders in disruptive behavior disordered homicidal youth. *Journal of Forensic Science, 37*(3), 919-922.

Nagy, W., & Townsend, D. (2012). Words as Tools: Learning Academic Vocabulary as Language Acquisition. *Reading Research Quarterly, 47*(1), 91-108. doi:10.1002/RRQ.011

Nelson, L. K. (2016). *Research in Communication Sciences and Disorders : Methods for Systematic Inquiry* (3rd ed. ed.). San Diego: San Diego : Plural Publishing, Inc, 2016.

National Health Service. (2018). Ethnic Category Code. Retrieved from: https://www.datadictionary.nhs.uk/data_dictionary/attributes/e/end/ethnic_category_code_de.asp?shownav=1

Nippold, M. A. (2007). *Later language development : school-age children, adolescents, and young adults* (3rd ed. ed.). Austin, TX: Austin, TX : PRO-ED, 2007.

O'Mahony, B. M. (2012). Accused of murder: supporting the communication needs of a vulnerable defendant at court and at the police station. *Journal of Learning Disabilities and Offending Behaviour, 3*(2), 77-84. doi:10.1108/20420921211280060

O'Mahony, B. M. (2010). The Emerging Role of the Registered Intermediary with the Vulnerable Witness and Offender: Facilitating Communication with the Police and Members of the Judiciary. *British Journal of Learning Disabilities, 38*(3), 232-237. doi:10.1111/j.1468-3156.2009.00600.x

Offender Health Collaborative. (2015). *Liaison and Diversion Manager and Practitioner Resources: Police and Courts*. London: NHS England Retrieved from: https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/10/ohc-paper-08.pdf

Office for National Statistics. (2018). *Children looked after in England (including adoption), year ending 31 March 2018*. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/757922/Children_looked_after_in_England_2018_Text_revised.pdf

Office for National Statistics. (2017). *Permanent and Fixed Period Exclusions in England: 2016 to 2017*. Retreived from: https://www.gov.uk/government/statistics/permanent-and-fixed-period-exclusions-in-england-2016-to-2017

Parsons, S., & Branagan, A. (2013). *Word Aware*. London: Routledge.

Paulhus, D. L., & Vazire, S. (2007). The Self-Report Method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of Research Methods in Personality Psychology*. London: The Guildford Press.

Petersen, I., Bates, J., Onofrio, B. M., Coyne, C., Lansford, J., Dodge, K., Pettit, G., Van Hulle, C. (2013). Language Ability Predicts the Development of Behavior Problems in Children. *Journal of Abnormal Psychology, 122*(2), 542-557. doi:10.1037/a0031963

Petheram, B., & Enderby, P. (2001). Demographic and epidemiological analysis of patients referred to speech and language therapy at eleven centres 1987-95. *International Journal of Language & Communication Disorders, 36*(4), 515-525. doi:10.1080/13682820110075015

Pinborough-Zimmerman, J., Satterfield, R., Miller, J., Bilder, D., Hossain, S., & McMahon, W. (2007). Communication Disorders: Prevalence and Comorbid Intellectual Disability, Autism, and Emotional/Behavioral Disorders. *American Journal of Speech-Language Pathology, 16*(4), 359-367. doi:10.1044/1058-0360(2007/039)

Quinsey, V. L. (1998). *Violent offenders : appraising and managing risk*. Washington, DC: Washington, DC : American Psychological Association, 1998.

Ramsbotham, L. (1996). *Annual Report of HM Chief Inspector*. London

Rance, N., Moller, N. P., & Clarke, V. (2017). ' Eating disorders are not about food, they're about life': Client perspectives on anorexia nervosa treatment. *Journal of Health Psychology, 22*(5), 582-594. doi:10.1177/1359105315609088

Rapley, T. (2004). Interviews. In C. Seale, G. Gobo, J. F. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 16-34). London: SAGE Publications Ltd.

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. doi:10.1044/jslhr.4103.688

Revolving Doors Agency. (2012). *Balancing Act : A Briefing for Directors of Public Health*. Retrieved from: http://www.revolving-doors.org.uk/documents/hope-inside-summary-report/

Ripley, K., & Yuill, N. (2005). Patterns of language impairment and behaviour in boys excluded from school. *British Journal of Educational Psychology, 75*, 37-50.

SAGE Handbook of Mixed Methods in Social & Behavioral Research. (2010). In A. Tashakkori & C. Teddlie (Eds.), (2 ed.). doi:10.4135/9781506335193

Sanger, D. D., Coufal, K., Scheffler, M., & Searcey, R. (2003). Implications of the personal perceptions of incarcerated adolescents concerning their own communicative competence. *Communication Disorders Quarterly, 24*(2), 64.

Sanger, D. D., Hux, K., & Ritzman, M. J. (1999). Female juvenile delinquents' pragmatic awareness of conversational interactions. *Journal of Communication Disorders, 32*(5), 281-295. doi:http://dx.doi.org/10.1016/S0021-9924(99)00003-9

Sanger, D. 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. doi:10.1177/152574010102300104

Sanger, D. D., Moore-Brown, B. J., Montgomery, J. K., & Larson, V. L. (2002). Service delivery framework for adolescents with communication problems who are involved in violence. *Journal of Communication Disorders, 35*, 293-303. doi:10.1016/S0021-9924(02)00066-7

Sanger, D. D., Scheffler, M., Drake, B., Hilgert, K., Creswell, J. W., & Hansen, D. J. (2000). Maltreated Female Delinquents Speak about Their Communication Behaviors. *Communication Disorders Quarterly, 21*(3), 176-187.

Schmitt, M. B., Justice, L. M., & Logan, J. A. R. (2017). Intensity of language treatment: contribution to children's language outcomes. *International Journal of Language & Communication Disorders, 52*(2), 155-167. doi:10.1111/1460-6984.12254

Secondary Care Analysis Team. (2017). *Hosptial Outpatient Activity 2016/2017*. Retrieved from London: https://digital.nhs.uk/data-and-information/publications/statistical/hospital-outpatient-activity/2016-17

Semel, E., & Secord, W. A. (1989). The Test of Language Competence. Houston, TX: Psychological Corporation.

Semel, E., Wiig, E. H., & Secord, W. A. (2017). Clinical Evaluation of Language Fundamentals. *CELF-5 UK* (5 ed.). UK: Pearson Clinical Assessment.

Semel, E., Wiig, E. H., & Secord, W. A. (2006). Clinical Evaluation of Language Fundamentals *CELF-4 UK* (4 ed.). UK: Pearson Clinical Assesssment.

Shaw, J., Bailey, S., Tarbuck, P., Chitsabean, P., Theodosiou, L., & Lennox, C. (2014). The Comprehensive Health Assessment Tool (CHAT). Retrieved from Manchester: https://www.click2go.umip.com/i/coa/chat.html

Shaw, J., Bailey, S., Tarbuck, P., Chitsabean, P., Theodosiou, L., Lennox, C., King, C., O'Connor, M., Law, H., Calame, S., Turner, O., Alam, F., McCartan, F., Seethapathy, V., Thomas, R., Verstreken, P. (2014). *CHAT Manual: Young People in the Secure Estate*. Retrieved from Manchester: https://www.click2go.umip.com/i/coa/chat.html

Shaw, S. (1946). *Guttersnipe*: S. Low, Marston.

Shelley-Tremblay, J., Brien, N., & Langhinrichsen-Rohling, J. (2007). Reading disability in adjudicated youth: Prevalence rates, current models, traditional and innovative treatments. *Aggression and Violent Behavior, 12*(3), 376-392. doi:10.1016/j.avb.2006.07.003

Shore, H. (2002). Transportation, Penal Ideology and the Experience of Juvenile Offenders in England and Australia in the Early Nineteenth Century. *Crime, Histoire & Sociétés / Crime, History & Societies, 6*(2), 81-102.

Slaughter, B., Fann, J. R., & Ehde, D. (2003). Traumatic brain injury in a county jail population: prevalence, neuropsychological functioning and psychiatric disorders. *Brain Injury, 17*(9), 731-741. doi:10.1080/0269905031000088649

Snow, P. C., Bagley, K., & White, D. (2017). Speech-language pathology intervention in a youth justice setting: Benefits perceived by staff extend beyond communication. *International Journal of Speech-Language Pathology*, 1-10. doi:10.1080/17549507.2017.1297484

Snow, P. C., & Powell, M. B. (2012). Youth (in)justice: Oral language competence in early life and risk for engagement in antisocial behaviour in adolescence. *Trends and Issues in Crime and Criminal Justice*(435), 1-6.

Snow, P. C., & Powell, M. B. (2011). Oral language competence in incarcerated young offenders: Links with offending severity. *International Journal of Speech-Language Pathology, 13*(6), 480-489. doi:10.3109/17549507.2011.578661

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. doi:10.1111/j.1099-0860.2006.00076.x

Snow, P. C., & Powell, M. B. (2005). What's the story? An exploration of narrative language abilities in male juvenile offenders. *Psychology, Crime & Law, 11*(3), 239-253. doi:10.1080/1068316042000209323

Snow, P. C., Powell, M. B., & Sanger, D. D. (2012). Oral Language Competence, Young Speakers, and the Law. *Language Speech and Hearing Services in Schools, 43*(4), 496-506. doi:Doi 10.1044/0161-1461(2012/11-0065)

Snow, P. C., Sanger, D. D., Belieu, K., Caire, L. M., & Eadie, P. A. (2015c). Snow et al.'s response to Richard Armstrong's Letter to the Editor. *International Journal of Language & Communication Disorders, 50*(4), 567-568. doi:10.1111/1460-6984.12163

Snow, P. C., Sanger, D. D., Caire, L. M., Eadie, P. A., & Dinslage, T. (2015a). Improving communication outcomes for young offenders: a proposed response to intervention framework. *International Journal of Language & Communication Disorders, 50*(1), 1-13. doi:10.1111/1460-6984.12117

Snow, P. C., Woodward, M., Mathis, M., & Powell, M. B. (2015b). Language functioning, mental health and alexithymia in incarcerated young offenders. *International Journal of Speech-Language Pathology, 18*(1), 20-31. doi:10.3109/17549507.2015.1081291

Snow, P. C., & Woodward, M. N. (2016). Intervening to address communication difficulties in incarcerated youth: A Phase 1 clinical trial. *International Journal of Speech-Language Pathology*, 1-15. doi:10.1080/17549507.2016.1216600

Snowling, M., Adams, J., 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., Duff, F. J., Nash, H. M., & Hulme, C. (2015). Language profiles and literacy outcomes of children with resolving, emerging, or persisting language impairments. *Journal of Child Psychology and Psychiatry*, 1360-1369. doi:10.1111/jcpp.12497

Spencer, S., Clegg, J., Lowe, H., & Stackhouse, J. (2017). Increasing adolescents' depth of understanding of cross- curriculum words: an intervention study. *International Journal of Language & Communication Disorders, 52*(5), 652-668. doi:10.1111/1460-6984.12309

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 and Therapy, 26*(2), 144-162. doi:10.1177/0265659010368757

Spreen, O., Gaddes, W. H., Meikle, S., & Spellacy, F. J. (1969). Developmental norms for 15 neuropsychological tests age 6 - 15. *Cortex, 5*(2), 170 - 191.

Stack, J. A. (1979). Deterrence and Reformation in Early Victorian Social Policy: The Case of Parkhurst Prison, 1838-1864. *Historical Reflections / Réflexions Historiques, 6*(2), 387-404.

Stackhouse, J. (1997). *Childrens speech and literacy difficulties : a psycholinguistic framework*. London, England: Whurr Publishers.

Stansfield, J. (2012). Parents with Learning Disabilities and Speech and Language Therapy. A Service Evaluation of Referrals and Episodes of Care. *British Journal of Learning Disabilities, 40*(3), 169-176. doi:10.1111/j.1468-3156.2011.00690.x

Statistics on Race and the Criminal Justice System 2012. (2013). London, UK Retrieved from: https://www.gov.uk/government/statistics/statistics-on-race-and-the-criminal-justice-system-2012

Stattin, H., & Klackenberg-Larsson, I. (1993). Early Language and Intelligence Development and Their Relationship to Future Criminal Behavior. *Journal of Abnormal Psychology, 102*(3), 369-378. doi:10.1037/0021-843X.102.3.369

Steffensmeier, D., & Demuth, S. (2001). Ethnicity and judges' sentencing decisions: Hispanic-Black-White comparisons. *Criminology, 39*(1), 145-178. doi:10.1111/j.1745-9125.2001.tb00919.x

Strand, S., & Lindsay, G. (2012). *Ethnic disproportionality in the identification of speech language and communication needs (SLCN) and autism spectrum disorders (ASD): 2005-2011*. Retrieved from London: https://www.gov.uk/government/publications/ethnic-disproportionality-in-the-identification-of-speech-language-and-communications-needs-slcn-and-autism-spectrum-disorders-asd-2005-to-2011

Strunk, J., Leisen, M., & Schubert, C. (2017). Using a multidisciplinary approach with children diagnosed with autism spectrum disorder. *Journal of Interprofessional Education & Practice, 8*, 60-68. doi:10.1016/j.xjep.2017.03.009

Sutherland, A., Disley, E., Cattell, J., & Bauchowitz, S. (2017). *An analysis of trends in first time entrants to the youth justice system*. London

Swain, N. R. (2017). *Speech-language pathology intervention for young offenders*. PhD Thesis. University of Melbourne. Melbourne, Australia.

Taylor, C. (2016). *Review of the Youth Justice System in England and Wales*. London

Teeters, N. K. (1951). The Prison Systems of England. *Journal of Criminal Law and Criminology, 41*(5), pp. 578-589.

Threats, T. T. (2006). Towards an International Framework for Communication Disorders: Use of the ICF. *Journal of communication disorders, 39*(4), 251-265. doi:10.1016/j.jcomdis.2006.02.002

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.

Transforming Youth Custody. (2014). Retrieved from: https://consult.justice.gov.uk/digital-communications/transforming-youth-custody/results/transforming-youth-custody-consultation-response.pdf

UK Government. (2018). UK Caldicott Guardian Council. Retrieved from: https://www.gov.uk/government/groups/uk-caldicott-guardian-council

US Government. (2004) The Individuals with Disabilities Education Improvement Act (IDEA 2004), PL 108-446.

Van Riper, C. (1978). *Speech correction, principles and methods* (6th ed.): New York: Prentice-Hall.

Wagner, C. O., Gray, L. L., & Potter, R. E. (1983). Communicative disorders in a group of adult female offenders. *Journal of Communication Disorders, 16*(4), 269-277. doi:10.1016/0021-9924(83)90011-4

Weaver Jones, S., & Healey, W. C. (1973). *Taskforce on Speech Pathology and Audiology Service Needs in Prison*. Washington D.C:

Wechsler, D. (1997). Wechsler Adult Intelligence Scale - Third UK Edition In: Pearson UK.

Westermann, G., Thomas, M. S. C., & Karmiloff-Smith, A. (2010). Neuroconstructivism. In U. Goswami (Ed.), *The Wiley-Blackwell Handbook of Childhood Cognitive Development, Second edition* (pp. 723-748): Blackwell Publishing Ltd.

Wiig, E., & Secord, W. (1992). Test of Word Knowledge. In: Psychological Corp.

Wilson, T. (2018). *Understanding Childhood Adversity, Resilience and Crime*. Scotland: Justice Analytical Services

Winstanley, M., Webb, R. T., & Conti-Ramsden, G. (2018). More or less likely to offend? Young adults with a history of identified developmental language disorders. *International Journal of Language & Communication Disorders, 53*(2), 256-270. doi:10.1111/1460-6984.12339

World Health Organization. (2007). *International classification of functioning, disability and health. Children & youth version : ICF-CY*. Geneva: World Health Organization.

World Health Organisation. (1994). The International Classification of Diseases 10, Classification of Mental and Behavioural Disorders. Geneva: World Health Organization.

World Health Organization. (1980). Disability Standard. Geneva: World Health Organization.

Youth Custody Report March (2018). London Retrieved from: https://www.gov.uk/government/statistics/youth-custody-data

Youth Justice Board. (2014). *ASSETPlus Model Document*. London, UK Retrieved from: www.gov.uk/government/uploads/system/uploads/attachment_data/file/364092/AssetPlus_Model_Document_1_1_October_2014.pdf

Youth Justice Board. (2016). *Understanding and Improving Reoffending Performance*. Retrieved from: https://yjresourcehub.uk/component/jifile/download/MDhhOGNhYjAwZmQ0Y2Q1M2JhNDg0NzQyZWJiM2E5MmE=/yjb-understanding-and-improving-reoffending-performance-pdf.html

Youth Justice Statistics 2014/15 England & Wales. (2016). Retrieved from: https://www.gov.uk/government/statistics/youth-justice-annual-statistics-2014-to-2015

Youth Justice Statistics 2016/17. (2018). London Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/676072/youth_justice_statistics_2016-17.pdf

16. Appendices

16.1. Appendix 1 - Phase 1 Consent Form

Language Assessment

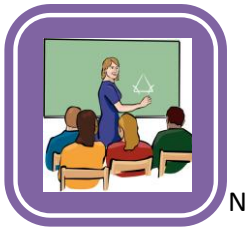
I agree to do the assessment

Name:_____

I agree to my assessment results being shared with healthcare

Name:
_____

I agree to my assessment results being shared with education



Name:
_____

I agree to my assessment results being used for staff training

Name:
_____

16.2. Appendix 2 - Phase 1 Assessment Guidelines

CELF Project - Assessment Guidelines

- Try to complete the assessment in one session, if obviously distracted however do discontinue
    - Make it clear on the front sheet if completed in more than one session
- Do not put name on front sheet, use prison number as identifier
- Keep a separate sheet with name and prison number, this should be stored in a different location to the completed assessments
- Complete the assessment form in full, do not use abbreviations or shorthand
- Complete scoring on a separate sheet of paper
- Store all assessment forms and scoring forms separately in a locked cabinet

- Introduce the assessment and get consent for sharing information with Health and Education (example script below)

  "My name is NAME. I'm a speech and language therapist and I'm going to do a short assessment with you today, it will take about 30 minutes. The assessment looks at your understanding and use of language. The assessment results will be used to help support you at Feltham and might be used to help train staff.
  Are you happy to do the assessment?
  Are you OK with this information being shared with health and Education?
  Would you be OK with your results being used for training staff?"

- Get participants to sign consent form for each point

- Explain at the end that if they don't hear from you again their language skills are ok and we don't feel they require any extra support, if the results indicate they could benefit from support we will come back and discuss this with them.

16.3. Appendix 3 - Phase 1 Ethics Approval

16.3.1.NHS REC Letter

NHS
Health Research Authority

North East - York Research Ethics Committee
Jarrow Business Centre
Viking Business Park
Rolling Mill Road
Jarrow, Tyne & Wear
NE32 3DT

Telephone: 0191 4283563

21 September 2015

Miss Kim Turner
Department of Human Communication Sciences
University of Sheffield
362 Mushroom Lane, Sheffield
S10 2TS

Dear Miss Turner

Study title:	**A secondary data analysis of the language profiles, socio-cultural demographics and offending behaviours in the male, juvenile custodial population in the UK.**
REC reference:	**15/NE/0262**
IRAS project ID:	**171202**

The Research Ethics Committee reviewed the above application at the meeting held on 11 September 2015. Thank you for attending to discuss the application.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager Mrs Helen Wilson, nrescommittee.northeast-york@nhs.net. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Ethical opinion

The members of the Committee present gave a **favourable ethical opinion** of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below. .

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

A Research Ethics Committee established by the Health Research Authority

16.3.2.Caldicott Guardian Letter

Barnet, Enfield and Haringey NHS
Mental Health NHS Trust

A University Teaching Trust

Barnet, Enfield and Haringey Mental Health Trust
Trust Headquarters
Orchard House
St Ann's Hospital
St Ann's Road
London N15 3TH

Tel: 020 8702 3559
Email: marc.lester@beh-mht.nhs.uk

Miss Kim Turner
Postgraduate Researcher
Dept of Human Communication Sciences
The University of Sheffield
362 Mushroom Lane
Sheffield
S10 2TS

29 September 2016

Dear Miss Turner

Thank you for your letter of 21st September 2016 in relation to my role as Caldicott Guardian and your research into language profiles of the male, juvenile, custodial population in the UK.

The study that you are conducting will require approval by the Trust's Research and Development Committee and I have copied your correspondence to them. I would be happy, subject to the Research and Development Committee's approval to approve this study in relation to Caldicott Guardian requirements.

I will ask the Research and Development Committee to advise me once they have reviewed this.

Yours sincerely

Dr Marc Lester
Deputy Medical Director/Caldicott Guardian
Barnet, Enfield & Haringey MH NHS Trust

Cc: Dr Illyas Mirza, Resarch & Development Committee, BEH

16.3.3.NOCLOR Approval Letter

noclor
RESEARCH SUPPORT

1st Floor, Bloomsbury Building
St Pancras Hospital
4 St Pancras Way
NW1 0PE

Tel: 020 3317 3045
Fax: 020 7685 5830/5788
www.noclor.nhs.uk

17 November 2016

Miss Kim Turner
University of Sheffield
Department of Human Communication Sciences
362 Mushroom Lane
S10 2TS

Dear Miss Kim Turner

This NHS Permission is based on the REC favourable opinion given on **21 September 2015** and the most recent amendment submitted on **17 October 2016**.

I am pleased to confirm that the following study has now received R&D approval, and you may now start your research in **the trust(s) identified below**:

Study Title: A secondary data analysis of the language profiles, socio-cultural demographics and offending behaviours in the male, juvenile custodial population in the UK.
R&D reference: 171202
REC reference: 15/NE/0262

Name of the trust	Name of current PI/LC	Date of permission issue(d)
Barnet Enfield & Haringey NHS Mental Health Trust	Miss Kim Turner	17 November 2016

If any information on this document is altered after the date of issue, this document will be deemed INVALID

Specific Conditions of Permission (if applicable)
Researcher will abide by the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research. Data sharing, transfer and analysis must be handled in accordance with the requirements of the Data Protection Act 1998. Research is subject to conditions for handling data as set out in the Caldicott Principles.
If any information on this document is altered after the date of issue, this document will be deemed INVALID

Yours sincerely,

Mabel Saili
Research Management & Governance Manager

Cc: Principle Investigator(s)/Local Collaborator(s), Sponsor Contact

16.4. Appendix 4 - Additional Phase 1 Results

Distribution Data

Age

		Statistic
Mean		**17.226**
95% Confidence Interval for Mean	Lower Bound	17.042
	Upper Bound	17.409
5% Trimmed Mean		17.232
Median		17.238
Variance		.355
Std. Deviation		.5962
Minimum		**16.1**
Maximum		**18.2**
Range		2.0
Interquartile Range		1.1
Skewness		**-.172**
Kurtosis		**-1.108**

CELF Subtests

Recalling sentences

		Statistic
Mean		**70.03**
95% Confidence Interval for Mean	Lower Bound	65.23
	Upper Bound	74.82
5% Trimmed Mean		71.16
Median		72.00
Variance		212.999
Std. Deviation		**14.594**
Minimum		24
Maximum		89
Range		65
Interquartile Range		18
Skewness		**-1.095**
Kurtosis		**1.470**

Formulated Sentences

		Statistic
Mean		**43.92**
95% Confidence Interval for Mean	Lower Bound	41.33
	Upper Bound	46.52
5% Trimmed Mean		44.63
Median		46.00
Variance		62.291
Std. Deviation		**7.892**
Minimum		21

Maximum	55
Range	34
Interquartile Range	7
Skewness	**-1.500**
Kurtosis	**2.270**

WCR Raw

		Statistic
Mean		**12.79**
95% Confidence Interval for Mean	Lower Bound	11.23
	Upper Bound	14.35
5% Trimmed Mean		12.88
Median		12.00
Variance		22.549
Std. Deviation		**4.749**
Minimum		3
Maximum		21
Range		18
Interquartile Range		6
Skewness		**-.272**
Kurtosis		**-.231**

WCE Raw

		Statistic
Mean		**9.21**
95% Confidence Interval for Mean	Lower Bound	7.63
	Upper Bound	10.79
5% Trimmed Mean		9.21
Median		10.00
Variance		23.036
Std. Deviation		**4.800**
Minimum		0
Maximum		18
Range		18
Interquartile Range		7
Skewness		**.054**
Kurtosis		**-.684**

Word Definitions Raw

		Statistic
Mean		**18.45**
95% Confidence Interval for Mean	Lower Bound	15.59
	Upper Bound	21.30
5% Trimmed Mean		18.42
Median		19.00
Variance		75.551

Std. Deviation	**8.692**
Minimum	2
Maximum	35
Range	33
Interquartile Range	12
Skewness	**-.108**
Kurtosis	**-.686**

Core Language Score Scaled

		Statistic
Mean		**70.00**
95% Confidence Interval for Mean	Lower Bound	63.84
	Upper Bound	76.16
5% Trimmed Mean		70.44
Median		71.50
Variance		331.829
Std. Deviation		**18.216**
Minimum		**24**
Maximum		**104**
Range		80
Interquartile Range		26
Skewness		**-.459**
Kurtosis		**-.092**

Social Skills Assessment

		Statistic
Mean		**70.00**
95% Confidence Interval for Mean	Lower Bound	63.84
	Upper Bound	76.16
5% Trimmed Mean		70.44
Median		71.50
Variance		331.829
Std. Deviation		**18.216**
Minimum		**24**
Maximum		**104**
Range		80
Interquartile Range		26
Skewness		**-.459**
Kurtosis		**-.092**

CHAT Comprehension

		Statistic
N	Valid	41
	Missing	4
Mean		**.34**
Std. Deviation		.762

Skewness	**2.530**
Std. Error of Skewness	.369
Kurtosis	**6.161**
Std. Error of Kurtosis	.724

16.5. Appendix 5 - Survey template

Survey of speech and language therapy services in YOIs in England

Please complete the questionnaire as fully as possible. An opportunity to expand on responses will be given during the subsequent interview.

*Required

1. **Email address** *

2. **Which service do you represent?** *
Mark only one oval.
- HMYOI Cookham Wood
- HMYOI Feltham
- HMYOI Werrington
- HMYOI Wetherby

3. **How many young people (15-18) are there currently within the YOI?** *
Mark only one oval.
- 0-50
- 51-100
- 101-150
- 151-200
- 201+

4. **What is the capacity within the YOI?**
Mark only one oval.
- 0-50
- 51-100
- 101-150
- 151-200
- 201+

About your service

5. **When was the SLT service developed?** *
Mark only one oval.

- ◯ Less than 1 year ago
- ◯ One to five years ago
- ◯ Five to ten years ago
- ◯ More than ten years ago

6. **How much SLT provision do you have at each banding?**
Mark only one oval per row.

	0.2	0.4	0.6	0.8	1.0	1.2	1.4
Band 5	◯	◯	◯	◯	◯	◯	◯
Band 6	◯	◯	◯	◯	◯	◯	◯
Band 7	◯	◯	◯	◯	◯	◯	◯
Band 8	◯	◯	◯	◯	◯	◯	◯

7. **What services do you provide?** *
Tick all that apply.

- ☐ Screening
- ☐ Assessment
- ☐ Intervention 1:1
- ☐ Intervention Groups
- ☐ Advice and Consultation
- ☐ Staff training
- ☐ Accessible information
- ☐ Other: _____

Referrals

8. **How do you get referrals to your service?** *
Tick all that apply.

- ☐ Blanket referral of all admissions
- ☐ CHAT 5
- ☐ Other induction screening
- ☐ Referral forms
- ☐ Other: _____

9. **Are all young people eligible to be referred to the service?**
Mark only one oval.

- ◯ Yes
- ◯ No

10. **Who do you accept referrals from?**
Tick all that apply.

- [ ] Self-referrals
- [ ] Prison staff
- [ ] Education
- [ ] Health
- [ ] Other agencies within prison
- [ ] Family
- [ ] Community agencies
- [ ] Other: _____

Screening & Assessment

11. **Is screening of SLCN completed by an SLT?** *
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Sometimes

12. **Who completes screening assessments for SLCN?** *
Tick all that apply.

- [ ] Primary Care Nurse
- [ ] Mental Health Nurse
- [ ] Other mental health care professional
- [ ] Other primary health care profesional
- [ ] Education staff
- [ ] Prison staff
- [ ] Young person
- [ ] Other: _____

13. **What assessment tools do you use? (Please list all formal and informal tools used)** *

_____

_____

_____

_____

_____

Intervention

14. **What SLT interventions do you offer?** *

Tick all that apply.

- [ ] Speech sounds
- [ ] Stammering
- [ ] Vocabulary
- [ ] Language
- [ ] Pragmatics
- [ ] Memory
- [ ] Social communication skills
- [ ] Developing communication skills for Education
- [ ] Developing communication skills for Offending Behaviour Programmes
- [ ] Developing communication skills for Employability
- [ ] Emotional awareness and coping skills
- [ ] Classroom support
- [ ] Other: _____

15. **How are interventions provided?** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
All 1:1	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	All groupwork

16. **What percentage of time is spent in direct patient contact?** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Indirect	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Direct

☐ Send me a copy of my responses.

Powered by Google Forms

16.6. Appendix 6 - Interview Template

An Evaluation of Speech and Language Therapy Services in English Young Offender Institutions

Interview Template

Service development

How did the service develop? Was a specific model employed? Has a model subsequently been employed? If a model is in place where was this driven from?

Response to Intervention Framework (article to be supplied prior to interview)

What do you think about the model? Feasible in English YOIs? If no, feasible with adaptations? Do you think a better model exists?

Service Frameworks

Do you think we can/should lift frameworks from the community? Should we adapt framework from the CJS? Do we need a specific framework? If so, what should it look like?

Referrals

Based on questionnaire data

Interventions

Based on questionnaire data

Client group

Do you think your service is reaching the people it should be? If not, why not and how could this be redressed?

Ideal service

What would the ideal service look like? What do we need to do to achieve this? Which stakeholders need to be involved? How do we know if we've achieved the goal?

Other

Based on questionnaire data

16.7. **Appendix 7 - Audit Template**

Date	Name of Patient	Referral Source	Reason for Referral	Faciltator /s	Session	Type	Attended/ Not Attended	Reason if Not	Length of session	Seen By	Other - Details

	Referral Source	Reason	Facilitator/s	Session	Type	Attendance	Reason	Seen By
1	CAMHS	Speech	Individual Work	Planned	SLT Assessment	Attended	Declined - Unwell	Name 1
2	Carer	Language	Group Work	Unplanned	Mental Health Assessment	Did Not Attend	Declined - Does not want to engage	Name 2
3	Child Protection Specialist	Communication	2 to 1		ASD Assessment		Education unable to facilitate	Name 3
4	CMHT	ASD	Assistant/Support worker		Intervention		Unit unable to facilitate	
5	Drug and Alcohol Team	Hearing Impairment	Meeting		Consultation		Unavailable - Internal activity	
6	Education	Head Injury			ACCT Review		Unavailable - External activity	
7	External Care Agency	Other			Professionals Meeting		Primary Care unable to facilitate	
8	GP				CPA		Wren unable to facilitate	
9	OT				GOOD Review		Therapist Unavailable	
10	Pharmacist				Psycho-education		Other	
11	Police				CHAT 4			
12	Primary Care				CHAT 5			
13	Prison service				Training			
14	Probation				Discharge Follow-up			

15	Psychology							
16	Relative/friend							
17	Secure Childrens Home							
18	Secure Training Centre							
19	Self-Referral							
20	Social Services							
21	Social Worker							
22	SLT							
23	Treatment Provider							
24	YOI							
25	YOT							
26	CHAT							
27	Other							

Example:

Date	Name of Patient	Referral Source	Reason for Referral	Faciltator/s	Session	Type	Attended/ Not Attended	Reason if Not	Length of session	Seen By	Other - Details
1/7/17	Jo Bloggs	25	1								
3/7/17	Jo Bloggs			1	2	1	1		45 mins	2	
3/7/17	John Smith			4	1	4	2	5		3	

16.8. Appendix 8 - Case Study template

Phase 2: Case Study Template

Overview

Age: (month, years)

Education: Exam results, Expelled (+ age), Years of education, SEN, Statement/EHC plan, ESL

Mental Health: Diagnoses, ADHD, ASD, Substance Misuse, Previous contact with services

Family & Society: LAC, SES, Child Protection, BME, Similar Peers

Offending: Index Offence Category, Length of stay, Violent v Non Violent

Physical Health: TBI

Referral

Referral source:

Reason for referral:

Assessment

Assessment tools:

Assessment summary:

Primary areas of need:

Time taken for assessment: (no of sessions and minutes)

Therapy

Treatment aims:

Intervention approach:

Sessions: (no of sessions and minutes)

Sessions cancelled: (and reason)

Weeks in therapy:

Therapy provider: (include whether 1:1 or prison officer/assistant sitting in)

Session description

Took place/Cancelled (if cancelled give reason)

Where:

Room set up: (who present, how seated, furniture)

Target:

Achieved/Not achieved

Materials:

General presentation:

Progress:

16.9. Appendix 9 - Phase 2 Participant Information Leaflet

Participant Information Sheet | Version 7 Mar 2017 IRAS: 209118

The University Of Sheffield.

Department Of Human Communication Sciences

Head of Department
Professor Patricia E. Cowell, BA, MS, PhD

362 Mushroom Lane
Sheffield
S10 2TS
United Kingdom

Telephone: +44 (0) 114 222 2418/ 2402/ 2405
International: +44 (0) 114 222 2418
Fax: +44 (0) 114 2222439
Email: hcs-support@sheffield.ac.uk
http://www.shef.ac.uk/hcs

A study to examine speech and language therapy service provision for under 18's in English Young Offender Institutions

An invitation to take part in a research project

You are being asked to take part in this research project. Before you make your decision, it is important for you to understand why the research is being done and what it will involve. Please take time to read this information carefully. You may want to talk to other people about the study or ask for further information before making your decision.

This information sheet is divided in to two sections.

Section 1 – Tells you the purpose of the study and what will happen if you take part.

Section 2 – Gives more in-depth detail about the study.

Please contact kim.turner@sheffield.ac.uk if anything is unclear or if you require further information.

KEY POINTS

- Participation in this project is voluntary and you can withdraw consent at any time
- This project will enable us to describe in detail the speech and language therapy services provided to young offenders in custody in England
- Findings aim to provide an improved understanding of the models of service delivery appropriate in this area
- Findings could be used to support the development of current and future services

Section 1

What is the purpose of this study?

Research confirms that around 60% of young offenders have speech, language and communication needs (SLCN)(Bryan, Freer, & Furlong, 2007) as opposed to just 7-10% of the general population (Enderby & Pickstone, 2004). Evidence based service frameworks are used to deliver speech and language therapy services to the general population with speech, language and communication difficulties. However, there is currently no research in to the design of speech and language therapy services for young offenders in custody who have high levels of SLCN. Understanding more about the service design for this population could lead to the development of a more suitable service framework. This framework could then be used to inform the development of future services.

What will happen if you take part?

If you choose to take part there are 4 interlinked steps. These are shown below:

No patient identifiable data will be shared as part of this research project. Following the completion of the study you will be sent a copy of the report.

Section 2 - More in-depth detail about the study

The adapted Response to Intervention (RTI) framework (Snow, Sanger, Caire, Eadie, & Dinslage, 2015) is used to understand the speech and language therapy services for young people in young offenders' institutions in England. The RTI framework is a model developed in the education sector in the United States to help identify and support young people with special educational needs. The RTI is a three tiered model with an increase in support and a reduction in numbers of those receiving this support at each level. All children are periodically screened for any behaviour and educational needs, those identified as 'at risk' then join Tier 1 for additional support within the classroom and regular checks to monitor progress. Students not considered to be making sufficient progress at Tier 1 then move to Tier 2 where they receive additional tailored support generally in small groups outside of the classroom. Children who do not benefit from this level of support then move up to Tier 3 where they receive individualised, intensive support. Children who do not make progress at Tier 3 would then be referred on for a comprehensive assessment under the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004).

The principle research objective is:

- To examine the purpose, structure and function of speech and language therapy services in English YOIs

The secondary research objectives are to answer the following questions:

- Are SLT services in English YOIs comparable?
- Is there an evidence base underpinning the interventions offered in these SLT services?
- Is there a role for community based service models in YOI SLT services?

The study will be divided into 3 separate phases: A detailed description of the SLT services in YOIs in England. An audit of referrals and interventions over a 6 month period. A series of case studies of service provision to individuals

More detail about each phase is given below.

1. A detailed description of the SLT services in YOIs in England

Each service in England will be asked to complete an online survey about their service in order to gain basic service information; the size of the service, referral criteria and services delivered. This

will be followed up by a semi-structured interview to gather more in depth information. The online survey will be used to give basic information about the services and also to inform subjects that require further exploration in the interview.

2. An audit of referrals and interventions over a 6 month period

Each SLT service will be asked to complete a database listing the number of referrals, sessions offered and other relevant details. Services will submit this on a regular basis to the chief investigator. This data will be gathered over 6 months. Data will be gathered over this time period to provide a reliable 'snapshot' of service provision.

The raw data from the audit will be given back to services after the 6 month period so this may be used within the service for audit of service development purposes.

3. A series of case studies of service provision to individuals

In order to gather more detailed information of what services are delivered and how they are delivered a small number of case studies will be gathered from clinicians. In addition to information on the number and content of sessions, pre and post assessment data will be requested. Any available feedback from the service users on their experience of speech and language therapy will be requested to assess not only the efficacy but also the acceptability of the intervention.

If I take part how will this work?

1. After having time to consider the information in this leaflet the consent form will be sent to you 2 weeks later.
2. If you have any questions about the project please contact the Chief Investigator by email, a follow up phone call or site visit can be arranged if required.
3. If you agree to participate please sign the form and send a copy back to the Chief Investigator.
4. You will then be sent a link to participate in the questionnaire.
5. Following completion of the questionnaire an appointment will be made to come and interview you at an appropriate venue of your choice (e.g. your work place, a quiet meeting room).
6. At the interview it will also be agreed when the audit phase will start and how information will shared between the local site and the Chief Investigator. The case study template will also be discussed and agreed.

Are there any risks to taking part?

1. There is an additional burden for clinicians involved in the study in terms of time commitments.
   However this is offset by gathering additional information about your service which you could use for audit and/or service development purposes.

2. As the number of participants is very small (n=3) the data generated is likely to be identifiable to the site.
   The research project is about service provision and service design not about you as a clinician. There will be no judgements being made about your clinical skills. You will be sent a copy of the interview to check for accuracy before this is analysed. For other parts of the project it is up to you what you choose to share.
3. Client data could be mistakenly shared with the chief investigator.
   Guidance will be given about what data to share to minimise this risk. We will ask you to share the data via nhs.net which is a secure link, so should client identifiable data get shared by mistake it would not be vulnerable. This would be returned to you immediately for anonymisation.

Confidentiality

All project data will be kept on the hard-drive of the Chief Investigator's University desktop computer; on her Google Drive account maintained by the University of Sheffield; and on a password-protected external hard-drive. This data storage plan has been approved by Corporate Information and Computing Systems (CiCS) at the University of Sheffield.

Interview data will be recorded. The recording will be uploaded to the hard-drive of the Chief Investigator's University desktop computer. At this point the original recording will be deleted. The uploaded recording will be deleted once the transcription has been agreed between the interviewee and the Chief Investigator. The transcribed interview will not contain full names.

Client identifiable data will be anonymised by the lead clinician at each site before being passed to the chief investigator. The Chief Investigator will provide support to the lead clinicians to assure anonymisation.

Should confidential information be found in correspondence from any of the lead clinicians the email would be immediately returned and a request made for the identifiable data to be removed. Nhs.net email addresses will be used to protect data sharing.

Data will be used for the fulfilment of the Chief Investigators PhD and may also be used in related publications.

Data will be held for 5 years. This comprises the length of the PhD and 2 years after the completion of the research project (PhD) as per University guidelines. Data will only be accessible to the chief investigator and supervisors.

Thank you for taking the time to read though this information sheet.

If I have further questions who should I ask?

- **Is the question specifically about this research project?**
  Please contact the Chief investigator, Kim Turner, via email kim.turner@sheffield.ac.uk or telephone **0114 2222400**
- **Is the question about consent?**
  Please contact the Chief investigator Kim Turner via email kim.turner@sheffield.ac.uk or telephone **0114 2222400** or Dr Judy Clegg j.clegg@sheffield.ac.uk
- **Do you want more information about how your data will be stored?**
- Please contact the Chief investigator Kim Turner via email kim.turner@sheffield.ac.uk or telephone **0114 2222400** or Dr Judy Clegg j.clegg@sheffield.ac.uk
- **Do you want to complain?**
  Please contact the Head of the Human Communication Sciences Department, Prof Patricia Cowell via email p.e.cowell@sheffield.ac.uk or telephone **0114 2222418**.
  Or contact the Health Research Authority via email contact.hra@nhs.net or by telephone **020 797 22545.**

References

Bryan, K., Freer, J., & Furlong, C. (2007). Language and communication difficulties in juvenile offenders. *Int. J. Lang. Commun. Disord., 42*(5), 505-520. doi:10.1080/13682820601053977

Enderby, P., & Pickstone, C. (2004). How many people have communication disorders and why does it matter? *International Journal of Speech-Language Pathology, 7*(1), 8-13. doi:10.1080/14417040500055086

Snow, P. C., Sanger, D. D., Caire, L. M., Eadie, P. A., & Dinslage, T. (2015). Improving communication outcomes for young offenders: a proposed response to intervention framework. *International Journal of Language & Communication Disorders, 50*(1), 1-13. doi:10.1111/1460-6984.12117

16.10. Appendix 10 - Phase 2 Ethics Approval

Consent Form	**Version 6** **March 2017** **IRAS:209118**

The University Of Sheffield.

Department Of Human Communication Sciences

Head of Department
Professor Patricia E. Cowell, BA, MS, PhD

362 Mushroom Lane
Sheffield
S10 2TS
United Kingdom

Telephone: +44 (0) 114 222 2418/ 2402/ 2405
International: +44 (0) 114 222 2418
Fax: +44 (0) 114 2222439
Email: hcs-support@sheffield.ac.uk
http://www.shef.ac.uk/hcs

A study to identify and examine speech and language therapy service provision for under 18's in English Young Offender Institutions

Chief Investigator: Kim Turner kim.turner@sheffield.ac.uk

Supervisors: Dr Judy Clegg j.clegg@sheffield.ac.uk

Dr Sarah Spencer sarah.spencer@sheffield.ac.uk

CONSENT FORM

Please read the following and tick the boxes if you agree

I have had the opportunity to consider the information, ask questions and had these answered satisfactorily.	☐
I have read the Participant Information Sheet and understand the requirements of the project.	☐
I have consent from my Manager to take part in this project.	☐

Consent Form	**Version 6** **March 2017** **IRAS:209118**

I understand that the Chief Investigator, Kim Turner, will gain the relevant approval from the Research & Development team within my Trust.

I understand that participation in the research project is voluntary and should I change my mind, at any time, I can withdraw consent. Should I withdraw my consent before the end of the project data gathered from me and my service will not be used in the final project.

I understand the responsibility for following the relevant ethical & research procedures and protocols will be the Chief Investigator, Kim Turner, and the University of Sheffield.

I _____ agree to take part in this research project.

I have been given a signed copy of the consent form.

A signed copy of this consent form will be retained by the Chief Investigator, Kim Turner.

Signed ..... (Clinician) Signed ..... (C I)

Date ..... Date .....

Consent Withdrawn

Signed ..... **Date**.....

16.11.Appendix 11 - Phase 2 Ethics Approval

16.11.1.University Approval Letter

The University Of Sheffield.

Downloaded: 20/02/2017
Approved: 20/02/2017

Kim Turner
Registration number: 140117431
Human Communication Sciences
Programme: FT PHD HCS

Dear Kim

PROJECT TITLE: A study to examine speech and language therapy service provision for under 18s in English Young Offender Institutions
APPLICATION: Reference Number 012491

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 20/02/2017 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 012491 (dated 11/01/2017).
- Participant information sheet 1026457 version 1 (11/01/2017).
- Participant consent form 1026458 version 1 (11/01/2017).

The following optional amendments were suggested:

The following comments are on the whole not germane to the ethics of the planned research, but would serve to make the application and research process clearer and more consistent. In particular, this phrase "and feedback from the service users on their experience of speech and language therapy" in Aims & Objectives has caused a lot of confusion, as the mechanism and method of getting service user feedback (presumably this means feedback from the young offenders on the SLT services) is not detailed anywhere in the application. I believe this may be a holdover from a prior research plan. It should be amended before the research takes place, so that we have a full and accurate record of the methodology in our records. Section C 1. Aims and Objectives An early specification of the number of YOI SLT services in England would be helpful. It would also add clarity in this section to state the number of intended case studies. From this section, it isnâ€™t fully clear how is feedback from the service users on their experiences of SLT to be collected (e.g., will this be information already held by the SLT service or will the clinical leads need to collect this specially)? The information in the IRAS form is clearer and should be considered during writing up of the project. Note: â€¯principle research objectiveâ€™ should be â€¯principalâ€¦â€™ 2. Methodology Can something be added to clarify where you envisage the data to help address the last 2 of the 3 secondary questions (in Aims and Objectives, above) to come from? Section D 3. Consent It would be useful to stress here the information you give in the IRAS document (A6-2? and top p8) regarding collection of service user feedback and, in particular, decisions about consent not being required from them. Section E 1. Data confidentiality measures If the data is to be stored on the computer hard drive, does anyone else have access to the computer/ the password? If it isn't actually to be stored on this computer hard drive - for example, this is the PC that you use but data will be stored in your online, password-protected storage area linked to your university computer account - then it could be helpful to state this. (These comments also apply to the information in the IRAS form.) 2. Data storage See comments under 1, above re- storage of data on computer. The current section mentions a password protected file - can you clarify for both sections? Re- the locked cupboard to be used to store the audio recordings: will you be the sole person to have access to the cupboard during the project? Section F Supporting

16.11.2.HRA Letter

NHS
Health Research Authority

Miss Kim Turner
Department of Human Communication Sciences
University of Sheffield
362 Mushroom Lane, Sheffield
S10 2TS

Email: hra.approval@nhs.net

07 April 2017

Dear Miss Turner

Letter of HRA Approval

Study title:	**A study to examine speech and language therapy service provision for under 18s in English Young Offender Institutions.**
IRAS project ID:	**209118**
REC reference:	**16/HRA/5469**
Sponsor	**University Of Sheffield**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

16.11.3.LCH NHS Trust Capacity Letter

NHS
Leeds Community Healthcare
NHS Trust

Telephone enquiries, please contact:
Phone: 0113 843 3432
Email: lch.research@nhs.net

Stockdale House
Headingley Office Park
Victoria Road
Leeds LS6 1PF

8th July 2017

Miss Kim Turner
Department of Human Communication Sciences
University of Sheffield
362 Mushroom Lane, Sheffield
S10 2TS

IRAS Project ID: 209118

LCH Ref: NP/0204

Dear Miss Turner

Letter to confirm Capacity and Capability

Re: A study to examine speech and language therapy service provision for under 18s in English Young Offender Institutions.

Registered study end date: 8th July 2018

We are now in receipt of the letter of HRA Approval and the Statement of Activities for the above study and have reviewed relevant study documentation. We are happy to agree to the Statement of Activities and pleased to confirm that the Leeds Community Healthcare NHS Trust (LCH) has capacity and capability to undertake the study, which can now proceed.

You should be aware that

- The Trust will be expected to recruit the first participant into the study within 30 days of the date of this letter. Please confirm the date of the first recruitment with the research team. If recruitment within 30 days is unlikely please contact the research team to clarify the circumstances.
- LCH may wish to audit your project
- All research staff working upon the study are required to update their HSCIC accredited information governance training every 12 months. Externally employed staff should use the organisation code and name: "RY6 Leeds Community Healthcare" and access training on the following link:

  https://www.igtt.hscic.gov.uk/igte/index.cfm

  An employee number should not be required. (Contact the research team in case of any issues.)

Chair: Neil Franklin OBE

Chief Executive: Thea Stein

16.11.4.NOCLOR Capacity Email

HUSAIN, Faisal (CENTRAL AND NORTH WEST LONDON NHS FOUNDATION TRUST) <faisal.husain1@nhs.net> Wed, 17 May 2017, 14:46

to Contact, me, p.e.cowell@sheffield.ac.uk, Emmanuel, Carmen

Dear Patricia,

RE: IRAS 209118. Confirmation of Capacity and Capability at Barnet Enfield & Haringey NHS Mental Health Trust.

Full Study Title: A study to examine speech and language therapy service provision for under 18s in English Young Offender Institutions

Latest HRA Approval Date: 07/04/2017

Site PI/LC: Dr Kim Turner

This email confirms that Barnet Enfield & Haringey NHS Mental Health Trust has the capacity and capability to deliver the above referenced study. Please find attached the agreed Statement of Activities as confirmation. Barnet Enfield & Haringey NHS Mental Health Trust agrees to start this study on a date to be agreed when you as sponsor give the green light to begin. Please ensure the R&D office and local CRN contacts are provided with this date.

If you wish to discuss further, please do not hesitate to contact us.

As specified in the HRA Approval, Letters of Access for the research team are not considered necessary .

Please note, in line with national HRA approvals process, you will no longer receive an NHS R&D Approval/Permission letter.

Kind regards

Faisal
On behalf of Barnet Enfield & Haringey NHS Mental Health Trust

Faisal Husain
Costing and Contract Assistant