UNIVERSITY OF DERBY

THE SUPPORT CHANGE PROJECT: A CRITICAL EVALUATION OF SPECIFIC INTERVENTIONS AT HMP DARTMOOR TO SUPPORT AND REHABILITATE AUTISTIC OFFENDERS

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Abstract

The study aimed to answer the following questions.

- Is the true extent of prisoners, that are likely to be autistic in the prison at any one time, likely to be more than ten per cent?

- Do prisons currently have limited understanding of neurodiversity and its impact on offender engagement?

- Is differentiation needed within prison education to meet the needs of autistic offenders in order to rehabilitate with measurable outcomes?

- Do autistic offenders require specific differentiated engagement focusing on resilience, coping and wellbeing in order to be successfully rehabilitated?

- When offenders engage in interventions that have a focus on resilience, coping, and managing wellbeing, can reoffending reduce?

The study carried out a literature review, favouring a critical realist framework, explaining the effectiveness of rehabilitation of autistic offenders. The researcher designed and implemented The Support Change Project at HMP Her Majesty's Prison in Dartmoor to establish operational value in differentiating rehabilitation interventions. Prisoners that are likely to be autistic in the prison, at any one time, is likely to be more than ten per cent. Prisons currently have limited understanding of neurodiversity and its impact on offender engagement; therefore, differentiation is needed within prison education to meet the needs of autistic offenders to rehabilitate. Autistic offenders require specific differentiated engagement focusing on resilience, coping and wellbeing. When offenders engage in interventions that have a focus on resilience, coping, and managing wellbeing, reoffending will reduce.

The project aimed to evaluate The Support Change Project, within HMP Dartmoor to develop and influence future policy and change. The study has a unique perspective as it was carried out by an autistic researcher, researching autistic offenders in prison, written for an autistic audience and reviewed by autistic professionals and prisoners.

The method involved carrying out DSM-5 Screening of offenders on arrival to HMP Dartmoor to identify if they met the threshold of autism. Strategy profiling was used to identify the offenders support needs. Cognitive assessments using WAIS tests were then deployed to show if an offender had what is described as a 'spiky profile, (Doyle, 2017) containing strengths and weaknesses (Wechsler, 2008). The offenders engaged in group and one-to-one interventions. The support-focused sessions contained high levels of differentiation. The interventions had a focus on resilience, coping and wellbeing. Offenders were placed into intervention groups with similar support needs and strengths and the teaching material was adapted accordingly.

The study found that 18.8 per cent of offenders screened had autistic traits. Furthermore, all offenders in The Support Change Project had specific support needs. Each identified person has a typical spiky profile. The Research Group improved in resilience, coping and wellbeing whereas the Control Group remained the same. Attitudes towards reoffending improved in the Research Group. This study carried out a service and practice development within HMP Dartmoor and made an original contribution of knowledge in the specialist field of autism, for use in several criminal justice settings, both in the community and custody.

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List of Abbreviations

ADHD	Attention-Deficit/Hyperactivity Disorder
APA	American Psychiatric Association
AQ	Autism-Spectrum Quotient
AS	Asperger's Syndrome
AD	Asperger's Disorder
ASD	Autism Spectrum Disorder
CFO3	Co-Financing Organisation Round Three
DSM-5	The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
GAD	Generalised Anxiety Disorder
HMPPS	Her Majesty Prison and Probation Service
ICD-10	International Classification of Diseases 10th Revision
ICD-11	International Classification of Diseases 11th Revision
IF	Identity First Language
IQ	Intelligence Quotient
NAS	National Autistic Society
NMRQ	Nicholson McBride Resilience Questionnaire
OCD	Obsessive Compulsive Disorder
PF	Person First Language
SD	Standard Deviation
WEMWBS	The Warwick-Edinburgh Mental Well-being Scale
WHO	World Health Organisation

Chapter 1: Introduction

> **Chapter Introduction:**
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> The opening chapter is an introduction to guide the reader through the purpose of the study. It will aim to make clear the objectives of the study. Furthermore, it will establish the researcher's professional experience of working with offenders from neurominority groups. The investigation questions will be explained, along with the aims of the study and the rationale behind it. This study is contextualised within a societal ecosystem in which it is important, operationally, to reduce reoffending by improving rehabilitation for offenders within the broader criminal justice picture, where many offenders are in a 'revolving door' of release and offend.

Investigation Questions, Expected Outcomes and Rationale

The purpose of this study was to answer the following questions using a range of methods.

- Is the true extent of prisoners that are likely to be autistic in the prison at any one time likely to be more than ten per cent?
- Do prisons currently have limited understanding of neurodiversity and its impact on offender engagement?
- Is differentiation needed within prison education to meet the needs of autistic offenders in order to rehabilitate with measurable outcomes?
- Do autistic offenders require specific differentiated engagement focusing on resilience, coping and wellbeing in order to be successfully rehabilitated?
- When offenders engage in interventions that have a focus on resilience, coping, and managing wellbeing, can reoffending reduce?

These research questions were answered in three clear stages. Each of these stages are explained in the methodology section in more detail later in the thesis.

- The study carried out an extensive literature review, that favours a critical realist framework, to explain the effectiveness of rehabilitation of autistic adults within the criminal justice system.

- The study designed and implemented 'The Support Change Project' at HMP Dartmoor, establishing operational value in differentiating rehabilitation interventions for offenders that are considered to be autistic.
- The study provided an evaluation of The Support Change Project within HMP Dartmoor that can be used by HMPPS to develop and influence future policy and change.

Table 1 *Table of Definitions.*

Term	Description
HMPPS	Her Majesty's Prison and Probation Service
HMP Dartmoor	Category C Male Prison in Devon
CFO3	Rehabilitation Project funded by HMPPS in Prisons and Probation using specialist Providers
Genius Within CIC	Specialist Provider funded by HMPPS on CFO3 Project
The Support Change Project	The intervention programme designed and implemented for the purposes of this study at HMP Dartmoor

Note. The Support Change Project took place within Her Majesty's Prison and Probation Service at HMP Dartmoor. The researcher was employed at HMP Dartmoor by Genius Within CIC to offer specialist interventions for offenders that are hard to help, including neurodiverse offenders. This provided an appropriate location and access to design, implement and review The Support Change Project.

The Support Change Project consists of a series of investigations and interventions that look to develop, implement and review a profile of support for autistic offenders in a prison environment. The interventions will create a pathway of self-awareness and actualisation that can be easily accessed, implemented, and maintained by offenders and professionals working with offenders operationally in a prison or probation setting.

The study is introduced by examining the origins and experiences of autism. This chapter will explore how autism, as a neurotype, situates in the neurodiversity context, and then finally explores some of the contextual issues surrounding neurodiversity within the criminal justice

system. The researcher's role within The Support Change Project was to design, implement and review a programme of screening and interventions aimed at offenders that were either autistic or had autistic traits. This project sat within the researcher's role working with neurodiverse offenders within the prison.

Introduction

Autism is a term originally derived from the Greek word 'autos', which literally means 'self'. Autism is a lifelong developmental disability that affects how a person communicates with, and relates to, other people. It also affects how autistic people make sense of the world around them. Autism is a spectrum condition, which means that, while there are certain difficulties that everyone with autism shares, the condition affects them in different ways. Some autistic people can live independent lives with no, or limited, support, while others will need a lifetime of specialist support. Autism affects more than one in a hundred people in the UK. In this investigation, there will be a focus on autistic individuals within the criminal justice system. The study was not concerned if the offenders taking part in the study have a formal diagnosis. The reasons are discussed later in this opening chapter (Milton, 2012). The true number of autistic people within the criminal justice system is hard to pinpoint. From the researcher's personal experience working at HMP Dartmoor, and through an early literature review carried out as part of that role, it became clear there are limited prevalence studies available. The researcher works with offenders that are classed as 'hard to help' by the prison. Through the researcher's vast experience of working with autistic people, they found that there was a likelihood of higher numbers of undiagnosed autistic offenders.

The initial aims of the study were to understand the prevalence of autism in HMP Dartmoor and then, when this was achieved, the researcher then designed, implemented and reviewed a programme of interventions to support offenders in prison, that are likely to be autistic, to reach positive outcomes for their futures going into local communities when they are released.

Neurodiversity in its very definition describes a diverse population. To understand the prevalence of autism in prisons, it is helpful to understand how autism has evolved within the

umbrella terms of neurodiversity. Historically, autism was viewed as a disorder by the medical model which has negative connotations. People that are described as autistic are also described as being part of a neurominority group. The word neurominority has evolved from the word neurodiversity. Within it, there are several disabilities including autism, also known as autistic spectrum disorder (Doyle, 2017). Doyle supports Singer's comments (1999) stating that neurodiversity should be synonymous with disability.

Both Doyle and Singer adopted the term neurominorities and neurodivergent. She says by definition that humans all have strengths and weaknesses where there will be trial and error. Some people will need more time, more accommodations, more patience. Sometimes it won't work out (Singer, 1999). The neurominority movement does not accept the word 'disordered' which originates from within the medical model and is explored later in the study. The negative word 'disordered' is part of the descriptor 'autistic spectrum disorder'. For the purposes of this study and because the study supports the notion that autistic individuals are not disordered, the study will use the terms 'autism' and 'autistic'.

Understanding the prevalence of autism in prisons is a necessary step towards making targeted or reasonable adjustments to support and rehabilitate autistic offenders more efficiently. Targeted or reasonable adjustments are positive measures that can be implemented at an organisational, system or individual level to address the healthcare inequalities experienced by people. Adjustments are required for all disabled people and autism is defined as disabling within a legal context (Heslop, Turner, & Read, 2009). Little is known about adjustments in prison and how effective they can be for offender engagement and consequential rehabilitation.

Currently, in the researcher's experience working at HMP Dartmoor, there are only limited adjustments made for neurodiverse offenders that have an autistic diagnosis or are screened as having traits of autism within the UK prison system. These offenders require reasonable adjustments for them to access interventions with a rehabilitation focus (The Home Office, 2006).

For the purpose of this chapter, it is necessary to know that these conditions are prevalent in the general population up to fifteen per cent (Doyle, 2017) and in the prison population are likely to be more prevalent. This means that for a prison such as HMP Dartmoor, there are likely to be around one hundred and forty offenders needing reasonable adjustments to be able to access interventions in the same way as someone that is described as neurologically different. People with developmental and cognitive conditions, in contrast, are described as neurodiverse or belonging to a neurominority group of people. To be able to understand how a neurodiverse demographic of people is formed, intelligence must be understood. The intelligence IQ test was founded in the late 1800s by Sir Francis Galton. He developed the first broad test of intelligence (Flanagan & Kaufman, 2004). Intelligence testing was developed in the early 1900s by the researcher Alfred Binet.

Binet was asked by the French government to develop an intelligence test to be used in schools. Louis Terman, a Stanford professor, further developed Binet's work by standardising the administration of the test. The result was that the test was normed and standardised for each age range. He did this by administering the tests to a large sample of the population and this resulted in a bell curve. The general population falls into the middle and most populated area of the bell curve. The bell curve uses the standard deviation to show how all scores are dispersed from the average score.

Only 2.2 per cent of the population has an IQ score below seventy (The American Psychological Association [APA], 2013). A score of seventy or below indicates marked cognitive delays, major deficits in adaptive functioning, and difficulty meeting "community standards of personal independence and social responsibility" when compared to same-aged peers (APA, 2013, p. 37).

An individual in this IQ range would be considered to have an intellectual disability and be defined as neurodiverse or neurodivergent. However, it is important to understand that people with higher IQ ranges can also be neurodiverse or neurodivergent.

People might exhibit differences in intellectual functioning and adaptive behaviour, formerly known as mental retardation in America, (American Association on Intellectual and Developmental Disabilities, 2013), however, 'Learning Disabilities' has replaced the term 'mentally handicapped' in the UK. The accepted term is intellectual disability, and it has four subtypes: mild, moderate, severe, and profound. *The Diagnostic and Statistical Manual of Psychological Disorders* lists criteria for each subgroup (APA, 2013). Advocates would argue that a spiky profile falls outside of standard IQ ranges and that this test does not accurately define if someone is neurodiverse or neurodivergent.

This study will primarily focus on autistic offenders who are, as described above, people that fall into the lower populated areas within a bell curve or those that have what is described as a spiky profile. Previously, autism has had negative descriptions and this will be explored in detail within the literature review. There is a criteria and threshold, which defines autism, which includes difficulties in reciprocal social interaction. It is important to remember that this varies from one autistic person to another depending on the development of the individual's cognitive profile. There are various deficits, such as theory of mind, which refers to a person being able to anticipate what another person is thinking or feeling (Happé et al., 1996). Further deficits are explored by O'Callaghan. He carried out academic research on autistic people. In his findings, he concluded that autistic people lack empathy; this is a much-debated topic and beyond the remit of this investigation as this is an area worthy of its own exploration.

The idea that autistic people lack empathy has been debated for decades and to reference within this study would invite academic criticism that might distract from the purpose of the research. Autistic people are sometimes regarded as not being able to make eye contact and preferring their own company (O'Callaghan, 2002). These are explored in more depth later in this study. In addition to these deficits, it has been observed that during periods of incarceration, many prisoners develop a yearning for meaning to understand and resolve their dissatisfaction with life and may be susceptible to rehabilitative programming (Lofland & Stark, 1965). Autism cannot be classified as a disease or disorder as it is a behavioural phenotype. Kanner described

autism as 'extreme aloneness' (Rosen, Lord, & Volkmar, 2021). These are all barriers towards autistic offenders achieving rehabilitation.

Funding bodies such as HMPPS, responsible for rehabilitation, are constantly under pressure to provide cost effective evidence-based rehabilitative programming for offenders and in particular neurodiverse offenders. One such rehabilitative programme is the CFO3 programme which was in operation at HMP Dartmoor. They are targeted at the most difficult to reach offenders such as the neurodiverse minority. However, the interventions are target driven and results based, which leads to a lack of meaningful work being carried out.

To answer the research questions, it is essential that the reader has a good understanding of neurodiversity and how it has influenced modern day health practice so that the reader is able to understand the rationale for the decisions the researcher made throughout this four-year study. The context of neurodiversity must be understood first. From this, the project intended to bring about operational change within the criminal justice system.

When considering neurodiversity, understanding about the extent of the problem was required first. The Home Office reports that, of the existing prison population of nearly eighty thousand in the UK, about eight thousand offenders, at any one time, are serving sentences of less than one year. In 2003, sixty-four per cent of all adult males sent to prison were sentenced to less than twelve months. They are also the most likely to reoffend within two years (Home Affairs Committee, 2005). Adult reoffending rates have remained between 28 per cent and 31 per cent for several years: (https://www.gov.uk/government/statistics/announcements/proven-reoffending-statistics-january-to-march-2019). The report found that offenders with a higher number of previous offences have a higher rate of proven reoffending than those with fewer previous offences. Offenders with eleven or more previous offences made up forty per cent of all adult offenders in the reporting period and represented sixty-nine per cent of all adult reoffenders but committed eighty per cent of all adult proven reoffences.

In the 2020 reporting period, it was indicated that the average sentence rate was now at the highest in the decade at between nineteen and a half and twenty-two month sentences for all offences. This study has not been able to include more recent statistics as the public release has been delayed until after this study. The figures that will be released post study are going to be affected because of the impact of the pandemic.

Offenders, with these sentence patterns and impacted additionally with a global pandemic, come in and out of prison but prefer prison life for its stability (Cunliffe & Shepherd, 2007). This research has exposed the prison system as being benign for many of this group of 'churners' or repeat offenders, who identified living in a safer environment away from the fears and anxieties of the outside world. The researcher has worked with many offenders that prefer prison life and structure. Furthermore, the researcher has worked with an offender that refused to be released because he simply preferred the structure and safety of prison life. This is a common occurrence when releasing autistic offenders.

Social and activists' movements have been advocates for change and creating different perspectives within disability for several years. Finally, HMPPS have begun robustly examining neurodiversity within the criminal justice system since 2020. (Neurodiversity in the criminal justice system: A review of evidence, 2021). This research is carried out by an autistic researcher, on a population that is also autistic, and this provides a potentially unique contribution and perspective towards autism research within the criminal justice system. The study has been shared with HMPPS and has formed part of the neurodiversity review. The review forms the foundation for continued research, particularly in the criminal justice field, by disabled researchers to ensure that disabled peoples' human rights are indeed respected from an insider – insider perspective.

Background

Rehabilitating offenders with neurological conditions such as autism is not adequate, offenders are reoffending, and ending back in the criminal justice system. The lack of differentiated support increases the pattern of behaviour where offenders become 'revolving door offenders' (The Home Office, 2006). Short-term prisoners, serving sentences of twelve months or less and having numerous such offences, are described as having 'revolving prison gate' syndrome (The Home Office, 2006). Less attention is paid to those given short custodial sentences for minor offences or those returned to prison for breach of supervisory conditions.

The impact of this steep rise in revolving door offenders is of interest to the taxpayer, as well as the negative impact on society in terms of general feeling towards the British judicial system.

Her Majesty's Prison and Probation Services (HMPPS) are actively seeking to address this controversial issue and reduce the financial cost with long-term statistical tracking to prove that offenders with neurological conditions, such as autism, are not reoffending by introducing specialist interventions.

There is a distinct lack of community measures available for neurominority offenders and they have faced a neglect of pre-release support and after-care services for returning prisoners (Maguire, Raynor,Vanstone, & Kynch, 2000). Many offenders with neurominority disabilities such as autism fall into the minor offences category and are finding themselves unable to adhere to their license conditions. This means, they are susceptible and vulnerable to reoffending once they are released on licence into the community with licence conditions. This pattern of offending behaviour helps to create a pattern of those prisoners re-offending and returning to prison within a short space of time after release (Home Affairs Committee, 2005, para. 254). It has long been recognised that all prisoners face a myriad of difficulties on leaving prison with the odds often stacked against them (Wilson, 2004). Through the gate planning and setting up ongoing referrals to community services often falls short of what is acceptable, due to the high numbers of short-term offenders as described previously.

Within the criminal justice system there has been a marked rise in recalls to custody for failing to maintain licence conditions (https://www.gov.uk/guidance/recall-to-prison). In 2018, there were 6965 recalled prisoners in custody in England and Wales. They had breached their licence conditions for various reasons. This number has increased over time; however, this study did not find a newer published report. This is likely due to the impact of Covid-19. The reasons for recall included poor behaviour and non-compliance, further charges, failure to reside at an agreed address and lack of communication with professionals.

Compared with the sentenced prison population, recalled prisoners from neurominority groups are vulnerable, as they may have poor emotional wellbeing. They may also have moderate to severe difficulties with coping, emotional stability, social isolation, and psychological problems including anxiety and depression.

All of these are explored in this study. These offenders are often on standard recall and could remain in custody until the end of their sentences. The impact of this is, when they are released, no statutory organisation has any responsibility for this demographic of offenders.

When a prisoner is released, they are given a list of conditions of their release. These are given to them on a sheet of paper which they are required to sign to confirm they have understood the conditions. The researcher had been employed in a prison setting for six years at the time of this study and has extensive rehabilitation and resettlement experience working with neurominority offenders. In the experience of the researcher, when working with offenders in prisons that fall into neurominority groups, they claim that they sign the paper put in front of them but are not fully aware of what it means and the consequences of not following the rules that they have agreed to.

Theory of Mind is often impaired when a person is autistic, and this poses a unique challenge in the criminal justice system. It is known to impact on the ability to predict and interpret the behaviour of others (Happé et al., 1996). Whereas some "neurotypical" people can assume what others want, think, believe and predict the behaviour of others as well as their own, an

autistic person may find this difficult and challenging (Premack & Woodruff, 1978). Many autistic individuals face challenges with social skills, repetitive behaviours, and nonverbal communication (Autism Speaks, 2011). They can also exhibit a deficit in theory of mind capabilities, and this has a direct impact on consequential thinking and behaviours.

These distinctions are controversially debated as it can be said that since autism is a spectrum condition, it is not possible to accurately define what the condition's features are. Past researchers are responsible for creating these myths and have been criticised for their findings. An example of this is when Baron-Cohen conducted a false belief test and eighty of the participants failed it. The test was constructed around being a witness, perpetrator, and participant in a crime (Baron-Cohen, 2019). Outside of the research setting, individuals with autism do not show spontaneous false belief attribution (Senju, 2012). These findings are not considered when an autistic person is arrested, attends court, and is inducted into prison.

It is not just theory of mind deficits that impact offenders within the criminal justice system but also sensory differences that are found specifically in autistic people.

These differences play a central role in the criminal justice experience. There is published academic research to support this (Dunn, Myles & Orr, 2002). Sensory differences manifest in several ways in the lives of autistic people and directly influence the way in which they see and experience the world. Sensory issues are included as part of DSM-5 Diagnostic criteria, and this is explored later in this thesis. Offenders might experience hypersensitivity and hyposensitivity when detained in a prison environment.

Hypersensitivity is where the sounds a person might hear are amplified. This is also described as sensory defensiveness (Baranek, David, Poe, Stone, & Watson, (2006). Hyposensitivity is where the same sounds are reduced. This manifests as indifference when observing the autistic person that is experiencing this sensory deficit. Another consideration is sensory seeking behaviours. It can be argued that these are incorporated as part of hyposensitivity behaviours (Dunn, 2007). Auditory sensory overwhelm is common for offenders in the prison

environment, as noise on many levels continues without break in a prison. Offenders might not understand the sensory overwhelm that they are experiencing but it exists none the less. Along with auditory differences there are also visual variations experienced by offenders in the visual cortex. This is also known as face-blindless (Williams, 1996). The combination of these differences with the added trauma of being detained in a prison lead to many adverse behaviours manifesting which is often misinterpreted by prison professionals. The combination of sensory differences and impacted theory of mind means that autistic peoples' views and experiences of the world can vary enormously from a person that is not autistic.

In the experience of the researcher working within this field, legal professionals can wrongly infer that an autistic person lacks victim empathy due to the lack of expressive emotions autistic people can display. It has been suggested by DeThorne (2020) that autistic people do not lack empathy, but their different neurotypes and personal experiences and perceptions of the world around them may make it harder for non-autistic or neurotypical people to understand them. Throughout the literature reviewed, there are references to autistic people having empathy deficits; however, references regarding possible differences in different types of empathy have not been explored other than by DeThorne (2020).

It is important to understand that when considering different types of empathy that cognitive empathy is vastly different from affective empathy. An autistic person might not have a full understanding of the impact of their criminal behavior on another person, but this does not mean that they are without feelings of warmth and compassion. Researcher Damián Milton researched the double empathy problem, and he concluded that empathy is a bidirectional phenomenon and notes that both autistic and non-autistic individuals may have difficulty understanding and feeling for one another because of their differing outlooks and experiences with the world (Milton, 2012).

Spenser supports this in her thesis. She provides empirical evidence that male and female offenders, and offenders and non-offenders, differ in their abilities regarding theory of mind,

moral and empathic understanding. These pro-social skills are plastic, which means that they can develop.

Spencer's findings suggest that if these pro-social skills are underdeveloped, they can impact social functioning. In more recent work, Spencer stated that pr-osocial skills are considered important in the study of offenders. This was further supported by research carried out by Prior and Paris, as they found that the risk of offending behaviour is believed to be lowered if a person possesses certain pro-social skills (Prior & Paris, 2005). The Support Change Project placed a high emphasis on improving these social skills by focusing on resilience and coping behaviours. Eckersley (1999) believed that a range of economic, social and technological changes have combined and interacted to create a society that was increasingly hostile to our wellbeing because of greater social and psychological vulnerability. As already described previously in this study, from a cognitive perspective, these skills are not exclusive to resilience and coping. Evidence suggests that these difficulties are not confined to the socially disadvantaged and marginalised in our society. Eckersley (1999) states that these deficits are a product of growing up in the last decades of the twentieth century. Alongside resilience, consideration was given to other deficits including theory of mind, empathic understanding and moral reasoning (Spenser, Betts, & Das Gupta, 2015). Spenser et al found that focusing on these pro-social skills together enabled individuals to understand their own, as well as another's mental and emotional perspectives and behave in a morally acceptable way (Spenser et al., 2015).

This was supported by research carried out by Russell et al. They linked theory of mind with pro-social skills (Russell, Tchanturia, Rahman, & Schmidt, 2007). Furthermore, Marques found that working around empathic understanding is beneficial for offender's rehabilitative development (Marques, Pereira, Goes, & Barros, 2015) and moral reasoning (Rueda & Paz-Alonso, 2013).

Short term offenders from neurominority groups are significantly disadvantaged. In England, probation and prisons' resources are increasingly focused on more serious offenders (The Home Office, 2006). Whereas it is the short-term offenders that are becoming the repeat

and often recalled offenders that need the additional support. Less attention is paid to those given short custodial sentences for minor offences or those returned to prison for breach of supervisory conditions. As observed by the Home Affairs Committee of inquiry into the rehabilitation of prisoners (Home Affairs Committee, 2005, para. 254).

There has been a steep rise in prison sentences and more punitive community measures have meant the neglect of pre-release support and after-care services for returning prisoners (Maguire, Raynor, Vanstone, & Kynch, 2000).

This has been further impacted by the global Covid-19 pandemic, as external agencies have not been permitted to enter the prisons for extended periods of time to manage release plans. It is not known if the Covid-19 pandemic has impacted on the rise of crime, but it is likely that there will be some correlation found in time. Prisons are overcrowded and under resourced, and from the researcher's direct experience of working in resettlement, there is far more need than resource. An example of an under resourced and therefore under accessed intervention, is the CFO3 project that is operationally nationally in prisons and probations. This project provides opportunities for offenders to attend this resettlement programme which focuses on offenders that are considered hard to help; however, this is not available to all offenders as there are simply not enough resources (https://www.co-financing.org/about.php).

The work of the CFO3, Co-Financing Organisation Round 3, plan is focused on The Reducing Re-offending National Action Plan and includes several pathways: accommodation; education, training, and employment; mental and physical health; drugs and alcohol; finance, benefits, and debt; children and families of offenders; and attitudes, thinking, and behaviour (Home Office, 2004b; CFO3, 2021).

When an offender is at the end of their sentence and is released into the community, which can be the case if they have been recalled due to breaching their previous licence condition rules, the probation service has no statutory responsibility to deal with them once they are released from prison. Probation services are overwhelmed with offenders that are being released on

licence and so the support falls to charitable organisations. HMPPS initiatives such as CFO3 only supports offenders that are serving sentences or are on licence in the community. It also does not cover Cornwall or Wales and so their support ends if they are released to these areas which is a barrier to the support given as these areas are low socio-economic areas. Many offenders that joined the programme in HMP Dartmoor were then released to Cornwall or were sent to a D category prison in Wales and the impact of this was that the CFO3 funding and support ceased. The reason why the support does not cover these areas is because the project was tendered out by HMPPS. Companies such as Genius Within CIC, Shaw Trust and BCHA tendered for the work by area. No company tendered for Cornwall or Wales, resulting in no provision in these areas. This is problematic if an offender on The Support Change Project leaves Dartmoor and is released to Cornwall as they are not able to access community support. The support from CFO3 will end on the day of an offender's release and they are expected to rebuild their lives using local provision.

Despite this, in the researcher's work with Genius Within CIC, they strived to ensure that all offenders had the ongoing support referrals to local provisions made in advance of release (www.geniuswithin.org).

Offenders with complex needs face multiple barriers. Autistic offenders can have co-occurring mental health difficulties which might include substance misuse. They might have serious debts, lack of accommodation and/or employment and limited access to education. Offenders with these barriers often reoffend.

These offenders are described as 'revolving door offenders'. This group promote mistrust, fear, and anger and this contributes to the widespread public perception that the criminal justice system fails to protect (Morgan & Towers, 2001). However, little is known about the high number of offenders with learning disabilities including the researcher's subject area of autism. In addition to this, there is little understanding of the impact of the co-occurring conditions on offenders.

It is evident that there is further need for specialist 'through the gate' services to work together and to provide end-to-end support for offenders in neurominority groups. There needs to be integrated and widespread provision of services 'through the gate' to achieve effective management of offenders' services. This is especially essential for neurominority offenders. The current framework is embedded in the strategic rationale for the introduction of the National Offender Management Service (Home Office, 2004a) but this only reaches a few of these identified offenders. Crow carried out a full review of the extent to which these recommendations have been taken up in resettlement policy (Crow, 1996). This policy should be reviewed and considerations for neurominority offenders included.

The impact of sentencing of the prison population has been inflated by 'backdoor sentencing practices' (Padfield & Maruna, 2006). An example of backdoor sentencing is where a judge will reduce a sentence based on the cooperation of the offender. Where this practice impacts neurodiverse offenders is when they are recalled to prison after they have been released on licence conditions. They are deemed to have breached the conditions that, many offenders tell me, they do not understand and then they are recalled.

The offenders breach conditions for minor reasons such as not attending probation appointments, having melt downs in approved accommodation, not managing themselves and then some more serious breaches such as stealing food, being aggressive and violent. These breaches indicate that these offenders are not adjusting well to being released into the community.

In the researcher's experience, working in HMP Dartmoor and in Plymouth Probation, offenders say it can feel like being 'set up to fail' if the correct 'through the gate' provision is not in place. There has been a massive rise in recalls to custody for failing to keep strictly to sentence stipulations that are detailed on their licence documents.

Many of these offenders are from neurominority groups, with and without formal diagnoses, and when faced with the lack of post custody specialist support available to them, they seek the

routine and structure of prison life and will achieve this by reoffending or breaking the terms of their licence restrictions. These short-term prisoners are often caught up in this circular pattern of leaving and returning to prison yet are left to continue this pattern of behaviour with no additional interventions put in place.

They are more likely to have an accumulation of social needs as well as more entrenched psychological effects borne out of repeated failures to integrate in the community. This group forms most prisoners in England (Nacro, 2000).

Autism Myths need to be considered when a person's behaviour significantly violates perceived social norms, it is not uncommon for observers to seek a label that purports to provide some sort of psychological explanation for their behaviour (Brewer & Young, 2015). This is common in the criminal justice system, as this is a fundamental part of the rehabilitation and sentencing process. It is human nature to use embedded stereotypes to form judgements of others that might be shaped by schemas (Fiske & Taylor, 2013). It is not clear if a label, that is attached to someone that has a diagnosis of autism and is driven by schemas, impacts how someone that is autistic is judged.

There were many misconceptions around autism such as lack of empathy, social exclusion and reduced facial expressions. However, these are general descriptors and do not apply to all autistic individuals. There was also a stereotypical myth that these offenders have highly specialist interests, and this is not true of all individuals. Often individuals with a primary condition such as autism also have secondary conditions such as generalised anxiety disorder (GAD) and obsessive-compulsive disorder (OCD). Individuals labelled with such mental illness are often judged negatively (Stone & Colella, 1996) and sometimes, as lacking credibility within justice services (Finn & Stalans, 1995). Witnesses labelled as having these conditions may be judged as lacking credibility and they are sometimes perceived to be unreliable witnesses. Evidence shows that they are more likely to be perceived as being responsible for the criminal activity they are charged with.

These offenders are more likely to be wrongly charged for crimes because of poorly representing themselves in the criminal justice system (Steadman, Cocozza, & Melnick, 1978). This negative reflection can have a direct impact on a person's ability to navigate the criminal justice system, from attending court to settling into prison life.

IQ and Emotional Intelligence tests are often used in terms of measuring academic intelligence, using IQ Wechsler Scores (Wechsler, 2008). These standardised tests look specifically at where a person falls below a population average. Genius Within CIC has developed a test using the Wechsler Tests but by presenting the strengths to the participant as a way of increasing confidence. IQ tests, such as the Wechsler Tests show that a vast majority of autistic adults have primary strengths as well as marked support needs. Autistic people have been described as specialist thinkers and so it is fitting the researcher sought to pull out these specialist cognitive skills and explore their unique talents and transferable skills. When considering specialist skills are a strength and lower cognitive skills are a weakness, this can be described as a contrast in cognitive ability as a 'spiky profile' due to the peaks and dips within the scores. The Support Change Project called these tests a Positive Test on the basis that it pulled out the strengths in the IQ tests and is used as a model to explain neurological differences. When looking at the variations of cognitive differences the researcher looked for any difference over thirty per cent to be significant. It makes evolutionary sense to focus on their specialist cognitive skills as being a positive attribute and so the project called the cognitive assessment a 'positive assessment' for these reasons. These variations of scores can limit a participant's ability to gain employment and training opportunities when they are not aware or able to demonstrate their neurological strengths and hidden talent. This profile is known in psychological terms as a spiky profile, as it shows an individual to have strengths outside of what is the norm. Neurominority Spiky Profiles measure the gaps of IQ scores taken from the Wechsler Adult Intelligence Scale seen in figure 1 (Wechsler, 2008).

Figure 1 *Spiky Profile using Wechsler IQ scores.*

Doyle (2017).

Note. The symbols on the Spiky Profile represent cognitive abilities such as memory, processing, and verbal reasoning. They align with the Wechsler IQ score tests by using six of the tests and focusing on the strengths of the person.

It is important to note that IQ intelligence is vastly different from emotional intelligence and often an autistic person might score highly on IQ tests but will struggle with social and emotional areas. This includes emotional self-awareness and regulation, coping skills, communication and advocacy, and resilience. These limitations can have a direct impact on an autistic offender navigating themselves through the criminal justice system.

The result of these negative experiences, that can occur either in a school environment or a criminal justice setting, is these emotional intelligence mechanisms can become reduced and offenders can find themselves either self-isolating or not engaging with people. Highlighting strengths can be one way of increasing self-esteem and confidence, which in turn can encourage offenders to engage with the prison population and increase a sense of belonging.

However, working on increasing emotional intelligence would certainly have an additional impact. In the community or a custodial environment, if an offender has deficits in self-awareness, low resilience, and poor coping behaviours, it can have a direct impact on the offender's susceptibility towards criminal activity and poor engagement overall.

In learning about an offender's background, their longing for satisfying, meaningful relationships mean that these desires make them vulnerable to manipulation by others (House of Commons Justice Committee, 2016).

From the researcher's experience of working at HMP Dartmoor, these offenders, who have lowered emotional intelligence and IQs, are eventually imprisoned and therefore, work around understanding emotional intelligence and building resilience and coping skills is critical for a successful rehabilitation.

Absent Self Theory and Autism needs to be considered when trying to understand how an autistic offender ends up in prison (Lombardo & Baron-Cohen, 2010). This theory proposes that self-awareness is less developed in autistic people. When autistic individuals were asked to describe the content of random daily experiences, it was found their reports relied on physical descriptions of the moment rather than on their own mental and emotional descriptions (Siewert, 2011).

This can come across as having a lack of accountability or victim empathy when trying to ascertain someone's level of remorse within the criminal justice system. Furthermore, it was found that autistic individuals were found to have more difficulty with identifying and describing their own emotions; this is known clinically as 'alexithymia' (Hill, Berthoz, & Frith, 2004). Additionally, atypical first-person pronoun usage has also been well documented in autism research (Loveland & Landry, 1986). This can come across as having a lack of accountability or victim empathy when trying to ascertain someone's level of remorse within the criminal justice system. Autistic people can confuse personal pronouns by referring to others as 'I' and to themselves as 'you.' This pronoun switching reflects confusion between self and others. Another possibility is that these autistic people misuse pronouns because they have a poor grasp of language, so they mirror other people's speech patterns.

These language confusions mean that autistic people can be at a disadvantage within the court process when they are giving an account for the crime they are being tried for as they are not

able to describe what happened in a way that the jury might understand. Autistic people often present as unremorseful and cold when they are masking and trying to make sense of the situation that they are in.

This means that autistic people are going to be at a disadvantage within the court process as they are not able to describe emotions to a jury and will come across as unremorseful and cold. Through working with offenders, via one-to-one sessions and group activities, offenders developed self-focused behaviours and understanding. Language that is autism-specific was still emerging and was very much a topic that was in many current debates among academics and professionals.

Lombardo supported this by reporting that autistic individuals who are more self-focused report having fewer autistic traits. In contrast, within the Control Groups, those who are more self-focused report having more autistic traits (Lombardo et al., 2010).

This does provide limited evidence that interventions that are self-focused for autistic offenders might have some benefit. Intervention for autistic offenders is the primary focus of this study and it will seek to consider different approaches of intervention.

The study hopes to understand the efficacy of the development of social-cognitive skills and assess if it increases the capacity of autistic offenders' understanding and acknowledgement of the impact of their criminal behaviour. It will also examine if interventions enhance the likelihood that their interactions with criminal justice system professionals proceed in a manner that does not negatively influence the outcomes (Brewer & Young, 2015). This study will look to measure the impact that The Support Change Project has on the offender's ability to positively complete their sentence plan prior to release. The main purpose of this investigation is to develop a working practice where offenders are supported through the criminal justice system as being disadvantaged at representing themselves effectively and then working with these offenders to build on self-awareness, resilience and coping within prison.

Diagnosis difficulties within the criminal justice system are difficult and many offenders come into prison having not had an official diagnosis. This has been supported by an earlier initial data collection taken within this study. When offenders start to self-reflect on their criminal behaviours, they will often try to make sense of underlying causes.

They look to understand themselves and seek clarification of their cognitive differences. Part of the criminal justice sentence plan is victim empathy awareness, and this is part of the process. Offenders are already marginalised before they come to prison. They have experienced segregation in many aspects of their lives before criminal behaviours emerged. The medical model is responsible for creating a mainstream negative descriptive that negatively defines autism and by its name (autistic spectrum disorder) it marginalises any offender by label alone. This is explored in detail within the literature review.

Within the parameters of this study, it was decided not to include autism diagnosis. Autism diagnostics require specialist training that takes place post doctorate. However, the researcher carried out several cognitive assessments to establish the cognitive spiky profile of autistic offenders. The spiky profile is not synonymous with autism. It might be ADHD, dyslexia, or dyspraxia (Doyle, 2017). The purpose of this is to identify areas of strength and areas that an offender will need support with.

Knowing this information will enable professionals to work with offenders more effectively. IQ testing using WAIS-IV (Wechsler, 2008) is used to test offenders for these differences.

These cognitive tests are useful as, currently, diagnoses waiting times have been a difficulty within prisons for several years. These waiting times are the result of several factors including cost and access to trained professionals within the prison system. As a result of these extended waiting times, the National Autistic Society raised serious concerns to Norman Lamb, the Minister of State, through a series of publications and reports (Ministry of Justice Report, 2015).

These statistics relate to adults in the community; therefore, it was presumed that the numbers of people waiting for a diagnosis in prison is much higher. Currently, there are no known published statistics relating to offenders, other than in the five years working with offenders, that are considered to have autistic traits. In this time, only one offender has received the much-needed formal diagnosis to access support when they are released.

Statistics that are available, looking at non-offending adults released under the freedom of information request, showed that diagnosis is a postcode lottery (National Autistic Society, 2015).

Guidelines state a diagnosis should take no longer than three months for a referral to an autism team (National Autistic Society, 2015). Many areas were achieving only ten per cent of this target, whereas some areas, such as Berkshire, had an average 509 days wait for a first appointment (Brugha, 2012). With these dreadful statistics, it is hardly surprising that the criminal justice system is looking for other ways to support and access interventions for offenders that fall into this category.

Offenders are leaving prisons knowing they are in a neurominority group which they know makes them different from the perceived norm but not how to manage themselves effectively in society to avoid reoffending. Many of these offenders that are in neurominority groups are prolific or revolving door offenders. It has already been discussed that autistic people have differing impaired theory of mind or simply a different way of operating. This means they can also struggle with consequential thinking, and this directly impacts upon their long-term rehabilitation. There are no statistics available currently to determine how many offenders have neurominorities in prison. All prisons have neurominority offenders but what is not known is how many at any one point, other than the researcher's pilot study carried out in 2018-19 at HMP Dartmoor. This mixed method study will attempt to establish the extent of this issue and examine this in more detail.

A qualitative study at this stage could have been useful to examine the individual lived experiences of the offenders. Another consideration is that the development of the plasticity of the brain in current neurology might assist the quantitative studies and this certainly provides opportunities for post-doctoral research.

The financial reality within a global pandemic is that McCrone and Dhanasiri projected an increase in the annual cost of mental healthcare from £22.5 billion in 2007 to at least £32.6 billion by 2026 to provide this early intervention (McCrone, Dhanasiri, Patel, Knapp & Lawton Smith, 2008).

However, the world entered a world pandemic of coronavirus and this plan of healthcare intervention was brought to a standstill and healthcare was only focused on crisis management.

The long-term impact of this interruption in mental healthcare was not known at the time of the study but, in the researcher's experience of working within a prison environment during this pandemic, the impact is going to be significant. Neurominority offenders at HMP Dartmoor seemed to settle well to the twenty-three hours a day lockdown initially, as autistic people can welcome desensitised environments. In the middle of the pandemic, they seemed to struggle, and negative behaviours evolved. However, more worryingly, these same offenders settled into an almost institutionalised existence. This was not the fault of the prison, as the COVID outbreak needed to be contained and as the prison is an environment of close proximity, the potential to spread the disease was much higher. The prison did what they needed to do for the safety of the offenders; however, mental health was difficult to prioritise in these conditions.

A four-fold increase in mental health referrals occurred nationally since 2010, but with no increase in provision and the world facing a pandemic, there was obviously going to be a spike, post pandemic, for not only offenders but professionals too. The impact of this was that there was just not enough mental health provision in custody and the community. Within The Support Change Project, there was a focus on increasing wellbeing, coping and resilience of

the individual within the prison to prepare them for challenges in the community when they were released.

This investigation considered the actualisation of an offender as part of the process and transformation from offending behaviour to being successful in the community post release. Actualisation is the capacity to gain autonomy and be self-sufficient (Rogers, 1959). This means a person's ability to grow to the extent where they are resilient and able to cope independently in the world.

When an offender's feelings of actualisation are removed, they are left feeling that their freedom and choice has been taken away. Since actualisation is known to improve autonomy, this research seeks to explore whether coaching and training can develop actualisation and, specifically, if this can be learned by autistic prisoners.

A specialist programme could be replicated by professionals working in the prison and improve outcomes for repeat autistic offenders. Another consideration is 'self-efficacy' in terms of actualisation as a mechanism of change or measurable outcome, as this is a primary consideration in this study. Currently, there is restricted access to behaviour change programmes and little room for differentiating what is available.

Offenders have been released into areas that have been in lockdown and have not had access to mental health services, and this has had a direct impact on their wellbeing. Many autistic people have co-occurring conditions such as anxiety and depression and need access to these services. Currently, mental health provision is very much reactive to crisis intervention and not prevention focused, whereas this investigation is primarily focused on preventative interventions. It must also be considered if it is possible for the prisoners to devise one in cooperation with a coaching model.

Missed Opportunities are plentiful despite the challenges of the global pandemic. Many offenders have described missed opportunities for interventions from an early age. The

implications of these inadequacies are that those individuals with serious neurominority conditions, such as schizophrenia, autism and ADHD with secondary co-occurring conditions such as generalised mood disorders and anxiety, either remain untreated or, if they are thought to present a danger to themselves or others, being sectioned in an in-patient unit or ending up in prison. Many offenders pass through life on the fringes of society, often repeat offending, until they commit a more serious offence, which triggers more strenuous interventions.

This is when these early issues are addressed retrospectively. This study seeks to draw attention to missed opportunities and provide new opportunities to develop prison-based interventions to support these offenders. The findings could then be used as a post doctorate opportunity to trial in probation services and schools to prevent offenders receiving custodial sentences through early intervention.

This study found that due to the lack of specialist provision, autistic offenders are forced to access services which are often located many miles from the home area. As already described, out of area provision disrupts positive attempts of rehabilitation. These additional stressors then result in psychological symptoms such as anxiety and manifestations of past and present trauma. Some of which may, in some cases, outweigh the severity of the initial offending behaviours. These stressful experiences can cause long term and lasting psychological effects for both the autistic offender and their immediate family who are also likely to be autistic due to hereditary factors.

Attachment is a deep and enduring emotional bond that connects one person to another across time and space (Ainsworth, 1989; Bowlby, 1969). If this bond is disrupted during interventions, sentencing and custody, there is likely to be a higher than the norm level of distress encountered. Offenders imprisoned are separated from their support systems and this can have a devastating impact on health and wellbeing. These factors mean that offenders in prison who are from a neurominority group are very vulnerable. Recent research on attachment was carried out by Jeremy Holmes. In this 2001 publication, the research was based on his own observations of John Bowlby's theories. He explores the correlation between attachment

theory, affect regulation and neural plasticity. He described the ambience as a secure space that was created by the attachment figure for the attached person. The essence of the secure base is that it provides a springboard for curiosity and exploration (Holmes, 2001, p. 70).

Another important fact to consider is how media has been responsible for negatively portraying rehabilitation for offenders.

Media platforms have made it possible for the public to see how prisons are understaffed and under resourced, leaving the public with a sense that rehabilitation is not taking place and that reoffending behaviours are at an all-time high (Transforming Rehabilitation: a summary of evidence on reducing reoffending, 2013). The Support Change Project, which is awaiting publishing, aims to address this misconception by using the media to its advantage by highlighting how prisons are putting in place new interventions to focus on successful rehabilitation of these offenders.

However, despite the wealth of anecdotal evidence that media reports online, there is no existing academic research that has examined the implications of not effectively supporting and rehabilitating offenders with specific neurodiversity. Therefore, this investigation acts as a starting point on which further research can be built. Without this scientific research, it makes it exceedingly difficult to bring about change, which is very much needed and requested by prisons across the country.

Cognitive behavioural therapy has been described as possibly the most promising rehabilitative treatment for criminals (Andrews, Bonta, Hodge, 2006; Lipsey, Landenberger, & Wilson, 2007). These behavioural change programmes are based on "active learning" (Andrews, Bonta, Hodge. 2006).

Person-centred behavioural change is a favoured approach within the criminal justice system as it aligns with what is already in place. The investigation aims to use what is in place and enhance the delivery with focused outcomes around behavioural change. Wilson, Allen-

Bouffard and Mackenzie found that all effective cognitive behavioural therapy-based programmes consist of an "emphasis on demonstrable, behavioural outcomes achieved primarily through changes in the way an individual perceives, reflects upon, and in general, thinks about their life circumstances." (Wilson, Allen-Bouffard & Mackenzie, 2005). Whilst the study did not use a CBT approach, the behavioural change methodology was favoured.

Autism and actualisation was also considered within this study. If an offender has reached the ability where they can self-actualise it means they are experiencing life in a way which allows for optimal development towards a superior state of individual being (Maslow, 1968) and (Rogers, 1961, 1980). Rogers described this state as 'fully functioning' or when one who has the freedom to experience and nurture psychological growth (Rogers, 1980).

Psychological growth is essential for an autistic offender, as they need to gain a better understanding of how they function as an individual and how this affects the decision-making process that has been responsible for their offending behaviours.

In support of this, Ryff found that if a person was self-actualised then they were capable of secure attachments (Ryff, 1989). This is perhaps one of the more challenging areas of rehabilitation, as autistic offenders, as already discussed, can struggle to see situations from another person's perspective. These ideas are all seeking to alter prisoners' thinking processes (Andrews, Bonta, & Hoge, 1990; Henning & Frueh, 1996; Meichenbaum, 1977). Baro stated that the primary treatment goal is to restructure the offender's thinking patterns or facilitate more pro-social thinking (Baro, 1999).

This investigation will seek to monitor the changes in the offender's thinking patterns throughout the life of the programme with a view to establishing if these changes reduce reoffending behaviours. 'Pro-social' behaviour refers to "voluntary actions that are intended to help or benefit another individual." (Eisenberg & Mussen, 1989).

The definition of pro-social behaviour refers to consequences of actions. In other words, consequential thinking rather than the motivations behind those actions. When all these ideas are put together, it is likely that an offender is going to develop a different way of thinking or being and they will then consider rejecting offending behaviours in the future. Social learning theory argues that just as criminal behaviour is often learned through interactions with criminals, pro-social conforming behaviour can also be learned in interactions with others (Akers, 1998). This investigation will establish a model of interventions that the offenders can engage in, that will in turn bring about these changes in thinking processes.

When thinking about bringing about change, it is imperative to acknowledge that current academic research found that half of all lifetime mental disorders begin by the age of fourteen and three quarters, before a young person reaches their mid-twenties (Kim-Cohen, Terrie, Moffitt, & Harrington, 2004). Autism is a congenital condition; however, individuals often have secondary mental health conditions, and these are coming to the surface at an earlier age than the offending behaviour.

This study aims to develop an emotional health tool kit that can be easily accessed by offenders within a prison, which allow them to develop skills that promote the development of coping, resilience, and a positive attitude in terms of rehabilitation.

Conclusion and what needs to happen next:

Now that the initial findings have identified that there is a huge gap of operational and evidence-based research, the researcher was able to see that there was a need for a body of research to take place in prisons to act as a platform for other research to build upon its findings. Many of these offenders in the target group are likely to have developed coexisting mental health conditions from the age of fourteen, they are likely to have had negative and traumatic experiences and they are likely to be undiagnosed. This group of offenders are likely to be what is classed by HMPPS as 'hard to help' or 'complex offenders.'

Chapter Two - Literature Review

Chapter Introduction: The researcher had a meeting in early March 2015 with Governor Oakes Richards. The Governor explained her view of research is that it is "very academic" and "difficult to translate into something that has an operational outcome". This chapter seeks to determine the extent to which this statement is true in the researcher's specific area of interest, by exploring the academic knowledge to date concerning practical guidance regarding the support of autistic individuals in prison. It gave the researcher an idea of the limitations and the gaps in the literature so that she could address some of them in the research.

Introduction

The literature review intended to focus on two subject areas: Firstly, the origins, meaning and implications of the term neurodiversity and secondly the prevalence of offenders with autism within the criminal justice system. The purpose of this was to determine exactly how many offenders there are in prisons at any one time, as this knowledge was unknown at the time of the study. These two areas were then split into subsections to confidentially differentiate for autistic readers, both professionally and within the criminal justice system.

When the word 'support' is used alongside neurodiversity it can imply vulnerability. The word neurodiversity relates to all of us and so can be considered to be an inclusive definition. Within this inclusive definition there are specific neurotypes, these can also be called specialist thinkers. Whether differences are acquired or developmental, it is normal and natural for there to be diversity within the human species. This investigation has required sensitivity and careful use of accepted and neuro-inclusive terminology to be able to reach all offenders. Terminology has been a critical consideration for this study due to the vast array of misconceptions and preconceptions. The study used the term neurodiversity or neurominority but in a prison environment this could mean a way of separation. When prisoners are separated, this can make them vulnerable. Within the prison environment there is an emphasis on labels and defining behaviours. In this study, the researcher wanted there to be a strong understanding of the theme

of inclusivity that is underpinned and supported by both current academic research and historical research, of which more recent publications refer to.

This study seeks to bring about practice change and development within the criminal justice system.

Aims of the Review

1. To conduct a literature review that uses the full range of diversity of terminology used within this field.

2. To search and review research carried out that focuses on people with autism within the criminal justice system to identify, analyse and review what others have found out about the topic.

3. To conduct a descriptive insight that addresses the range of words associated with neurodiversity.

4. To carry out a systematic literature review of the literature available and draw a conclusion that identifies a research question that has not been answered.

5. To carry out a review of the literature, to review the limitations and areas for further research in the subject area of autism in a criminal justice context.

The Purpose of the Review:

The literature review searched and reviewed a number of areas of interest to the study. This included the origins, meaning and implications of the umbrella term neurodiversity and what this means for the future when considering supporting individuals with a developmental condition. The literature review then focused on what research has been carried out that is focused on autistic offenders that are either within or have passed through the criminal justice system.

The literature was reviewed to identify limitations and areas for further research in the subject areas of neurodiversity and autism in a criminal justice field. The researcher then searched and

reviewed theoretical approaches that underpin this area of research and then sought to create a specific research question that has not been answered in the chosen area of research.

The rationale for this was because rehabilitation has failed. Finally, the investigation sought to understand why and present new ideas for practice and development.

Having carried out a literature review at the start of this thesis study, the researcher carried out a further review in the final year of the study to ensure that a current overview of all literature available was achieved. The researcher was aware of the limitations likely to be encountered within the investigation literature review and has continued to acknowledge them throughout the study. The initial literature review, which was carried out within the taught years of the doctorate programme was integrated into the most recent investigation literature review. The purpose of this was to ensure that no literature was missed as this study was submitted to HMPPS which contained the requirement of needing to include all published evidence to date.

Both reviews found that traits associated with autism may result in increased vulnerability in the prison environment. Both reviews found that there are a high number of offenders that have these traits and are not diagnosed, and therefore, are not being adequately rehabilitated. The current cost of detaining an offender is £38 thousand per prisoner and costs the taxpayer £9.4 million per annum. When this is applied to the total UK prison population of eighty-five thousand, it represents eleven thousand prisoners at a cost of £420 million per annum. Clearly preventative measures to stop reoffending rates further reduces annual costs to the taxpayer and is of personal benefit to the prisoner by minimising extended incarceration. To target this socio-group of offenders' rehabilitations has a direct impact on taxpayers as well as an individual's successful rehabilitation (Ministry of Justice HM Prison & Probation Service Annual Report and Accounts, 2016-17).

The scoping literature review applied a systematic search and review (Grant & Booth, 2009) of research addressing the experiences of autistic prisoners, and a narrative review to conclude its findings and areas for further research. This review formed a foundation for the current review

where the two reviews were combined. The scoping review was used as a starting point as the researcher knew the review considered published articles up until 2017.

Within this review the researcher included the previous review and searched in greater depth from 2016 to 2021. The two reviews were combined. There were no advantages to separating them into two reviews for the purpose of this investigation.

Relevant literature was identified from a two-stage search process:

(1) Literature databases (PsycINFO, PubMed, PsycEXTRA) and other online search engines (e.g., Google) were used to identify studies concerning autistic individuals and rehabilitation within prisons; and

(2) Backwards citation searches were undertaken with literature identified in the first stage of the search process. Search terms entered were autism, Asperger and rehabilitation, prison, offenders, offending behaviour.

Papers were included where they were reports of original research that directly explored the lived experiences of individuals who were detained within prisons and were specifically identified as having a diagnosis of autism. The search was widened to include ADHD studies as it became apparent there were several combined studies, which were useful when comparing limitations of papers (The Diagnostic and Statistical Manual of Mental Disorders, 2013).

The search revealed only three papers identified as meeting the inclusion criteria, involving a total of eight autistic individuals who were incarcerated in prison settings. Subsequent searching in undiagnosed autistic offenders was unable to identify any studies globally that had taken place. As a result of the insufficient literature, a meta-analysis was not possible to be undertaken and this review is consequently limited. The literature review needs to be carried out again and a range of additional methodologies used to be able to draw accurate conclusions. The reason for this is there are recent studies that would be valuable for this study. This study

has deployed a narrative of its intentions, focus and methods, as in previous studies these have not been explicit and have therefore, limited the research as it has not explored the issues broadly.

Methodology

As already mentioned within this study a systematic process was used for conducting the review of the relevant literature. A two-step approach will be deployed in the same way as the method used within the initial literature review.

The methodology focused on concluding what is already known through an examination of current available academic literature and being able to determine what was not yet known so that the gap in knowledge can be filled. Asperger's was selected as this condition has been prevalent in HMP Dartmoor and it appears to be more commonly found over other spectrum syndromes, however, this is not exhaustive.

The process aimed to critically evaluate by determining if the researcher could trust what was published and to identify any limitations such as access within the prison, sample size and overall prison screening. The next stage was to critically evaluate the literature focusing on its methodology and validity in this field.

The Process of this Review:

The formal search criteria and strategy the study used, to undertake a systemic search for literature on the evolution and development of neurodiversity, contained the following search criteria:

Choosing search terms

Keywords searches

Searching for exact phrases

Using truncated and wildcard searches

Searching with subject headings

Citation searching

In this study, key words were identified using a mind map to broaden ideas. The mind map started with a topic area, then consider synonyms. Next, key words were reviewed in a thesaurus to identify further related words, and these were added to the mind map.

The search criteria included singular and plural words. Consideration was given to notice UK and US spellings as well as terminology.

A combination of a Prisma Diagram to show the flow of the research and CHIP analysis (Arshed, 2005) to search and review the literature. (Liberati et al., 2009). The review is included in the appendix. (See Appendix A4 for CHIP Analysis). The CHIP analysis was the best method to use in this review as it focused on the Context of the study; many studies in the first review were not set in the context of a prison environment and this was a limitation. The researcher focused on the methodology used, as the researcher was interested to know how many studies have used a mixed methods approach.

In the first literature review, it was found that all the studies used a single method, and none used a mixed method. Issues focuses on if this study has expanded the knowledge of an autistic person's journey through the criminal justice system. Population in the previous literature

review: all the papers that were directly focusing on autistic prisoners had small numbers taking part in the study and all were identified by senior management to take part in the external study. The researcher was interested in comparing how this research would differ from other studies in terms of numbers of participants and the researcher being autistic themselves and conducting the research through an 'autism lens'.

Once the CHIP analysis (Arshed, 2005) was completed it provided a list of key words, the researcher's overarching outcome was to develop a research question to answer in the investigation. From this, the researcher was then able to start writing the search strategy. At this stage the researcher carried out a search and review strategy.

This was carried out using a mixed method review. From the initial literature review, it was concluded that, due to the scant level of research available in the research area, the research area needed to be broadened in order to be able to carry out a broad investigation. The aim was to find a balance between comprehensiveness and specificity.

The previous literature review focused on specificity and had limitations, so in this review it leaned towards comprehensiveness.

After this stage of the research was completed, the researcher then screened the research for relevance using a colour coded thematic approach. The CHIP analysis was a useful tool to carry out this review. During this stage, the researcher worked from the full reference of each record. These findings were recorded on the CHIP data records and they can be found in the appendix. This gave the study sufficient information to decide as to if the research is included or excluded from the study. A colour coded system was used to record this activity. If there are more 'yes' responses than 'no' it was recorded in the review.

The next stage was to critically evaluate the evidence to determine its quality and validity within the investigation. The aim was to take a critical stance and attempt to allow an authorial voice

to lead the review. Appropriateness was explored in the research and methodologies examined to identify limitations that can be addressed within this study.

Methodology Criteria

Methodology

Objectivity

Reliability

Validity

Generalisability

Trustworthiness

Transparency of information

Evidence of systematic research

When carrying out this review, the prompts from Dixon-Woods, Agarwal & Smith, (2004) were used. This ensured that a systematic approach was deployed when reviewing the literature.

The final stage of the systematic literature review was to establish what the 'take home message' is. The objective was to arrive at a conclusion that was without holes and consider the broad range of research on neurodiversity within the criminal justice system. The conclusion established what is already known and what is fundamental to the research so that it can establish, clearly, the gaps in research and define them. To know, which questions needed answering in the chosen field. To develop a rationale for the investigation that showed awareness of what this investigation achieved overall.

Findings

Appropriate search and review methods were selected. The most appropriate for the investigation was the CHIP method (Arshed, 2005) and the Prisma method. (Liberati et al., 2009). Two searches were carried out; (1) with no date limitations (2) date limitation from 2015-2020 to ensure the review of literature was up to date since the start of this investigation. Searches were conducted on the described data bases and then a general search to ensure any

published reports by the Ministry of Justice had not been missed. The search criteria had been followed and had exhausted all the combinations within the search criteria to incorporate language deviations.

There were limited studies across all fields and only eight that exactly matched the criteria. The flow chart below shows the process for inclusion and exclusion of studies using the PRISMA guidelines (Liberati et al., 2009). This includes a PRISMA 27 stage check list, and a four-staged process of review as detailed in the flow diagram. (Liberati et al., 2009).

The checklist consists of items which are considered key to ensuring transparent reporting in a systematic review (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, (2008); Liberati et al., 2009). Searches on all seven databases were conducted again on the 15 November 2020 to ensure that any new published literature was included in the study.

The purpose of this was to ensure that all available literature was included to meet the criteria of the HMPPS call of evidence, which this study forms a part of. The search criteria (using keywords) were entered into the seven databases using no date limits.

All references contained in the papers, identified as being in the general search area (such as papers exploring ADHD), were also examined for possible inclusion in this review for possible neurodiversity references. Searches resulted in the identification of eight journal articles which met the inclusion criteria of this review.

Initial Findings using Prisma Flow Chart

The Prisma Systematic Review was an appropriate method as it uses a checklist that can be used to evaluate each study (Liberati et al., 2009). There are twenty-seven areas that can be reviewed using the check list and it is a comprehensive model able to critically evaluate studies. The researcher used this for each paper (http://www.prisma-statement.org/). The researcher reviewed and recorded the results. Following this, the researcher was able to record the findings in the flow chart labelled Figure 2.

Figure 2 *PRISMA 2009 Flow Diagram.*
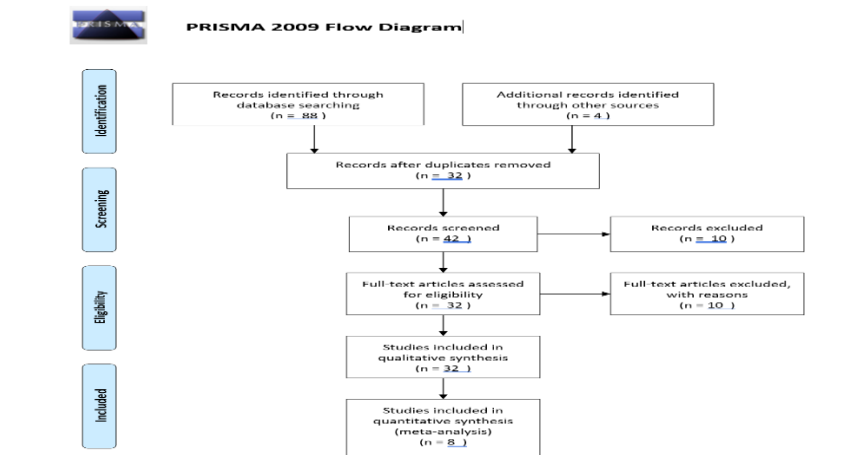
Note. The PRISMA (2009) flow chart above shows the published research that was reviewed in the literature review. This included the initial and following literature review.

Abstracts for each reference were obtained and screened using the following criteria identified using the CHIP model and the Prisma Flow Chart Model..

Inclusion criteria:

1. Study population.

2. Papers which investigated autism within a prison setting.

Exclusion criteria:

1. Paper not published in English.

2. Papers investigated did not focus on autism such as ADHD.

3. Papers that are conducted out of a prison setting.

From a total of eighty-eight considered, there were a total of forty-two studies used in the CHIP review for this literature review. Using the CHIP methodology, thirty-two papers were not able to be included in this study. Ten studies were excluded based on language, publication date and trustworthiness of the study itself. Two of the studies were not published in academic journals and did not have a comprehensive explanation of methodology.

Within the thirty-two included papers only eight linked directly to the subject of research. These papers are listed further into this chapter and the full reviews are in the Appendix. The researchers' exact subject of research is autistic prisoners in the criminal justice system which includes time spent serving a custodial sentence. Within this, only three were an exact match. Despite being an exact match, the researchers were also not directly employed within a prison context and did not have the additionality of being autistic and an 'insider'. The findings are described in subsections below. Many studies have been carried out by academic researchers that are employed within educational establishments. They achieve ethics approval through the HMPPS process and are then allowed to enter the prison. Their access is limited usually to the suite where legal representatives can access prisoners and the participants are self-selected and approved by the senior management team within the prison. Prisons are concerned about negative information being made public by offenders. An outsider researcher would be limited by these selection methods and might not be aware that this limitation has occurred. As an insider the researcher can make a more randomised selection and is likely to select someone that can give a true picture of an offender's journey through the criminal justice system.

Discussion of Findings

The included studies are:

1. Screening and Diagnostic Assessment of Neurodevelopmental disorders in a Male Prison (2015) McCarthy, Chaplin, Underwood, Forrester, Hayward, Sabet, Young, Asherson, Mills, Murphy.
2. Experiences of prison inmates with autism spectrum disorders and the knowledge and understanding of the spectrum amongst prison staff: A review (2015). Allely.
3. Development and implementation of autism standards for prison (2015) Allely
4. Autism behind bars: A review of the research literature and discussion of key issues. (2015) Robertson, McGillivrey
5. Autism spectrum conditions and offending: An introduction to the special edition (2013) Chaplin, McCarthy, Underwood.

6. A case control study of offenders with autistic spectrum disorders (2007). Woodbury-Smith, Clare, Holland, Kearns, Staufenbery, Watson.

7. Characteristics of male autistic spectrum patients in low security: are they any different to low security patients? (2013) Haw, Radley, Cooke.

8. People don't like you when you are different: exploring the prison experiences of autistic individuals (2020) Vinter, Dillion, Winder.

The studies included in the broadened criteria.

1. Intellectual disability in the Victorian prison system; Characteristic of prisoners with an intellectual disability (2010) Holland, Persson.

2. Asperger's Disorder, Criminal responsibility, and Criminal Capability (2009) Freckleton, List.

3. A systematic PRISMA review of individuals with autism in secure psychiatric care: Prevalence, treatment, risk assessment and other clinical considerations (2017). Allely.

4. Risk Factors for violent offenders in autism spectrum disorder: A national study for hospitalised individuals (2009). Langstrom, Grann, Ruchkin, Sjostedt, Fazel.

5. Circumscribed interests and offenders with autism spectrum disorders: a case control study (2010). Woodbury-Smith, Clare, Holland, Watson, Bambrick, Kearns, Staufenberg.

Due to a need to broaden the search area, the researcher decided to focus the study on the following areas. They have been divided into sections for ease of reading for the reader. The rationale for covering the ten areas listed below is to allow the reader to understand the broad complexities of carrying out researcher in the area of criminal justice. The researcher makes no assumptions of the reader's knowledge level in this area of research.

1. The models
2. Understanding what autism is and its terminology
3. The neurodiversity movement and the criminal justice system
4. The impact of diagnosis

The Medical Model

There are several medical frameworks that were used by professionals to try and narrowly define what was viewed as 'mental illnesses.' However, all the studies that were explored here agree that there are differences to be observed between the neurotypical brain and the neurodiverse brain. These frameworks included the diagnosis of autism, previously termed as autistic spectrum disorder. The medical models focus on impairment and the extent that the individual is impaired within any given activity. This has been the subject of much debate over the years as the neurodiversity movement believe that it is the world that is impaired and not the individual.

It was deemed appropriate that the medical field had the ability to categorise and diagnose conditions and illnesses. The medical professionals lead others with respect to many aspects of life that dealt with the body and mind, including disability (Brittain, 2004).

The models were explored in this section, and it was established where there was commonality within these models where they sought to define disability through different measuring means. The medical model created a form of segregation by defining behaviours negatively by categorising them as disordered. An example of this is when an autistic person might be experiencing sensory overwhelm and display external behaviours, they would be described as disordered thinking and behaviour. The model was responsible for pulling out the negative characteristics of autism and defining them as disordered behaviours. They applied these descriptions that segregated autistic people from an early age. Mainstream education is defined by alibility and did not acknowledge specialist thinking skills. It is only recently in the last few

years that education attempts to differentiate. For the purposes of making sense of the conflicting past models this study has selected two variations of the medical models and the emergence of the biopsychosocial model, and will focus on researchers Kanner, Kraepelin, Wing and Engel. Both were responsible for using marginalising descriptors and applying them to autistic people. The origins and founders of the models remains a debate depending on personal theoretical bias and is heavily debated, to this day, by researchers and diversity campaigners.

It is important to recognise that there is much confusion that surrounds what originates from the medical model of mental health, what originates from the medical model of autism and how they underpin the biopsychosocial model. Nevertheless, the models are largely rejected by all neurodiversity models today, and for the purposes of this study, it will focus on the emergence of neurodiversity.

The study initially attempted to unpick the key conceptual disputes surrounding neurodiversity so that the reader has a general understanding of why this study is important in terms of new understanding of the barriers that neurodiverse offenders face in prison today.

The purpose of this exploration is that the reader needs to be able to understand the historical understanding and concepts that surround neurodiversity if they are to understand why academics and professionals are in a divided position today.

It sought to specifically explore the academic and lived experience debates around terminology and the embodiment of neurodiversity itself. It is important to understand the origins and relevance of these models as they are the foundation of which all future models have arisen from and that The Support Change Project has attempted to address.

The medical model of autism was the first published description of autism, where it is described in terms of disability, was in 1943 by a man called Kanner (Rosen, Lord, & Volkmar, 2021). Within a year, Hans Asperger identified a similar group of children from different racial,

ethnic and socio groups. The classic medical model has taken many features from the first published descriptions of autism. Neurodiversity is connected to biodiversity and the civil rights action; that is explored further along in this literature review, when looking at the contributions of activists such as Judy Singer (Singer, 1998, 1999) in the late nineties. Neurodiversity rejects being pathologised, which are the medical model's defining features. This is explored in greater depth further along in this study. Neurodiversity examines the 'so called normal' as the 'normal'. The neurodiverse movement would argue that all people are neurodiverse. Each individual brain is cognitively and physically different through biological and social development (Singer, 1998, 1999).

This thesis has already explored the theory of mind approaches in the literature review and has explained how they originated from the medical model. The medical model of mental health could perhaps apply to disabled people that have health and support needs, they might exhibit more pronounced learning disabilities, such as poor behavioural regulation. The idea that behaviours are disordered is common in this model (Baron-Cohen, 2019). One of the main conceptualisations of the medical model of mental health is a focus on prevention and cure for the impairments that the individual lives with. Both medical models only apply to the cooccurring conditions, such as depression or anxiety that an autistic prisoner may need support with. It is important to remember that these viewpoints are not exclusive, and it must be considered that autism contains huge heterogeneity as well as intersectionality.

Both medical models are focused on the ideology that autistic people would be limited significantly in any environment or setting.

Often, they will not have intact language abilities and will not be able to freely advocate for themselves. This model will present interventions for prevention and cure of the serious impairments that can be associated with autism.

The medical model of mental health was first recorded in psychiatry by Emil Kraepelin in the first universally recognised textbook on psychiatry. He said that the psychiatrist needed to

be able to validate and diagnose different mental illnesses using a framework. He wrote that certain groups of symptoms occur together sufficiently frequently for them to be called a disease. He regarded each mental illness as a distinct type and set out to describe its origins, symptoms, course and outcomes.

Kraepelin's claims created the basis for the Diagnostic and Statistical Manual of Mental Disorders (DSM). The first DSM was published in 1952 and currently have published the 5th edition. This is used in prison currently; however, this edition expected to be replaced with the inclusions of ADR-I and ADOS becoming more popular among professionals. He went on to publish the international Classification of Diseases (ICD) through the World Health Organisation in 1948. The current version is the ICD-10, published in 1992. (Bastiaansen et al., 2011).

Wing (1981), in the Camberwell study, identified children who struggled with reciprocal social interaction. This type of difficulty of social interaction with narrow, repetitive pattern of activities occurred typically within the research sample. However, Wing and Gould (1979) found that there were children who also had the triad but who did not fit clear cut definitions between typical autism, atypical autism and other features of the triad. Many children with the triad were severely, even profoundly, mentally impaired and were nonverbal but others were found to be in the normal range of intelligence. Some of the latter fitted Asperger's description of his syndrome (Freckelton & List, 2009, Wing & Gould, 1979, Wing, 1981; Frith, 1989). The prevalence of Asperger's syndrome among those with normal intelligence was also investigated by Gillberg and Gillberg (1989). The study has decided not to explore the diagnoses of Asperger as this is a term not used within the prisons today. Wing was also considered to be influential in categorising childhood developmental disorders. In 1959, she found that autism was only present in five out of ten thousand children but, of course, it is now known it is more likely one in one hundred.

She wrote that people that are on the autistic spectrum exhibit a triad of communication, social interaction and social imagination, with rigid patterns of behaviours. The triad can be

recognised at all levels of intelligence (Wing, 1996). Wing founded The National Autistic Society. Its early published research is debated due to classifying autism as a disorder which is a negative description of a cognitive difference. Lorna Wing founded the idea that autism is in fact a spectrum condition, and this is widely considered to be accurate presently. She examined robustly early research in the medical model of mental health stating that autism was defined in clearly differentiated disorders.

Wing set up the Centre for Social and Communication Disorders, now known as the Lorna Wing Centre, today. The Lorna Wing Centre did attempt to pathologise autism, and this has been the basis for debate by more modern academic researchers such as Happé and Frith (2020). The concept of 'autistic traits' is problematic, and it 'arises from a misuse of language' (Chown 2010; In press). However, the researcher has chosen to disregard this in her research as the lack of formal diagnoses has had a detrimental impact on offenders accessing support when identifying as autistic or having autistic traits.

The term 'autistic traits' within autism literature was examined by Happé, 'It is ironic that a belief in the existence of a broader phenotype depends on 'autistic traits' being normally distributed amongst human beings, when these very same traits are why autism is pathologised' (ibid., p. 50). This is because autistic traits often overlap with other cognitive differences. Further research should be carried out to examine offenders with multiple and mixed diagnoses, all seemingly over lapping and superseding each other. Happé and Frith looked at the idea of a person being a bit autistic or 'on the spectrum'. At the genetic level too, it appears that the genetic influences on subclinical traits largely overlap with those on diagnosed autism (Happé, & Frith, 2020. p. 6).

When considering how not to pathologise autism it does not mean that an autistic person does not have impairments. Furthermore, it does not mean that cognitive differences are problematic. An example of this is social activities, an autistic person might simply choose not to socialise and prefer their own company. Baron-Cohen mentions "social difficulties" as a

way of pathologising autism, and for many autistic people, their social struggles are indeed disabling.

Socialising and deciding not to socialise are as likely as each other for an autistic person and inface they might prefer both. Learning how to socialise is as important as learning how not to socialise and claim a period of desensitisation.

Understanding neurodiversity means listening to autistic adults and learning about their lived experiences. Understanding their personal costs of being autistic and how they have chosen to work or not work, be married or not be married and so on. The lived perspective has over the years been examined by high-profile academic researchers to navigate the constantly changing position of the neurodiversity movement. There has been considerable funding placed to evolve traditional approaches that have defined autism. The neurodiversity movement has largely consisted of autism advocates and people that sit within autism communities. Indeed, Wing was the parent of an autistic child, and she formed the National Autistic Society with several other parents. There is an identified gap in identifying people with lived experiences of autism that are also academic researchers. This research is carried out in this unique perspective, and it seeks to provide new perspectives and create a space to form and develop new models.

However, these academics, with lived experiences, could be biased as they might not fully represent autistic people with profound learning difficulties. It is clearly apparent that both the medical model of mental health and autism do not capture the individuality of autism. Poor implementation of participatory research has created a level of dissatisfaction among autistic communities, and this provides strong census for more participatory research such as autistic offenders that are incarcerated. Participatory research enables meaningful input from autistic people in autism research. It is one important way to overcome barriers to effective translation and to ensure that research yields relevant benefits (Long, Panese, & Ferguson, 2017).

By participatory research, it means incorporating the views of autistic people and their allies about what research gets done, how it is done and how it is implemented (Cornwall & Jewkes,

1995). Participatory research is useful when considering creating supportive environments within a prison. Access to offenders that are in this space is limited and it is often difficult for academics to gain access to serving offenders and so rich data from this particular group is limited. Research needs to be carried out by skilled academics who have the resources and access to enter prisons freely and without restriction to develop their work.

Research subjects should be included in any participatory agenda (Fletcher-Watson et al., 2017b). This academic influence using participatory inclusion at its core can change policy and processes that can benefit the autistic community. The growing autistic rights movement and recent prevalence of participatory research will enable people to recognise and respect differences rather than attempting to force a consensus (Milton, 2012).

There are several autistic-led organisations in operation currently who have successfully published their findings (e.g. Autonomy; Beardon, 2017; Lawson & Beckett, (2021), online communities (e.g. wrongplanet.net) and events (e.g. Autistic Pride, Autreat and Autscape). The world of neurodiversity is very much a fluid one that has embarked on a period of growth, exploration and change to provide real world change for autistic people living in local communities. The neurodiversity movement has strongly argued against previous models on the basis that each person's experience of the world is unique and individual and so it cannot be conceptualised within a measurable framework, however, it is a good counter-position to the medical model.

This is one of the main criticisms of both medical models as they present conditions such as autism negatively, as it highlights the negative aspects of illness and neglects the structural context within which meanings are shaped (Williams, 1996). This perception then reinforces the `negative' image of the person with a disability and a negative sense of self and identity (Barnes & Mercer, 1996). All examined research acknowledges that many people with autism have cooccurring conditions and depending on the model these occur as part of autism or independently alongside autism. There are vast benefits towards medical involvement in terms of medical interventions.

Bury supports this by saying that `a full picture of disablement in contemporary populations inevitably exposes health and illness dimensions' (Bury, 1996). Engel was one of the first researchers to examine the biomedical model (Wilbur, Engel & Jones-Engel 2012) and published a series of papers that questioned the model by saying that the biomedical model was 'limited'. He claimed that there was a need for a new model that took into account the spectrum of medical disordered present in the general population at the time. He named this new model the biopsychosocial model.

Engel (1977) stated that the 'biomedical model did not allow for social, psychological and behavioural dimensions of conditions (Wilbur, Engel & Jones-Engel 2012). The model did not allow for individualised medical treatment where the patient is the core focus on a humanistic level. The biopsychosocial model was built upon the biomedical model by creating new dimensions for the medical professionals to consider. This model very much underpins the medical model of autism.

The ongoing debate between impairment and disability encourages sociologists and psychologists to steer away from the medical models, but there is evidence to support its place when considering neurodiverse conditions, even if only to diagnose and treat cooccurring conditions, also present. This debate was carried forward by the Disability Alliance. They argued that the goals previously were too limited. These issues where explored in the Fundamentals Principles Document. There were three sections. The first was the Fundamental Principles and the second was the criticisms of the principles and finally the third section was where the word 'umbrella' as a metaphor was used by Finkelstein in 1994. The umbrella structure enabled a few professionals to claim that they spoke for disabled people.

This was received well by disabled people because there was an immediate connection to their own lived experiences. This formed the basis for disability awareness and disability equality. For some disabled people intervention provides meaning, understanding and legitimisation of their experiences of impairment (Broom & Woodward, 1996). However, experience and

environmental factors share equal importance. If these were brought together, then the overall management of the autistic person's primary condition and treatment of co-occurring conditions would achieve a far more positive outcome.

Each needs to embrace the other's model to bring about social change, which could then contribute to lessening the gap between disability and ability and improve the quality of life for autistic people. The models described adopt a normative view where it believes that disability, including problems with the mind or body, is viewed as a problem that needs to be medically cured so individuals can function within society (Brandon & Pritchard, 2011).

They worked on the idea that interventions would cure and reduce the disordered behaviours and conditions. These models operate on an individual focus rather than an environmental perspective.

Some disabilities cannot be eliminated or cured using medical advances. Disabled people are considered to require help (Roush & Sharby, 2011). This means that the medical model of mental health supports the idea that autistic people are considered disabled on the basis that they are unable to function in the same way as a perceived normal person does (Mitra, 2006). Disability becomes the defining characteristic of individuals with disabilities including autism, which shapes the beliefs that individuals who are typically functioning have toward them (Fitzgerald, 2006). This statement is vehemently disputed by the activists that support the social model of disability and the neurodiversity movement on the basis that it is labelling people and magnifying differences. These movements would argue that disability is not a defining characteristic of a person's existence. The researcher recognises that in exploring defining the impact that the medical model has had on understanding disability, it will contain the researchers own personal bias being a disabled person themselves.

In Baron-Cohens most recent paper he argues that a 'disorder' is used when an individual has a dysfunctional symptom. A disease is when a disorder is ascribed to a specific mechanism and the term disability is used when a person is below standardised cognitive measurements (Baron-

Cohen, 2019). This statement alone supports the idea that autism is not a disorder (autistic spectrum disorder) as many non-offending autistic people do not lead disordered lives. If there is no specific disorder, then there is no disease present.

Many autistic adults have what is described as a 'spiky profile' (Doyle, 2017), where they can score much higher than average in intelligence tests and therefore, these assumptions cannot support those foundations of the medical model defining people that identify as autistic. Autism is simply a 'difference', and this is explored in the literature review in more depth.

In Baron-Cohen's paper he makes several generalisations such as stating that all autistic people have a need for things to be the same, a desire for repetitiveness and will reject sudden change.

If autism is a spectrum, then this cannot be true, as a spectrum means that there is a wide spectrum of difference. These differences support the medical models, as anxiety and depression are conditions that can be treated in line with the medical model's identify and treat practice. Perhaps it requires considering that both medical models support and are more compatible with the cooccurring conditions that many autistic people are particularly vulnerable towards. Autistic people can require medical intervention from time to time and this is also true of any group of people (Barton, 1993; Oliver, 1996). The medical models both look at conditions from `an illness perspective' (Barnes & Mercer, 1996). When looking at conditions from an illness perspective it can be immediately seen to be operating from a perspective of disadvantage. This is one of the main criticisms of both medical models as they present conditions such as autism negatively, as it highlights the negative aspects of illness and neglects the structural context within which meanings are shaped (Williams, 1996). This perception then reinforces the `negative' image of the person with a disability and a negative sense of self and identity (Barnes & Mercer, 1996). It is known that as many people with autism have cooccurring conditions. There are vast benefits towards medical involvement in terms of medical interventions. Bury supports this by saying that `a full picture of disablement in contemporary populations inevitably exposes health and illness dimensions' (Bury, 1996).

The second criticism of the medical model is its findings on the theory of mind where researchers said that it characterises autism. This is because autistic people can struggle to understand implied actions between humans. This is led to the assumption that autistic people have less empathy. Which is not true.

Researchers Castelli et al said that the individuals with autism, regardless of their general intelligence, have an impairment in the attribution of mental states (Castelli, Frith, Happé, & Frith, 2002, p.1944). This was also described as a form of mental blindness. Both terms are cumbersome in as much as they imply misleading implications for the autistic person. It is embedded in literature to such an extent that this study needs to acknowledge it but has decided not to dwell on it as it is not important for the objectives of this study.

The ongoing debate between impairment and disability encourages sociologists and psychologists to steer away from the medical models, but there is evidence to support its place when considering neurodiverse condition, even if only to diagnose and treat cooccurring conditions, also present.

For some people medical intervention provides meaning, understanding and legitimisation of their experiences of impairment (Broom & Woodward, 1996). However, experience and environmental factors share equal importance. If these were brought together then the overall management of the autistic person's primary condition and treatment of cooccurring conditions would achieve a far more positive outcome. Each needs to embrace the other's model to bring about social change, which could then contribute to lessening the gap between disability and ability and improve the quality of life for autistic people. Both medical models face criticism, as their ideologies have had many repercussions for autistic people over the last fifty years. Autistic adults and children were placed in institutions and left to languish. In fact, the last of these institutions were only recently closed in the last five years. The model labelled people so that they would receive services.

The labelling was used to determine which individuals receive services (e.g., educational services), types of services, and benefits (Humpage, 2007). Labelling people with disabilities encourages individuals to feel as though they have limited options (Barton, 1993). The model had many negative perceptions and as a result it has stigmatised disability.

Individual and Social Models

There are two main concepts within individual and social models. Firstly, the model locates the 'problem' of disability within the individual, and it recognises the causes of the problem as stemming from the functional causes of the problem in terms of limitations and losses.

The genesis, development and articulation of the social model of disability by disabled people themselves is a rejection of all these fundamentals (Oliver, 1990). Disability, according to the social model, is all things that impose restrictions on disabled people, ranging from individual prejudice to discrimination. It places central importance that there is a valid distinction between illness and disability (Oliver, 1990). The two should be considered as intertwined and this study has been successful in recognising this within the implementation and evaluations of the interventions that took place within The Support Change Project. The social model for disability has been supported by researchers, activists, and members of academia as being the most inclusive model currently available.

There are indeed nine versions of the social model available (Lawson & Beckett, 2021). Any professional or person with lived experience will identify with one or more of the versions of the social model of disability depending on their own personal perspective based on individual intersectionality. Even today each model does not encapsulate neurodiversity entirely.

1. The Social Model of the United Kingdom.
2. The Oppressed Minority Model.
3. The Social Constructionist Version of the United States.
4. The Impairment Version.
5. The Independent Living Version.

6. The Postmodern Version.
7. The Continuum Version.
8. The Human Variation Version.
9. The Discrimination Version.

All the models are concept based and each model fits into the social model. There is nothing inherently disabling about having an impairment (Blustein, 2012).

Advocates of the social model argue that disability is imposed in addition to impairments by the way that individuals, with impairments, are isolated and excluded from full participation in their community (Bingham, Clarke, Michielsens, & Van De Meer, 2013). The social model of disability argues that the true definition of disability is not their medical condition, but society's responses and adjustments towards them. In the Human Variation Version and The Discrimination Version, the models most closely align with the idea that neurodiversity is simply cognitive variation or as previously explained, individual 'spiky' profiles.

Social Model of Disability

The social approach to disability focuses on empowerment and the development of an active disability rights movement committed to major social change (Oliver, 1996). It is very much a civil rights approach to disability. The model argues that it is society that the medical model imposes disability on individuals with impairments (Bingham et al., 2013). If adjustments were set up in a way that was accessible for people with disabilities, then they would not be disabled in anyway.

It proposed to bridge the gap between the abled and the disabled by introducing assistive technologies and adaptations. Society views an impairment as a disadvantage and highlights differences in ability to complete any given task.

This model seeks to address these differences. However, this model does not include autistic people that are more disabled, such as being without language and needing more care in place.

It is not possible to bridge the gap to the extent that there is a level playing field between a nonverbal autistic adult and a neurotypical adult.

There are many ways that a person can be at a disadvantage in society. Some of the ways that individuals are disadvantaged by society include prejudice, labelling, ignorance, and lack of independence through intersectionality. The social model of disability was developed by individuals with disabilities in the 1970s and 1980s and endorsed by public figures such as Temple Grandin (Grandin, 2008).

It came as an opposition to the medical model of autism supported by Professor Baron Cohen (Baron-Cohen, 2019). The medical model of autism states that disability is caused by the health condition a person has and the nature of this condition will determine what they can and cannot do.

The medical model would say that for everyone to participate fully in society, everyone would not be disabled. Following extensive research, it was found that this is not considered to be true, as this research was based on the existence of cooccurring conditions such as depression and anxiety disorders, which are all medically treatable. These conditions are described within the medical model (Baron-Cohen, 2019). In contrast, by considering the social model of disability as a theory, instead of the medical model, this can change people's outlook on what other people can achieve, including autistic offenders within the criminal justice system.

If, within this study, it only considered the social model of disability, there should be no limits set on what autistic offenders can achieve; the key is finding the support which they need to enable them to achieve these things. The support can be identified without a diagnosis. However, for a person to be able to bridge the neurodiversity gap they must be able to treat and manage all the cooccurring conditions that many adults have.

This means that the social and medical model are an integrated mechanism.

The researcher would have liked to have supported this finding with research; however, there were no current published articles. It could be argued that many problems associated with disability may disappear if people's attitudes toward individuals with impairments change and there is public policy that focuses on the removal of environmental barriers (Brittain, 2004).

Addressing environmental barriers may move society from one that discriminates against individuals with impairments to one of social inclusion (Palmer & Harley, 2012).

The social model focuses on the environment around the disabled person and not on the impairment itself. This could be argued to be a limitation as the impairment, for want of a better word, forms part of a person's identity and lived experience and so if this is removed from someone's existence and focus solely on the world outside of the person, does that person then not lose part of their unique identity and what makes them the person that they are?

Is impairment an observable attribute of an individual that is an essential aspect of their lived experience (Palmer & Harley, 2012). The social model seeks to separate impairment from disability completely (Bingham et al., 2013). It is evident that the social model ignores the intersectionality of different forms of oppressed states (Fitzgerald, 2006).

The social model does not disregard that fact that some illnesses have disabling consequences and also that many disabled people have illness that, for the purposes of this study, the researcher refers to these as cooccurring conditions. Morris argues that there is a tendency within the social model of disability to deny the experience of our own bodies by insisting that physical differences are entirely a social consequence (Gitimoghaddam, Chichkine, McArthur, Sangha, Symington, 2022) and supports this by saying that the way forward for the social model is to fully integrate the experience of impairment with the experience of disability. It is clear that all of the models cannot explain disability totally and cannot do the work of social theory. If lived experiences are not accounted for, in the medical models or the social models of disability, then there is room for a new model that can fully account for medical, biological, social, and environmental differences.

The Neurological and Biological Basis of Neurodiversity

Research examined in the neurodiversity models suggests that autism is an extremely heterogeneous condition and participant selection is likely to have an influence on the results of a study as the spectrum of people with autism cannot be robustly sampled.

When considering the neurological and biological basis of neurodiversity there is evidence, in this review, that supports that there is altered brain growth within autistic people. The studies about to be reviewed in this section have found that the amygdala and frontal cortex overgrow during the first few postnatal years. There is then a period of normalisation and sometimes decrease in volume or cellularity. Although this area of research is not directly linked to the processes of a systematic review, for the purposes of achieving the depth of understanding required to be able to consider the basis of the research, it was essential that it was included.

Following on from the previous two models is the most appropriate place to explore neurological and biological influences within neurominorities. There are three main neurological areas that scientists have been researching in this field of research. The research suggests that autistic people have distinct neurological differences when compared with those who are not autistic.

1. Abnormal cortical growth patterns (Donovan & Basson, 2017).
2. Abnormalities in cortical thickness (Rapin, & Katzman, 1998).
3. Cortical layers and their connections to other regions of the brain (Courchesne, Campbell, & Solso, 2011).

MRI imaging, carried out by researchers (Donovan & Basson, 2017, Rapin, & Katzman, 1998, Courchesne et al., 2011a), have found that the total size of the parietal lobe is increased in autistic people. The increased size of the parieto-temporal lobe was one of the most replicated differences found. These two lobes control the sensory input of the body and the language, speech, hearing and communication centers of the brain. This supports the idea that autistic people struggle with sensory and communication difficulties (Baron-Cohen, 2019).

Donovan and Basson support the idea that there is physical, neurological evidence that there are differences between a typical and a neuro difference brain, such as, the amygdala is larger and the posterior section of the corpus callosum is smaller (Donovan & Basson, 2017). However, their research did not support brain overgrowth which is a common myth in autism.

The Autism Research Institute carried out some research in the Harvard Medical School to examine structural differences that can be found in the autistic brain (Elderson, 2019). The research concluded that the amygdala is smaller in an autistic person. This area of the brain is responsible for the regulation of emotions, aggression and is linked to responding to sensory stimuli. This supports the idea that autistic people can struggle to manage sensory exposure and can easily feel overwhelmed. The research center concluded, in their research, by stating that when this is removed from an animal, they will avoid eye contact and their fight or flight response is more triggered (Elderson, 2019). However, it can only be considered as an inference drawn from this research, as there is no direct evidence that supports the idea that a smaller amygdala could be why some autistic people have aggressive episodes.

A study at The University of Montreal carried out by researchers Ha, Sohn, Sim and Cheon found that the hippocampus is also smaller in an autistic brain. (Ha, Sohn, Kim, Sim, & Cheon, 2015). This area of the brain is responsible for controlling a person's ability to respond to stimuli.

They also make the inference that when it is removed from an animal self-stimulatory behavior is more prevalent, and therefore, being smaller in an autistic brain could be the reason why similar behavior is seen in autistic people (Ha et al., 2015). These two inferences are very misleading in the published research as there is evidence to suggest it might be true; however, there is no evidence that directly supports this. Furthermore, they found that autistic brains support the idea that they are more able to undertake visual abilities. The study collated data over a fifteen year timeframe, collecting seven hundred brain images, where 357 of the scans were from autistic people. The researchers, Donovan & Basson, Rapin, Courchesne, found

more activity in the temporal and occipital regions in the autistic brain scans than in the non-autistic scans. This area of the brain controls vision and long-term memory.

In contrast, there was less activity in the frontal cortex which is responsible for planning and organisation (Ha et al., 2015).

Courchesne carried out a study where the results show that the autistic person's brain has a much greater number of neurons in the frontal lobe, which suggests that there might be reduced apoptosis reducing neural connections (Courchesne et al., 2011a). It must be considered that people that are nonverbal might display behaviours that can be classified disordered behaviours. This supports another debate separating so called high functioning autism and Asperger's from low functioning classic autism. This is supported by MRI researchers such as Ha et al (2015), where they found MRI imaging showing increases and decreases in brain activity during a range of different tasks (Ha et al., 2015). Autistic people often score highly on the block design IQ sub test, as this test primarily focuses on mental rotation ability which can be seen in an MRI scan. This ideology is supportive of the neurodiversity model, where it supports the idea that all neurodiverse brains have a Spiky Profile (Doyle, 2017).

The most significant study to take place was an MRI study focusing on autism and neurotypical brain size (Courchesne et al., 2011a). This study examined the brains of individuals between one and fifty years of age and they reported evidence of early frontal cortex overgrowth, followed by a marked reduction in brain size in the autistic cases (Courchesne et al., 2011a).

He then carried out a post-mortem study and his findings supported his earlier findings. He found an increase in neurons and total weight in the dorsolateral and medial prefrontal cortices in children with autism compared with the controls (Courchesne et al., 2011a).

Some scientists have reported that the excessive rates of brain growth in infants with autism, is mainly contributed by the increase of frontal cortex volume (Herbert et al., 2004). A further post-mortem study carried out, looking at this same area, found the pathology in the amygdala

of individuals with autism compared to age and sex-matched controls (Rapin, & Katzman, 1998). They found small neuronal size and increased cell density in the cortical, medial, and central nuclei of the amygdala detected in autistic patients. This is clear evidence that there are neurological differences between an autistic person and a non-autistic person.

There have been further small-scale studies where scientific evidence found that the five to fifteen per cent of diagnosed autistic adults have their condition attributed to rare genetic variants or mutations discovered in neuro imaging. Cheng found that ten to fifty per cent of the variance in autism can be attributed to common genetic variants such as single nucleotide polymorphisms (Cheng et al., 2009). However, other scientists would argue that these differences are responsible for disordered behaviour and thinking. It could be argued that they simply reflect individual differences or natural variation (Baron-Cohen, 2019).

Some areas of the autistic brain such as the amygdala, are larger, and others such as the posterior section of the corpus callosum are smaller (Sah et el., 2003). The amygdala, located in the medial temporal lobe anterior to the hippocampal formation, has been thought to have a strong association with social and aggressive behaviours in patients with autism (Aggleton, 1992). The amygdala is a major component of the limbic system and affective loop of the cortico-striato-thalamo-cortical circuit (Alexander, DeLong, & Strick, 1986). It is known that the amygdala has two functions, eye gaze and face processing (Lai et al., 2001). Lai found evidence that early overgrowth within the brain is common among autistic people. Studies carried out by Ha found that the autistic brain reveals a greater number of neurons in the frontal lobe, suggesting that there may be reduced apoptosis or pruning of neural connections in autism (Ha et al., 2015).

These studies support the idea that there is a difference between that of an autistic person's brain and that of a neurotypical person's brain; however, it does not evidence disorder (Lai, Lombardo & Baron-Cohen, 2001). Given that one study says the amygdala is bigger and one study says smaller, this could indicate that probably the amygdala size is irrelevant. These differences could be just individual differences and could be related to trauma, not autism.

However, there are similarities found between someone having lesions and someone having autism. If a person is found to have lesions of the amygdala it can result in fear-processing, modulation of memory with emotional content, and eye gaze when looking at human faces (Adolphs et al., 2005). Adolphs goes on to say that the amygdala receives highly processed somatosensory, visual, auditory, and all types of visceral inputs.

It sends afferents through two major pathways, the stria terminalis and the ventral amygdalofugal pathway. When it is disrupted, it can result in delayed processing of information.

Recent developments in neuroimaging have facilitated the investigation of amygdala pathology in autism and this further supports this claim (Howard et al., 2000). Studies using structural MRI estimated volumes of the amygdala and related structures in individuals with autism and age, gender, and verbal IQ-matched healthy controls (Howard et al., 2000). An increase in bilateral amygdala volume and reduction in hippocampal and para hippocampal gyrus volumes were found in individuals with autism. In addition, the lateral ventricles and intracranial volumes were increased in the autistic subjects; however, overall temporal lobe volumes were similar between the autistic adults and control groups. There was a marked difference in the whole brain, voxel-based scans of individuals with autism and control groups (Abell et al., 1999). Individuals with autism showed decreased grey matter volume in the right paracingulate sulcus, the left occipital-temporal cortex, and the left inferior frontal sulcus. On the contrary, the grey matter volume in the bilateral cerebellum was increased. They showed increased volume in the left amygdala/peri amygdaloid cortex, the right inferior temporal gyrus, and the middle temporal gyrus (Stoodley, 2012).

The development of functional neuroimaging has provided evidence for the correlation between amygdala deficit and autism. A study, using Technetium-99m (Tc-99m) single-photon emission computed tomography (SPECT), found that regional cerebral blood flow (rCBF) was decreased in the bilateral insula, superior temporal gyri, and left prefrontal cortices in individuals with autism compared to age- and gender-matched controls with mental retardation

(Ohnishi et al., 2000). The scientists found that rCBF in both the right hippocampus and amygdala was correlated with a behavioural rating subscale. On proton magnetic resonance spectroscopy (MRS) in the right hippocampal-amygdala region and the left cerebellar hemisphere, autistic subjects showed decreased level of N-acetyl aspartate (NAA) in both areas (Otsuka, Harada, Mori, Hisaoka, & Nishitani, 1999). This study concludes that a decreased level of NAA might be associated with neuronal hypofunction or immature neurons.

These findings support the claim that amygdala might be a key structure in the development of autism and a target for the management of autism. Where people have experienced a head injury, this area of the brain can also be impacted in similar ways to autism. The frontal lobe has been considered as playing an important role in higher-level control and a key structure associated with autism. Individuals with frontal lobe deficit demonstrate higher-order cognitive, language, social, and emotion dysfunction, which is deficient in autism (Struss & Knight, 2013). If this area is impaired, it can mean that function is also impaired. Blatt carried out studies that found cerebellar hypoplasia and Purkinje cell hypocellularity were found in some participants. He concluded that the developmental trajectory of cerebellar development in individuals with autism has not been found. Studies found that several other brain regions are affected, including deep cerebellar nuclei, limbic system, and other brain stem nuclei (Blatt, 2012). Disturbed communication within amygdala-mPFC circuitry caused deficits in memory processing. These findings provide support for a role of the mPFC in the development of autism. Besides the amygdala, nucleus accumbens (NAc) is also considered as the key structure which is related with the social reward response in autism. NAc borders ventrally on the anterior limb of the internal capsule, and the lateral subventricular fundus of the NAc is permeated in rostral sections by internal capsule fibre bundles.

The rationale for NAc to be considered as the potential target of DBS for autism, is its predominant role in modulating the processing of reward and pleasure (Quirk & Beer, 2006).

All the neurological studies explored in this review of the models and concept of neurodiversity agree that there are physical differences between the autistic brain and the neurotypical brain

to varying degrees. What has not been agreed upon is how to fairly measure these cognitive differences in terms of ability. It could be considered that the number of differences in what 'causes' autism, therefore, makes these studies meaningless. These studies needed to include considerations around intense world theory, or super connectivity theory to be regarded as more meaningful. These theories are the strongest evidence of neurological differences that are consistent between studies available to date.

Psychology professionals use standardised cognitive testing to be able to measure difference. However, the studies reviewed, all conclude differing differences found in the MRI studies and therefore, to measure from the same set of standardised norms, found in the Wechsler intelligence scale, is surely flawed. The differences are measured by the gaps of IQ scores taken from the Wechsler Adult Intelligence Scale (Wechsler, 2008). The tests show areas of high ability, competence and areas that need support. In its raw form, this is disability. When considering cognitive abilities, autistic people may look longer at non-social stimuli than at social stimuli, and autistic people may show their best performance on IQ tests on the Block Design subtest, perhaps reflecting their strong aptitude for attention to detail and disassembling complex information into its component parts.

When considering cognitive abilities, it focuses on where a person falls below what is described as a standardised measure of functioning and this causes limitations in any given environment. A favoured term 'difference' simply means a variation in a trait, and this is widely accepted in the neurodiverse community. It has been considered what can be huge heterogeneity in the autism spectrum demographic of individuals. It could be argued that it is a difference in language and communication. It needs to be considered that, within the spectrum, there is a huge difference between language and intelligence, and this impacts a person's bias and viewpoint in the neurodiversity debate.

When considering that each neurodiverse person has a spiky profile (Doyle, 2017) then it can conclude that standardised IQ tests do not allow for these differences. Autistic people tend to have outstanding long-term memory but find processing speed difficult (Armstrong, 2010;

Meilleur, Jelenic, & Mottron, 2015). IQ tests are all standardised against the general population and whilst everyone has strengths and weaknesses in their cognitive profile, for neurodiverse people, the difference between them is statistically significant (Grant, 2009). IQ tests such as Wechsler IQ tests (Wechsler, 2008) do not separate and enhance these 'super strengths' and therefore, many autistic people have poor self-confidence and feelings of ability. An average person can score a reasonable level for four of the intelligence quotients indexes that comprises the overall score for Wechsler tests, a neurodiverse is likely to have large disparities between scores and some would need support to be able to access prison education in a way that is not always available causing further disadvantage.

The result of these tests measuring difference, highlights what offenders cannot do rather than their overall ability. Measuring differences, using the Wechsler testing, is a flawed process and so this study cannot support the idea that offenders have access to accurate cognitive testing that will reflect their true cognitive functioning. No one method of rehabilitation, that suits all approaches, can reach offenders that are on all corners of the spectrum. Offenders have a disadvantaged access to rehabilitation as the courses they access do not consider the cognitive differences described in this chapter. In addition to these evidenced cognitive differences, there are also several additional areas the offender might struggle with; including difficulty coping with change, seeking routine and for things to repeat, determination to pursue specialised interests, and sensory difficulties. Furthermore, when considering heterogeneity, autism has many secondary conditions such as what is commonly known as 'autism anxiety'. This terminology is one that is causally given by autistics experiencing anxiety, as anxiety is a common cooccurring effect.

It has become a popular way of expressing that a person might feel anxiety. However, when it is attached to a primary condition, like autism, it is a 'bolted on' co-occurring condition. There is research that shows fifty per cent of autistic people have at least four co-occurring conditions. Ninety per cent of children have at least one other condition (Vargason, Frye, McGuiness, & Juergen, (2019).

It is important to consider these conditions when working within the criminal justice system as these conditions are often over lapping and each offender might have a range of professionals working with them which could result in confused interventions. The difficulty in considering co-occurring conditions, is that it brings neurodiversity closer to the medical model, which is the same model that is widely opposed by the neurodiversity movement. This concludes that there is evidence that supports both models and there is not one definitive answer, thus supporting the idea that labels are counterproductive, and the criminal justice system should be moving towards the individualised support model already described. A person might seek a diagnosis to make sense of a social deficit or difficulty but rarely is it based on IQ.

This needs to be a consideration for the selection of a participant within a prison, as they might be functioning well within a controlled, structured prison yet reoffend each time they are released. A better neurological and social understanding will strengthen this knowledge gap and improve resilience and coping skills. In conclusion, this chapter has explored that there are several discrepancies between studies. However, all the studies agree that there is a difference to be observed between the neurotypical brain and the neurodiverse brain. The evidence in this review supports that there is altered brain growth within autistic people.

Understanding Terminology.

This study looked at the term disability and what is understood by the term. Within the subject of disability sits the term neurodiversity. Many conditions are classified as disorders due to the neurological differences presented. An example of debated terminology is the word disorder. It is easy to assume that offenders are disordered.

Disorder is a term that is widely used in the criminal justice system; however, it is a medical descriptor that is favoured in the criminal justice system. The term originates from Professor Baron Cohen's early research and was rejected by the neurodiversity movement (Baron-Cohen, 2019). However, his more recent work supports the term 'neurodiversity'. The word 'disorder' still lingers. Disorder means 'disrupt the systematic functioning or near arrangement of' or 'a disruption to a regular bodily structure of function' or 'an abnormal state of health that interferes

with normal or regular feelings of wellbeing'. It is not difficult to understand why self-advocating autistic individuals might oppose these definitions and seek to change the term autistic spectrum disorder based on the negative generalisations that relate to autistic spectrum disorder being classified as being a genetic disorder as described within the medical model (The Diagnostic and Statistical Manual of Mental Disorders, 2013).

When considering autism, there are individuals that have higher cognitive functioning scores in some areas and lower in other areas. People that have higher functioning scores tend to favour being described as 'high functioning'.

The researcher would describe herself as high functioning, as she has a typically autistic spiky profile where she has strengths and weaknesses. This thesis has decided not to use the term high functioning as it is a divisive term in as much as it separates out autistics within its own demographic.

When considering functionality, an autistic person is not going to want to be defined as falling below standardised cognitive measurements such as the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), but equally they might require reasonable adjustments to be able to function or perform at their best. Does this then imply that someone that had had adjustments made and are then able to consequently perform at their best might exceed the standards being described as disabled and thus rendering them no longer disabled? Disabled is a legal term that requires adjustments. Therefore, does a person strive to fall below or above this imposed line? (Department of Health, 2001). Within the group of people that identify as being autistic, there is much debate as to what definitions and descriptors best describe them. 'Othering' is a phenomenon in which someone is defined when they do not fit into a social group. It causes feelings of negation and being perceived as less worthy.

When a person is othered, they feel that they feel somehow less human than the next person. There is a sociological context that supports this concept. De Beauvoir first introduced the idea of a person being 'the other'. This is construction opposing and thereby constructing 'the self',

the concepts of 'the other' (De Beauvoir, 1949). 'Othering', and 'otherness' have been explored in many disciplines from nursing science (Canales, 2010) to cultural geography (Crang, 1998, p. 61). Crang describes 'othering' as "a process through which identities are set up in an unequal relationship". This is very evident within the criminal justice system today. In the researcher's experience, working for Genius Within CIC at HMP, many neurominority offenders have been exposed to situations where they have been significantly othered.

The concept of being othered is really what brought about the neurodiversity movement. Various media-based organisations have documented this fight (Briant, Watson, & Philo, 2013); Pearson & Trevisan, 2015) and academic literature has supported this movement (Campbell & Oliver, 1996; Williams-Findlay, 2011).

The series, 'Employable Me' has also documented this by exploring instances of being 'othered' that people from neurominority groups have experienced (Employable me, series 2, 2017). It could be argued that the sense of 'other' can be developed from a sense of making connections and that might mean understanding what enables people to connect through associations and that might be different for different people. This research documents the trajectories experienced by othered neurominority offenders. They have fought to explore and minimise marginalisation as well as highlight disability discrimination. The fight for social justice for disabled people in all societies continues and is currently, continually active. The autistic movement originated due to the conflicts between the social and medical models of disability (Singer, 1998; WHO, 1980). The word diversity is defined as the fact of many different types of things or people being included in something; a range of different things or people or the variation and differences in neurological structure and function that exist among human beings, especially when viewed as being normal and natural, rather than pathological (Oxford Dictionary, 2020). There is much debate around what the term neurodiversity covers. For some people it covers autism only and for others is covers ADHD, dyslexia, autism, mental health and a whole array of diversities, conditions or even disorders, depending on the preferred terminology.

It is an individual choice. Similar to supporting a particular political party, it carries certain hallmarks and it is very much the same within neurodiversity and it is essential to know and understand a person's individual preferences. This is a much-debated topic in the autistic community; the differentiation between neurotypical and neurodiverse people. It has been claimed that neurodiversity frames autism as a difference and a cultural identity, but not a disability (Jaarsma & Welin, 2015). However, within the neurodiversity movement, autism is described as using the social model of disability. Disability is seen as resulting from the distance between the characteristics of an individual and the characteristics of their social context. A person is disabled not by their impairment, but by the failure of their environment to accommodate their needs (Oliver, 1996). In other words, disability results not from autism itself but instead from living in a society which tends to be physically, socially, and emotionally unaccommodating towards autistic people.

Neurodiversity is measured by the gaps of IQ scores taken from the Wechsler Adult Intelligence Scale seen in Figure 1. The tests show areas of high ability, competence and areas that need support. In its raw form, this is disability. When considering neurodiversity in terms of IQ, it is extremely easy to see the differences and diversities that are found within neurodiverse people. Again, when comparing this with the visual below it shows where one might find someone on the autistic spectrum on this bell curve, as explained in Figure 3.

Figure 3 *Bell Curve.*
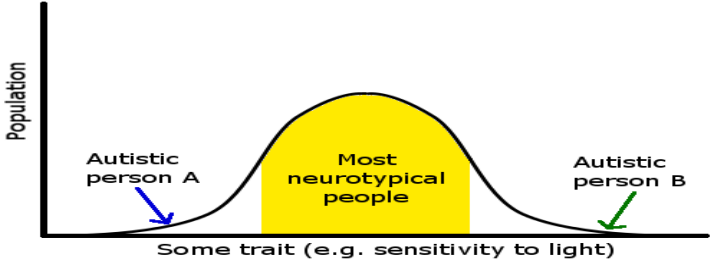
(Autisticality, 2019).

Note. The bell curve is a visual representation of the general population. It shows where an autistic person is likely to sit in relation to the rest of the population. It is important to remember that there is a vast range of traits that autistic people might or might not have.

Figure 4 *Understanding the Prevalence of Neurominorities.*
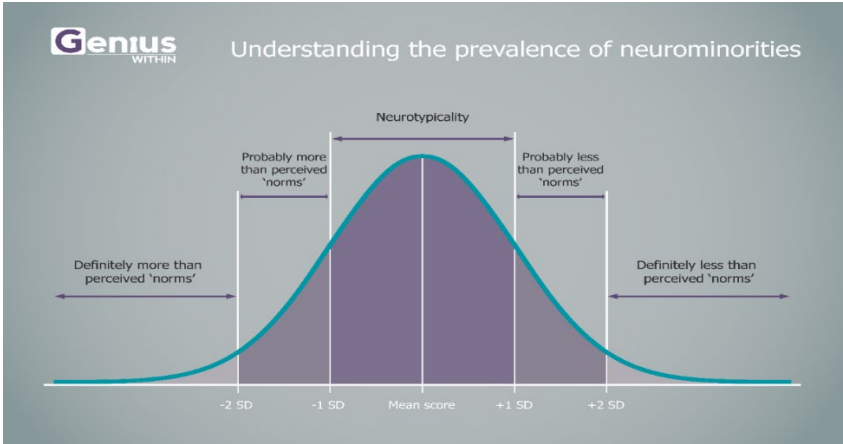
(Banfield, 2021).

Note. This is a resource created by the researcher that is used to deliver interventions and training about neurodiversity. Due to be published in 2023.

Someone that is neurodiverse is likely to fall in the 'Probably more than or less than' others and the definitely more or less than other descriptors for any given trait and this reinforces the idea of the spiky profile that is used to define people that are neurodiverse. There is the concept of

biodiversity to consider when attempting to unpick this debate. This is related to the bell curve shown above as it represents that natural biodiversity found in any human being.

The neurodiversity activist community, which consists of researchers and people with lived experiences debate the relevance of biodiversity, argue against the medical models, and explore the social model to bottom out where each person fits within their community. Considering neurodiversity as a community gives it civil rights and a demand for social acceptance and this is perhaps one of the main arguments that lie within neurodiversity.

When considering the political minefield of neurodiversity, the researcher decided to keep the terminology broad to avoid detailed debates. Terminology is debated and fiercely argued to the extent that a study can be disregarded if it used the incorrect terminology.

By making an explicit reference to accepted terminology, this study strives to be sensitive towards all favoured terminology, used by both academics and, also, people with lived experiences of neurodiversity. An example of perceived negative terminology is the term 'disorder' in the criminal justice system. It is intricately linked to the widely diagnosed mental health condition, personality disorder. Offenders do not want to have anything that identifies them as being more vulnerable from the next person. A vulnerable person in a prison is at risk of coercion and exploitation. The word diverse is a misunderstood and misused word that has become popular with varying meanings over the years, and this has led to much confusion about what neurodiversity means. By way of reaching a conclusion on the conflicts around the use of correct terminology, the researcher would reject both neurodiversity and neurocosmospolitan in favour of neurominority, as this is most closely aligned to the desired outcomes of this study. Offenders, who were commonly masking support needs and are attempting to navigate themselves through a prison sentence, simply do not wish to be classified as having a disorder or anything that makes them stand out. The neurodiversity movement's core aims are to move away from the definition 'disorder' which can still be found in the acronym ASD (autistic spectrum disorder). In this investigation, to focus on producing something that can bring about change, it is essential to take this into consideration and therefore, the researcher adopted the

following terminology which has been used throughout the study: An autistic person that belongs to a neurominority group within society.

Understanding autism

From the systemic literature review, it was found that there was scant research carried out to examine the lived experiences of neurologically diverse autistic offenders with autism and the impact of rehabilitation, as currently many in this group are failing to rehabilitate. It is already known that autism is a lifelong neurodevelopmental condition characterised by impairments in both reciprocal communication and social interaction, alongside psychological and behavioural inflexibility (Emerson & Baines, 2010).

However, some commonly observed features include resistance to changes in environment or routines, impairments in understanding and relating to other's social communication, empathy, and theory of mind deficits and a sometimes-obsessive focus on specialised interests. Autistic individuals may experience difficulties coping at all levels of communication in the criminal justice system, thus impacting the effectiveness of individual rehabilitation. It is not known or understood the extent of autistic offenders' experiences in prison and the effectiveness of the subsequent rehabilitation.

Around 700,000 people may be autistic, or more than one in a hundred people in the population (The NHS Information Centre, 2002). However, this is indicative of the people that have been classified and is known there are many prolific short-term offenders that are not in the prison system long enough for any diagnostic testing to take place. It is these individuals that are harder to rehabilitate.

A meta-analysis of prevalence studies showed a range of people with learning disabilities and autism from fifteen per cent to eighty-four per cent with a mean of fifty-two point six (Ministry of Justice HM Prison & Probation Service Annual Report and Accounts 2016-17). In addition to these figures, one study suggested that only sixteen per cent of autistic adults in the UK are in full-time paid employment (Rosenblatt, 2008), and only thirty two per cent are in paid work

(The National Autistic Society, 2015). Only ten per cent of autistic adults receive employment support, but fifty-three per cent say they want it but do not have the support required to access it (Bancroft, Batton, Lambert & Madders, 2012). Seventy per cent of diagnosed autistic adults say that they are not getting the help they need from professionals and because of this, feel more socially excluded. These high percentages do not include the bracket of undiagnosed offenders described above. Another study indicated that at least one in three autistic adults are experiencing severe mental health difficulties due to a lack of support and so to rehabilitate the undiagnosed repeat offender is an area that is in desperate need of focus and attention (Rosenblatt, 2008). Despite these statistics being readily available, there has been scant research carried out to examine the support and therapeutic input that autistic offenders are engaging in and its role in the process of rehabilitation, as currently many in this group are failing to rehabilitate, as shown by the papers extracted here.

Furthermore, at the time of writing, there is little known research that specifically examines the issue of offenders that could present as autistic but do not have a formal diagnosis and how this socio-group can be managed within the prison system. This has been clearly identified as an urgent area of research to demonstrate clearly why this support is needed and how focused intervention can help offenders, with this diagnosis, rehabilitate into the community. This information is known from information sharing practices within the prison system where the researcher was employed; however, this is not published information. The research that does exist is limited by poor methodology and small sample sizes, as discussed in the systematic review. The offenders examined are all with formal autism diagnoses in place and have been selected by the prison to take part in the study. This literature review provides a review and discussion of the limited literature available regarding the experiences of autistic prisoners, with the view to summarising areas of difficulties potentially faced by such individuals. The assumption that having autism defines the autistic person and therefore, not gain acceptance from others is untrue. Autism should not be pathologised (Gillespie-Lynch et al., 2017).

When autism is defined as a condition that can be controlled or made better, it moves away from the idea that differences should be accepted. There are differences between all humans;

however, the differences can be greater among people from neurominority groups. Most people from neurominority groups within media forums say that they feel that autism is not a disorder, and they reject this term fiercely. Disorder gives the impression that it is something that needs to be treated or cured and this is not the case for anyone with autism. This is debated relentlessly within online social groups that support autistic people.

Whilst these are not academically referenced, they are valid and have a place within this investigation as this is the movement that brought about the change that is seen today. The researcher's academic supervisors concluded that there was no benefit to the investigation by doing this. This was a key element of The Support Change Project that focused on rehabilitating offenders that have traits of autism or that are self-reported as being autistic.

The project was not seeking to cure or treat the individual but was focused on rehabilitating through a differentiated approach using the same evidence-based methodology that would be adapted to rehabilitate someone that was deaf or blind. The investigation sought to adapt to encourage deep learning and ongoing rehabilitative success. Within in the criminal justice system this could be as simple as the neurodiversity model discussed below.

The Neurodiversity Movement
The Neurodiversity movement is a natural and valuable form of human diversity. Humans are all unique and individual humans. The idea that there is one type of healthy brain or mind is fictional and this is supported neurological evidence explored in this chapter concluding that the human brain has plasticity. Social dynamics manifest themself in the same way as other forms of diversity such as race and gender

The neurodiversity movement is a powerful cultural and political movement that has been based on the social model of disability. It is supported by several academics and activists with lived experiences (Singer, 1998, Doyle, 2017), and there are many different views, opinions and research that strives to define it.

The role of the 'neurodiversity movement' can be described as a collection of different 'neurotribes' as presented in The Legacy of Autism and the Future of Neurodiversity' (Silberman, 2015). Silberman supported the idea that the neurodiverse population were part of a tribe gathering momentum, others argued against its ideas. Silberman's ideas are popular press, and he has not used his own ideas and therefore, his findings are largely rejected by the academic world. The inclusion in this investigation is relevant, as many people exploring this topic might not be aware that his work is considered not relevant by many neurodiversity academic researchers.

Harris argued that the book has an agenda and carried significant bias by misrepresenting fellow researcher, Leo Kanner, saying he had a negative view of autistic people and their caregivers. He very much believed that all children should be individualised (Harris, 2016). They attempted to move away from the idea that someone that relates to another is disordered in some way. This idealism very much supports the ethos of Genius Within CIC. Both the work of Silberman and Singer have received some opposition within the movement as some of the work is not considered to be politically aligned with the disability rights movement's core drivers, which are Singer (1998) and Silberman (2015). The neurodiversity movement is being written about and showcased, allowing autism to be seen in a positive light. It is important to consider that, in the criminal justice system, this could be exploited and give offenders new rights that can be used as a source of leverage and means to not fit within the already stretched prison system. It is important to consider this, as more offenders are seeking to obtain a diagnosis for these reasons.

The neurodiversity movement prefers to view autistic individuals simply as people with normal human differences in behaviour. The focus of neurodiversity rights advocates is to expand our definition of what is viewed as normal and acceptable, rather than attempting to alter those behaviours as a matter of course. For example, it is argued that autism is inherently disabling irrespective of context (Clements, 2018). Whereas some neurodiversity activists propose to divide autism with the classification of high functioning and low functioning autism, this idea is argued against as being discriminatory (Alvares, Bebbington, & Cleary 2019).

Another popular non-academic advocate, with autistic lived experience, is Nick Walker. He is the author of the blog Neurocosmopolitan. (Walker, 2020). He considers the neurodiversity debate by saying that neurodiversity simply means human diversity. He goes on to say that the social dynamics around neurodiversity are like the dynamics that manifest around other forms of human diversity. These dynamics include unequal distribution of social power; conversely, when embraced, diversity can act as a source of creative potential. (https://neurocosmopolitanism.com/what-is-autism). The hearing voices network focuses on creating community and changing policy, as well as transforming psychiatric practice.

These two movements, combined, brought about the revision of diagnostic practice in 2015.

Another of many neurodiverse advocates is Ari Ne Eman who is founder of the Autistic Self Advocacy Network (ASAN). An organisation which Josh Elder Robison, a policy consultant for the National Interagency Autism Coordinating Committee, introduced is 'Carly's Voice: Breaking through autism' which brings about another different translation of neurodiversity. In summary, the Neurodiversity Movement has multiple, overlapping definitions, identities, and members. Autism can be viewed as a natural variation within the human species. For the purposes of this investigation, in the next section the impact of the movement upon the criminal justice system has been explored.

The Impact of Neurominority Groups on the Criminal Justice System
Neurodiversity is a new and evolving area for the criminal justice system. Professor Cohen says of the neurodiversity topic 'It remains controversial – but it doesn't have to be' (Cohen, 1992, p68). This perspective very much focuses on neurodiversity from the medical model; however, in this systematic review the researcher has looked at psychology, sociology, political, biological, as well as the medical models. This is because the medical model forms the basis of many of the other models that are considered in this movement.

This investigation needed to consider the journey of the neurodiverse offender in terms of current research and understanding, as well as understanding where they fit within this social model of disability. Currently, the topic of neurodiversity is being considered and changes implemented across the criminal justice system from when the offender is apprehended by the police to when they are detained in custody. The purpose of this movement was to encourage people not to think of disability as a medical condition arisen out of poor health and or a birth defect. Cognitive differences are in fact normal and can be found between any two individuals. This is an observation that requires considerable rethinking across the criminal justice system. This term is a recognised one amongst disability services, (Armstrong, 2010). As previously mentioned, there has been much critical analysis and it is increasingly considered that neurodiversity has evolved within a typical spectrum of human experience (Blank, Peters, Pickvance, Wilford, & Macdonald, 2018).

The literature research and review looked at neurodiversity from a neurology standpoint and described how all these axons and neurons that interconnect in the human brain, are remarkably diverse. Whilst academics and professionals strive to normalise neurodiversity, and this was the core driver of many movements, it was essential to recognise, as explored in previous sections, that neurodiverse people are cognitively different which reflects on their experience within the criminal justice system. A good example of this is the recent research looking at visual and verbal prompting (Carney, 2020). Carney found the individuals may have difficulties with autobiographical memory and open-ended questioning. Whilst the research was carried out in a job interview context, can easily relate this to a police interview which could also be stressful for an individual. They found that open ended questions were difficult due to autobiographical recall being a common area that needs support among neurodiverse adults. This recall is essential when being interviewed by the police, then a solicitor and finally within a court setting.

If no reasonable adjustments are made for this deficit, how can it be believed that a trial is fair, and the offender concerned is given an equal chance of representing themselves. There is currently no literature that supports this other than what is portrayed within the media.

For rehabilitation to achieve a reduction in reoffending, it needs to differentiate for the high numbers of neurodiverse offenders that are currently held within the system from the start of their criminal justice journey. The offenders' experiences were considered by the police, being represented in court, and then taken to prison. This research was one of the pieces of research that supported the changes in the criminal justice processes. The results showed, that due to cognitive differences, the autistic group's responses were more ambiguous, and these responses could then be used to shed reasonable doubt in the court room. For example, visual prompting is not used until the court hearing itself and this for a neurodiverse offender can trigger new memory recall. However, this late recall casts further doubt into the account of the offender. If visual prompts were used at the point of arrest this would mean that offenders have the best chance of representation. Within the criminal justice system there is specific pressure to reduce reoffending by addressing specific negative behaviours in relation to offending. These are detailed in sentence plans and there must be evidence provided to support how these objectives have been met to reduce reoffending and the risk to the public.

This is one of the main objectives of this project. The project addressed the specific negative coping behaviours in relation to the offences committed to ensure a positive replacement. It focused on identifying the needs of the offenders, creating a support plan, managing the plan, and then progressing the offender to be a better version of themselves as they move through the criminal justice system. It has been recognised that the socio-communicative and imaginative deficits, that are characteristic of autistic people, may result in some individuals facing considerable difficulties in the context of the criminal justice system. There are traits commonly found when a person identifies as autistic, these include social communication difficulties, poor social relationships, and interactions with others, over compliance and rigid thinking (Browning & Caulfield, 2011).

Furthermore, it has been argued that these traits increase the likelihood of such individuals being disadvantaged as a suspect in the context of interactions with criminal justice staff.

The offender's frankness and direct communication is often misunderstood as belligerence and difficult behaviour (Chown, 2010). Furthermore, autistic offenders may consequently be considered to lack remorse or credibility as a witness or suspect in courts. It needs to be considered as to whether autistic offenders may also experience difficulties within court hearings, and this then impacts on custodial outcomes because of their inability to demonstrate compassion and consequential thinking in relation to remorse.

The Impact of Diagnosis

Autism has been described as an 'epidemic' (Maugh, 1999). This is because of the higher rates of diagnosis and not due to an increase of occurrence, so this cannot be described accurately as an epidemic. What needs to be considered is the individual benefit for the offender if they are to be diagnosed. A letter of diagnosis would not increase resilience, hardiness and coping upon release, so it would be better to look at other pre-release interventions. The DSM-5 diagnostic model is a controversial model of testing, and many researchers say that it is not reliable as 'reliable' means a kappas of 0.6 or above. For DSM 5, 'acceptable' reliability is then reduced to 0.2-0.4. This only just exceeds the level one could expect to get by chance.

In this study, the DSM was used simply as a guideline to conceptualise if the person might benefit from additional interventions within the criminal justice system. There are several disadvantages, such as, it does oversimplify behavioural characteristics, it can lead a person to believe they have a cognitive disorder when they do not, and it can be stigmatising. It was, however, used to identify offenders that could take part in the study because, on balance, its limited reliability was taken into consideration by inter-rater reliability, cross-checking results with alternative tools, and cross referencing with self-identification.

To be able to offer fully inclusive support-based interventions, the researcher needed to design a way to work with symptom clusters within groups of offenders, as that achieved a greater overall outcome, increased impact and be more cost effective. It supported the idea that there was no need for diagnosis and that the focus is primarily on adjustment and inclusivity of all within the criminal justice system.

Debated Applied Behaviour Analysis ideas

The applied behaviour analysis idea that it is possible to treat autistic people, is much debated by psychologists and scientists (Pierce & Cheney, 1995). They feel that autism can be treated using a range of cognitive behavioural approaches. The analyst's movement have been heavily criticised by stating that applied behaviour analysis was 'unethical and misguided' (Dawson, 2004, Medavarapu, Marella, Sangem, & Kairam, 2019). Dawson has autism herself. As previously stated, it is important to know which researchers have an autism diagnosis to consider bias. The treatment devised by the ABA (applied behaviour analysis) theorists was debated in court and ruled experimental. This is one of the most significant developments in the treatment debate surrounding autism (Morris, 1991). ABA addresses perceived disordered behaviour (Reeve, Reeve, Townsend, & Poulson, 2007). It focuses on behaviour-change procedures such as desensitisation for phobias (Ricciardi, Luiselli, & Camare, 2006). They create packages of behaviour change such as self-management and peer-mediated treatments (Stahmer & Schreibman, 1992).

They also produce a comprehensive programme of treatment, such as, early intensive behavioural interventions (Smith, Groen, & Wynn, 2000). As well as procedures for specific behaviour to comprehensive programmes for problems in daily living (Iwata, Zarcone, Vollmer, & Smith, 1994).

The need for diagnosis is certainly an area that needs further study but as this is such a vast area, the researcher decided not to consider this in the investigation. It is something to consider in post-doctoral research within the criminal justice system. If professionals were to remove the need for diagnosis, there would be considerable cost savings which is much needed, and these funds could be diverted towards rehabilitation.

This is the researcher's opinion, formed from being an attendee in disability focused meetings within HMPPS. An early decision was made to remove this bias within the project and move away from a diagnosis being an end game, as there would be too much focus on that rather than learning to self-manage a person's own support needs in general.

Within the pilot study, it was found that offenders were quickly fixated on a diagnosis and what they might be given in terms of adjustments in the prison, including not needing to attend group work identified on a sentence plan. The Support Change Project, which is the name given within the prison for the investigation, seeks to strengthen and improve rather than diagnose and treat. This supports the neurodiversity model and removes the pressure on HMPPS to provide diagnosis within prisons. The fact is there is no cure and no treatment. The Support Change Project supports the term 'an autistic person or autistic' for this reason.

Prison Education and Autism

Prison education is believed to be at the centre of rehabilitation. However, this is not always accessed by the short-term offender and does not always cater at the level of differentiation required by the offender to make a difference in a way that might reform these negative behaviours. Hayes provided 'supportive for the effectiveness therapeutically initiatives in prisons' but acknowledged that further work needs to be carried out in consequential thinking and acknowledgement of offending behaviour (Hayes, 2004, p34). Hayes (2004) has published several papers that support this.

From this initial work, Breckon developed a therapeutic framework where the primary focus was to achieve stability. Measuring stability includes being able to engage, maintain and sustain a particular pathway. This can mean different things in a prison in contrast to the community. Breckon found that when the offender was feeling safe, they were able to develop a sense of purpose and belonging. Through the development of the relationship with the therapist, the offenders were able to realise what change is needed (Breckon & Smith, 2013). Supporting these findings, Shaw Trust believe that offenders can reintegrate into their communities and contribute positively if the right advice and opportunities are put in place – increasing the chance that they would not reoffend (Shaw Trust, 2020).

The way the criminal justice system tackles offender management is changing, and it is starting to reject past approaches, having looked at pragmatism, individualism, and rationalism collectively. The criminal justice system needs to focus on individualism. Kettle supports

individualism by stating that the significance of the human individual has risen steadily in the last three centuries, to a point where freedom is defined as the maximisation of individual choice (Kettle, 2008).

In the researcher's experience working with prisoners at HMP Dartmoor, where she has worked with 210 offenders over a five-year timeframe, an offender with a poor experience from their schooling can reject prison education as an adult and it is only when they can move past this emotional barrier, that they are able to access educational and psychological support. Often, there is not enough time or resources available to make this happen. A strength based cognitive assessment at induction is one way that this can be addressed, as this would clearly identify anyone that 'requires support' at entry stage and would flag up support needs. They could then be automatically referred into a therapeutic based workshop where their emotional and support needs are addressed within the first week, which would limit the potential of self-isolation and withdrawal. It is often these early abandonment issues that carry on into adulthood and are deeply rooted in the person concerned and for this reason having access to a psychotherapist to work through these feelings could be highly beneficial at removing barriers to behavioural change. Once each participant is in a good space individually, they are then able to progress towards group work interventions.

There is a focus on inclusivity throughout by a focused approach of levelling the playing field so that all participants feel that they are ready to engage within The Support Change Project.

The Prevalence of Autism Within the Prison Population

The prevalence rate of autistic offenders within the prison population is unknown. There is limited research, indicating an overrepresentation of autistic individuals within prisons based on a limited body of research, in which the rate of autism within prisons has been explored (Allen et al., 2008).

A recent review provided a comprehensive search of the available literature and reported inflated rates of autism throughout services within the criminal justice system. There are

significant variations of numbers of autistic offenders, thought to be in prison in England. The initial data collection carried out in HMP Dartmoor, within The Support Change Project, found that one in five offenders have traits of autism. This study is currently unpublished but had been submitted to the HMPPS Neurodiversity review for consideration at the time of submitting this investigation.

There were huge variations within diagnostic tools used and what was within the inclusion criteria. The current literature is for these reasons hard to compare; however, it is clear where the limitations of each study fall (King & Murphy, 2014). There was long waiting times for a full cognitive test to diagnose autism. There were different tools or guidelines for assessment available currently, such as ADOS, ADR-I and DSM-5. The researcher favoured the use the DSM-5, which was used within the medical model originally and was still used commonly in prisons today by professionals. It was based around a set of guidelines that can determine if a person was likely to be autistic and could be administered easily within a prison as it was paper based. However, it was a much-debated method of identifying or indicating the presence of autism. The questions asked and its simplistic method do not explore all of the deviations within autism that a person might experience.

Prisons remain stuck between disregarding DSM-5 based tools as being inadequate, yet, becoming inadequate at a service level, as they are not able to reduce waiting times for full diagnostic testing. For the purposes of this investigation, the DSM-5 criteria were used as a checklist to identify and determine if a person has autistic traits.

Researching Autism in the Criminal Justice System

The media has previously given high-profile coverage to criminal offences involving offenders who have autism (Browning & Caulfield, 2011). An example of a media case portraying autism negatively is that of a boy with Asperger syndrome who stabbed his baby brother to death. It published with headlines such as "Autistic boy killed baby brother" (BBC, 2001). However, the story did not mention that he had other co-occurring psychological conditions alongside Asperger's. The media sensationalised the link between autism and offending behaviour by

publishing "Recipe for a serial killer? Childhood abuse, autism and head injuries are more common in murderers, study claims" (Daily Mail, 2014).

An early study was carried out by Scragg and Shah in 1994. They studied 392 male offenders detained in Broadmoor Hospital. They found a prevalence rate in this population of offenders for autism (Scragg & Shah, 1994). They concluded that these findings supported Mawson's theory of a link between Asperger syndrome and violent behaviour (Mawson, Grounds, & Tantam, 1985). Following this Hare (1999) carried out a similar study where he identified thirty-one autistic individuals in Rampton, Ashworth and Broadmoor hospitals. It is not known out of how many individuals overall. Hare found that 67.64 per cent of those were diagnosed with Asperger's (Hare, Gould, Mills, & Wing, 1999). Findings concluded that only ten per cent of his sample had a previous diagnosis. The link between autism and crime was established as lying between the limits of 2.4 per cent and 5.3 per cent on the ADOS autistic guideline scales, which the researchers compared higher than previous estimates such as Wing's estimates of 0.71 per cent (Wing, 1997). Additionally, there have been several international studies including Siponmaa (Siponmaa, Kristiansson, Jonson, Nyden, & Gillberg (2001), where a study was conducted to examine the prevalence of neurodevelopmental disorders in children referred for forensic psychiatric investigation in Sweden.

They concluded that fifteen per cent of subjects had pervasive developmental disorder (under DSM-IV criteria), and three per cent had Asperger syndrome (Siponmaa et al., 2001). Anckarsäter looked at offenders in three different populations in forensic settings. He found that prevalence of autism was around thirteen per cent. However, other prevalence studies have shown that people with autism are underrepresented in forensic settings (Anckarsater, Nilsson, Saury, Rastam, & Gilberg, 2008). Woodbury-Smith et al used the UK Home Office Offenders' Index to study offending rates in people with autism or Asperger syndrome. He used a control group of offenders without autism. They found that overall rates of offending were lower in the autistic group of offenders (Woodbury-Smith & Dein, 2014). This contradicts the earlier studies of Anckarsäter. It could be said that there is simply a link and not a correlation.

A strong argument in support of there not being a correlation, is that the relationship between autism and offending behaviour, where an offence is committed by a person with autism, it can usually be causally related to the clinical features of the syndrome (Chesterman & Rutter, 1993). The studies discussed in the literature review do not consider the clinical studies of autism, nor do they mention coexisting conditions that could be a contributary factor in offending behaviour. To be clear, this does not state that autism causes criminal behaviour, but it does make an autistic person more suspectable due to the emotional vulnerabilities of being autistic.

Literature on autism and offending behaviours, up until 2011, implies that autistic people are, at times, associated with criminal behaviour. Although, there is no clear link with those with Asperger syndrome associated with violent crime, and they were no more likely to commit violent crime than the rest of the population, reviewed over fifty years up until the early 1990s (Allen et al., 2008). To the present date this remains the same; however, there have been a small number of serious crimes that can be linked to the core features of autism that have been portrayed by the media with the autism diagnosis being a core factor. Linking Autism and Crime was first published in an academic journal by Mawson in 1985.

He studied an autistic individual who had committed several violent crimes. These case studies can be as counterproductive as media coverage in forming inaccurate perceptions of autism (Browning & Caulfield, 2011).

In 1992, the Department of Health recommended research into the relationship between autism and offending behaviour, to ensure that appropriate services for people with autism could be developed, if necessary (Browning & Caulfield, 2011). Several studies have been carried out in the last twenty years seeking to establish whether people with autism are more or less likely to engage in offending behaviours than the general population. Many of these studies have taken the form of, or incorporated into their methodology, prevalence studies, which normally involve taking a fixed forensic population and calculating what percentage of that population has autism, then comparing that to the prevalence of autism in the general population. To

answer the question as to the nature of the relationship between autism and offending behaviour, the results of these studies should be considered, as well as the flaws in their methodology. The sub-groups of people should be considered that are diagnosed with autism to be able to fully review the literature available.

Offending behaviours have rarely been reported in childhood autism and there is a failure in detecting autism amongst offenders, and those that have been identified have typically related to arson and sexual abuse. This conclusion should be treated with caution due to the lack of community-based studies of offenders (Mouridsen, 2011).

A study undertaken by Fazio, Pietz, and Denney identified a higher rate of autistic traits within a prison population than found in the general population (Fazio, Pietz & Denney, 2012). They examined the presence of autistic traits amongst 431 male prisoners in a maximum-security prison in the United States of America, according to the Autism Quotient (AQ). The AQ is an autism test that measures self-reported experiences across five domains, in which deficits are common amongst autistic individuals; social skills, communication, imagination, attention to detail and attention switching and have recommended a cut off score of thirty-two as providing a good indicator that an individual would meet the diagnostic criteria for autism (Baron-Cohen,Wheelwright, Skinner, Martin, & Clubley, 2001).

Fazio carried out a study to investigate this and he determined that 4.4% (n = 19) of their sample's scores on the AQ fell above the normed cut-off score of thirty-two. Compared with the estimated prevalence of around one per cent in the general population in America.

Their results thus suggested an overrepresentation of numbers of autistic individuals within the prison population (Fazio, Pietz, & Denney 2012). This study is not without limitation as his research only looks at individuals that fully meet the diagnostic criteria and he has not considered individuals that have traits present and are impacted by the same neurological difficulties as those that meet the criteria. It is this group of offenders that are not being effectively supported within the prison and have been identified in the initial data collection

that the researcher carried out at HMP Dartmoor. These challenging, social emotional conditions may impact negatively on a prisoner's well-being and prevent engagement in rehabilitative treatment programmes, potentially resulting in increased risk of recidivism (Borzycki, 2005).

Interestingly, Myers found that the lack of training and knowledge had a direct impact of offender rehabilitation (Myers, 2004) he carried out focused research where the sample included a small number of participants with a formal autism diagnosis; however, only two participants were within a prison setting. Nevertheless, he made some interesting findings, such as finding that offenders were disadvantaged and were found to be at risk of exploitation, bullying and social exclusion (Myers, 2004). Myers found that staff interviewed in this study were poorly equipped to meet the needs of the individuals with autism as well as poor prison officer to offender ratios. The extremely limited sample size has therefore, made little or no impact on support offered to autistic offenders (Myers, 2004).

In 2007, Robinson carried out a data collection by screening for autistic offenders in Scottish prisons, across twelve prison establishments. They were both male and female, adult and young offenders. This is the first published study looking at female offenders. The prisoners with high scores were invited to take part in interviews. The study also interviewed relatives where they were asked to complete a neuro-developmental assessment. 2,458 prisoners took part in the study. Ninety-eight prisoners scored above the cut-off threshold of AQ=32 as defined by current diagnostic guidelines. Although this screening measured autistic traits in this population, sensitivity for score of thirty-two or above on the AQ is poor. They concluded that the AQ usefulness is limited and not recommended as a routine screening tool for autistic people in prisons (Robinson, Spencer, Thomson, Stanfield, & Owens, 2012; Robinson, McNeill, & Maruna, 2013).

In 2008, Paterson carried out an in-depth study where it focused extensively on two case studies but examined them in depth by carrying out a qualitative study. He explored a range of difficulties that autistic individuals may face within prisons.

Again, there was a small sample as he looked at only two case studies of young male offenders with Asperger syndrome. The data was collected over four months from the offenders and staff in the prisons, as well as review of files and observations (Paterson, 2008). The two participants in Paterson's report varied their offending, the severity of autistic traits with which they presented, their comorbid diagnoses and their level of intellectual functioning.

The first participant had committed a violent offence and was found to be what was formerly known as 'high' functioning. He showed good communication skills and showed no evidence of co-morbid diagnosis which is often present for an autistic person. He also had strong family connections and presented as being securely attached to those around him. This is not the considered norm when looking at offenders on the autistic spectrum and indeed the second participant presented in a different way. He was socially disadvantaged and was socially isolated. He demonstrated a higher level of intellectual impairment as well as co-morbid diagnoses and affective disorders. Despite the different presentations, Paterson found that both participants were observed to have significant difficulties with prison life that could be attributed to socio-communicative deficits and rigidity associated with a diagnosis of autism. The second participant in this study committed a sexual offence, whereby he stated that he misinterpreted communications from the victim, and this led to the committal of the sexual offence. The participant was not able to recognise social cues and understand communication and this neurological support need could impact upon his consequential thinking and rehabilitation. In the study, both participants displayed difficulties understanding their offences and this resulted in distress. This would perhaps account for the increased rates of self-harm and suicidal ideation among this socio-group within prison settings. These findings and behaviours are likely to have impacted on their ability to manage their risk for reoffending following release and this would subsequently impact on parole board hearings. In a further research study, in the same year, Allen (2008) used a sample of thirty-three offenders with a diagnosis of autism. Of these, only six gave their permission to be interviewed and only four of these were in a prison setting. They were found to have varying prison experiences and many of these experiences were common among all offenders.

Some of the participants welcomed being in a structured environment and so, conclusively, Allen found that autistic offenders were no more or less impacted than their neurologically typical counterparts. One limitation of this study was that he did not look at the offender's journey into the community and at the reoffending likelihood (Allen et al., 2008). However, a study carried out by Holland and Persson looked at the offender's journey into the community by investigating both intellectual and non-intellectual differences among prisoners. They looked at a sample of prisoners (n=102) with an intellectual disability released from custody between July 2003 and June 2006. They were compared with a random sample of non-intellectual disabled prisoners (n=244), released over the same period, on a range of variables resulting in the observation that intellectual disabled prisoners do differ in several important ways and are characterised as having a high-risk of offending associated with prior involvement with the criminal justice system (Holland & Persson, 2011). Also, there were associated difficulties in moving these prisoners to minimum security whilst in prison and in obtaining parole. Findings indicate that prisoners with intellectual disability are a group with complex histories and needs, and who present considerable challenges to services, including correctional, forensic and disability, in their management and rehabilitation (Holland & Persson, 2011).

A systematic review was conducted by King and Murphy (2014) of studies on the relationship between autism and the criminal justice system. They too noted that "the poor quality of much of the research and the variation of both methodologies and specific focus in each study allows only tentative conclusions" (p. 2727). However, what they did find was that the four studies which included control groups, and so constituted the best quality evidence available, all reported that people with autism "committed the same number of offences or fewer offences than those without autism" (p. 2729).

They, therefore, concluded that an autistic person is either less likely to offend than someone without autism, or that, if they do offend, they are more likely to have this dealt with outside of the criminal justice system (King & Murphy, 2014, p. 2729). The evidence found within this

literature review, shows that there is evidence both for and against the idea that offending behaviour is more common in autistic people than in the general population.

However, there are several things to consider when using these publications to reach a conclusion on this relationship between autism and offending behaviour.

The primary consideration is that autism prevalence figures vary widely between studies and to date there has been no whole prison study carried out except for the data collection. Another consideration is that some of these studies are based on Asperger syndrome, and I have included these papers as there are many overlapping features between both autism and Asperger's. The diagnostic criteria are identical; however, it is favoured by people that view themselves as high functioning. The study demands large samples for reliable results as the prevalence is so low, and these studies have not included sufficient samples to do this (Barry-Walsh & Mullen, 2003). Further compounding this problem, are the different methodological and diagnostic approaches that these studies have taken (Browning & Caulfield, 2011). Most of the published studies found have subjected a forensic population to diagnostic assessments for autism to calculate prevalence: this prevalence is then compared with a population prevalence calculated without use of the same diagnostic stringency (Browning & Caulfield, 2011). When exploring a possible link between offending behaviour and autism, one needs to consider the traits linked with an autism diagnosis. The personal impact of these traits on offending behaviour needs to be fully considered if they impact on an autistics person's judgement when committing criminal offences. Furthermore, co-existing conditions such as anxiety, depression etc need to be considered. Researchers need to be looking to identify whether the offender might be at risk of committing offences. There seems to be an emerging consensus that when an autistic person commits a crime, it is likely to be directly connected to the vulnerabilities found within an autism diagnosis (Cheely et al., 2012). These vulnerabilities include impaired communication and deficits in social skills which impair an autistic offender from understanding the implications of criminal behaviours.

Consequential thinking is disrupted and can cause consequences such as breaking the law and beginning the journey through the criminal justice system. (Mayes, 2003; Woodbury-Smith & Dein, 2005). Some researchers have suggested that because of their additional vulnerabilities and inability to organise offending behaviours mean they are more likely to be apprehended for criminal activity than non-autistic offenders (Vermeiren, Jesper and Moffit, 2006).

Compounding these difficulties is the fact that offending behaviours may bring autistic people to the attention of police who might lack knowledge and experience working with individuals with developmental disabilities (Mayes, 2003).

Autism Standards in the Prison System

In March 2015, HMPPS encouraged all prisons to follow national standards set as guidance of how neurominority offenders are managed within the criminal justice system. It was developed and based on an English young offender's institution; it was felt these guidelines and standards, when implemented, would reduce the level of distress and difficulty experienced by autistic people finding themselves in custody, and to meet the needs of prisoners and their rehabilitation, whilst minimising adverse impact on everyday processes. The aim is to also have these accredited by the National Autistic Society (NAS) (Lewis, 2015). In 2021, HMPPS then commissioned the first study to review these standards and publish new guidelines. This research was submitted in the call for evidence as part of this national review.

Social Difficulties in the Prison System

The social deficits and idiosyncrasies exhibited by autistic individuals, combined with a strong desire to form friendships, appear likely to place them at a higher risk of victimisation and bullying than their neurologically typical counterparts (Rieffe, Camodeca, Pouw, Lange, & Stockmann, 2012). Paterson's study revealed that participant one was not aware of his negative behaviours towards others and participant two self-isolated himself (Paterson, 2008).

Many autistic offenders do not present with having communication difficulties or barriers towards engagement, but they do struggle with consequential thinking, understanding abstract

concepts as well as social cues and appropriate emotional reactions. These behaviours can be troublesome in a group setting and it is not always possible to tutor an offender on an individual basis. These barriers often interfere with the completion of offence-specific and offence-related programmes within their sentence plans.

Baron-Cohen reported that future research is needed to look at how intervention can reduce the impact of what he calls the triad of deficits. They are social and communication difficulties and imagining other people's minds (Baron-Cohen, 2019).

Myers found that, while seclusion may assist in the protection of vulnerable individuals and the potential targets of their aggressive outbursts, this may also limit their opportunity to increase their adaptive living skills or to address their offending behaviour and other rehabilitation needs through participation in programmes and other learning activities (Myers, 2004). The absence of prison-based programmes, that are suitable for autistic prisoners, may result in such individuals being unable to adequately address their risk of recidivism, with consequent disadvantage in terms of consideration for parole, early release and potential difficulties with reintegration following release (Myers, 2004).

Difficulties that Autistic People Encounter when Transitioning into the Community

Difficulties in transitioning from the prison environment to the community are common amongst all prisoners. Imprisonment imposes a rigid routine that removes the potential and requirement for individual decision-making in many aspects of daily life, so limiting the opportunities for individuals to develop or exercise their existing adaptive living skills. Prisons may foster institutionalisation, characterised by an increasing reliance on others and a loss of a sense of personal responsibility to attend to daily living tasks following release from prison (Borzycki, 2005).

Offenders can show a range of symptoms showing emotional instability post release. These can include hypervigilance, psychological distancing including 'melt downs' of coping strategies and a reduced sense of personal identity. Offenders have a strong desire to return to

prison where they can feel secure amongst its routine and structures, and this increases reoffending, as often the offender is on licence and breaching these terms could ensure they are returned to custody. Person centred support and rehabilitation would be needed in such cases to avoid a revolving door effect whereby individuals cycle between the criminal justice system and the community (Bishop, 2008

Limitations

The type of difficulties offenders experience whilst in prison has received little academic research to date. This could be due to the difficulty in accessing offenders in a prison setting and the limitations that 'outsider' researchers encounter. However, research has been carried out focusing on other minority groups, such as dyslexia and ADHD.

It could be inferred that autism is an incredibly challenging area of research to get data, due to sociability barriers present in autism. These limitations support the idea that existing research suggests information is limited by poor methodology and small sample sizes, where offenders were selected by the governors and that this should be researched further with extended sample sizes to get a better overview and form more concise conclusions (Robertson & McGillivray, 2015).

The limitations, within each study reviewed, have an impact upon drawing meaningful conclusions within this literature review. The studies reviewed from the United Kingdom are each limited in quality and quantity, as well as poor methodology, particularly sampling. There are variations among diagnostic criteria used within studies reviewed and no studies look at autism on a trait present basis. All the studies connected to this review have a small number of participants in prison and none of the studies reviewed, follow the offenders into the community.

Parole hearings consider the reduction of assessed risk for reoffending through successful completion of intervention programmes within the offender's sentence plan; however, these

risks are often not reduced due to a lack of engagement and autistic offenders spend longer in prison overall.

One of the main limitations was the use of outdated language. Professionals and academics alike are using language not favoured by the autistic communities and this presents a barrier in terms of the credibility of the research. An example of misused language is the tendency to use the abbreviations ASD or autistic spectrum disorder in these studies. This has been outdated for several years and person first language is required if the research is to be taken as current and valid by autistic offenders and professionals. Another perceived limitation could be that the researcher has an unconscious bias as they are autistic. This has been considered throughout the study and they engaged in reflective practice throughout.

The benefits of being an insider were seen to be more advantageous than the disadvantages of the researcher unconscious bias. The advantages of being an insider was that the researcher was a trusted professional within the prison and the offenders were able to build upon existing rapport and trust. Engagement was able to take place within the confines of the prison wings and therefore, in their own environment. References to the medical model in academic journals led the researcher to infer that, professional academic researchers, in the criminal justice field, were not employed in the prison field and did not have lived experience. There were scant references available to support the progressive neurodiversity model, in as much as some academic papers only the medical model was referenced and advancements in neurodivergent understanding were not.

The researcher selected the literature for the study initially using the PRISMA model (2009), however, as the search developed it was clear that a more in-depth model was needed where the researcher could cross reference limitations and so the CHIP model was added to the literature review. This enabled the researcher to compare themes and limitations between academic journals more robustly. The obvious limitations of approaching the literature review in this way is the time involved, however, the researcher favoured this because of the obvious benefits of knowing every item of research within this field.

Achieving Operational Impact

For the examined research to blend into the synthesis from the literature review, it is important to ground the research back into the researchers practice experience at HMP Dartmoor. As discussed in the previous section, autistic people are neurologically different but due to the lack of diagnosis they are unaware of their own neurological differences. Offenders might be aware of their lack of ability as already discussed but there is a lack of awareness around the level of cognitive differences. IQ testing such as the WAIS-IV (Wechsler, 2008) is commonly used to support a diagnosis of dyslexia or Developmental Coordination Disorder (DCD) in adults (Mcloughlin, & Leather 2013; Grant, 2009; Biotteau, Albaret, & Chaix, 2020). Using this method of cognitive testing is not suitable for an autistic person that is likely to have a 'spiky profile' showing differences and this can impede on an anticipated rehabilitation of efforts to reduce reoffending. Recognising these fundamental flaws when considering neurodiverse offenders, The Transforming Rehabilitation: A Strategy for Reform (Ministry of Justice, 2013) introduced the privatisation of probation services where specialist provisions for offenders was put up for tender with the overall aim to reduce reoffending. They were known as CRC Community Rehabilitation Companies, and they took responsibility for low to medium risk offenders. This category included many of the offenders that took part in the study. Supervision of high-risk offenders was moved to a new National Probation Service (NPS). The Offender Rehabilitation Act (2014) allowed the CRCs to focus on offenders being released from short sentences.

In 2017, the Annual Report, the Chief Inspector of Her Majesty's Probation Inspectorate described the provision as ineffective 'through-the-gate' services, with a lack of continuity in supervisory relationships within CRC settings (HMIP, 2017). Despite variation across jurisdictions, supervision typically incorporates the oversight and monitoring of an individual's activities in the community (Robinson, McNeill, & Maruna, 2013). The concept of supervision is complex as it can include functions and goals such as monitoring offenders, enforcing court sentencing, ensuring public protection, and reducing reoffending. Supervision is associated with 'a measure of sanction before imprisonment, instead of imprisonment, as a temporary release and after imprisonment' (Durnescu, Enengl, & Grafl, 2013).

Many of the offenders, that the researcher has encountered within the criminal justice system, have intact language and no obvious learning deficits. These offenders can self-advocate, comprehensively, in a way that can bring about the adjustments they need, and they are aware of the neurodiverse framework. They understand what it is to be neurotypical and what it is to be neurodiverse as explored at the beginning of this chapter. The offenders were able to competently explain what diversity is and what it means for them through engaging with The Support Change Project in group work and one-to-one intervention. Many of the offenders that took part in the project have limited understanding around cognitive differences. They have not had previous cognitive testing and they did not know how to self-advocate for themselves. The offenders were simply allowed to self-identify that they had support needs and would like support to be at their best.

The offenders knew they are different and needed support to access prison activities, but they did not know why. The participants on The Support Change Project nearly always had negative school experiences which led to their journey within criminal justice system. These environments provide structure, routine, and limited sensory exposure. HMP Dartmoor can be described as autism friendly due to its structure and often calm environment. Many of the officers are of an older generation and work on traditional principles of respect and manners. This type of environment suits an autistic person, as they can simply slot into the prison routine and are behind their doors, in their cell at teatime each evening, so they can decompress for the next day. They might not get this level of structure in the community. The offenders might not be aware of why they are able to thrive in a prison environment yet in the community their coping and resilience fails, and they reoffend.

The purpose of this study is to identify, educate and give skills for the future to this small demographic of offenders that has already disclosed poor schooling experiences and negative post school opportunities for employment. These offenders often thrived in the prison environment as they had access to trade-based courses such as bricklaying and painting. However, they would then struggle to cope when they are released into the community and that positive support network in prison ends. The Support Change Project sought to help offenders

to self-manage this transition and be aware of the emotional challenges that they might face when they are released.

They are more importantly referred to outside agencies that can support them with this transition. The study found that when the environment changes, resilience decreases and so the purpose of the project is to increase these skills so that when the environment changes, the individual can adapt.

Future Research

The purpose of this investigation is to support evidence-informed practice surrounding the interventions that are available to neurodiverse offenders, that are currently detained in prisons today. The researcher is considering the value the social model of neurodiversity as well as recognising the value of the medical model of mental health and autism in terms of co-occurring conditions.

The limited studies examined in this paper are insufficient from which to draw conclusions; however, they have shown an urgent need for further and in-depth exploration of this topic area. However, it was clear from all the studies that offenders, with traits or a diagnosis of autism, find prison incarceration and then release difficult, and often face co-morbid related disorders. Equally for some offenders, prison life is very comforting with its set routines and predictability. People with autism tend to have outstanding long-term memory but find processing speeds very difficult (Armstrong, 2010; Meilleur et el., 2015). Prison routines and processes appeal to offenders that have difficulties in these areas.

Future research is essential to increase knowledge and understanding in this area and provide a basis from which to inform recommendations regarding the sentencing, rehabilitation, and management of offenders with a diagnosis of autism or those that display traits. A way to ensure that these offenders are identified at the start of their sentence, is to have routine screening for autism and other minority groups, such as ADHD and dyslexia. This can be carried out during the induction stage within the first two weeks of their sentence. Future

research needs to use larger samples of offenders, ideally a prison, so that the statistics are representational across the prison population.

Given the heterogeneity of autism, future research could be directed at identifying whether certain phenotypes result in higher risk for difficulties and whether the expression of certain traits of autism may be protective in the context of incarceration. There is a clear argument that the criminal justice system needs to address rehabilitation for offenders that have disabilities. There is no clear evidence to suggest that offenders that fall in these demographics are having access differentiated rehabilitation packages.

There may be an argument for the development of specialised forensic services and the provision of additional support services and adapted rehabilitation programmes within prisons, specifically for autistic individuals. This is already being delivered by Genius Within CIC in some prisons, but this is not mainstream and not all offenders have access to these interventions.

Positive outcomes for autistic individuals are likely to be supported by ensuring that staff, within prisons, have sufficient knowledge and understanding of the presentation and likely challenges faced by diagnosed individuals with autism, as many offenders with these diagnoses or traits have learnt ways to mask their behaviours and feelings to blend in and be unnoticeable. The evidence found within this literature review suggests a lack of knowledge and understanding of autism amongst staff in the criminal justice system, including those working within prisons.

There is a clear need for developing specialised services for autistic individuals living and delivering training across the board. However, first it is necessary to determine the numbers of offenders, with an autism diagnosis or traits, to justify this recommendation. Myers supports this by stating that the lack of appropriate assessment tools may underlie the failure of forensic services to routinely screen for both autism and ADHD within prison populations. There is no screening method for autism available in prison settings currently being used (Myers, 2004 p103).

Conclusion

The initial literature review revealed that only eight studies were able to be considered as a direct match for the study. Following this limited initial literature review, the researcher broadened the search criteria using standardised methodology (Grant, 2009). The main findings and conclusions are discussed below.

Understanding neurodiverse terminology in terms of how autism is defined. For this to happen the researcher needed to review the models that underpin and support the model of disability as well as the idea of neurodiversity. There has been much movement in recent years in the broad area of disability that it was important to review the neurodiversity movement and the impact it has had on the criminal justice system. For example, in 2021 there was a national HMPPS review on neurodiversity in prisons being carried out for the first time. The starting point for the research needed to be able to find out the prevalence of autism within the prison population and what research has been carried out in this area.

The results were unexpected. Next, the researcher reviewed published articles on the difficulties that autistic people encounter when transitioning through the criminal justice system. Once the review in each of these areas was completed, the broader search opened a larger range of academic articles of which could be reviewed.

There are two main models reviewed in this study, the medical model, both mental health and autism, and the social model of disability. However, when reviewing disability, it is not as simple as presenting a dichotomy between two models (Mitra, 2006). The medical model can be said to be the starting point when evaluating the timeline journey of neurodiversity. Blustein was an incredibly early contributor in this model. It can be said that the social model of disability was founded in a reaction of opposition to the medical model.

Additional models can be developed in reaction to, as an extension from, or independently of these two models (Mitra, 2006). There have been many discussions and studies that have sought to understand disability in terms of disorder of difference (Baron-Cohen, 2019).

It is essential for the criminal justice system to evaluate and rethink how it can interact with individuals with disabilities that find themselves detained. How this complex system defines disability going forward is crucial if effective rehabilitation is to be achieved.

The experiences and lived experiences of offenders that have travelled through the criminal justice system needs to be examined so that adjustments can be made to reduce long lasting damage. Barton supports this by saying the language people use to describe individuals with disabilities influences their expectations and interactions with them (Barton, 1993).

Four of these studies were carried out in a prison or custodial setting. There were three studies which looked at the prevalence of autism in secure psychiatric hospitals (Scragg & Shah, 1994; Hare, Gould, Mills, & Wing, 1999). In the initial literature review, the researcher found only one study evaluated the clinical utility of the AQ screening tool to assess self-reported autistic traits in secure psychiatric settings (Murphy et al., 2017). One study identified, investigated the lived experiences of offenders with a diagnosis of autism detained in secure psychiatric care (Murphy et al., 2017). However, this was excluded as the subject was detained in a clinical hospital rather than the inclusion setting of a prison. The researcher found eight studies set in hospital secure settings and these were NHS focused papers.

They were also excluded due to not meeting the inclusion criteria. The offenders had not been detained in a prison or had experienced post release and so were excluded from the study. McCarthy highlighted several studies which described limitations on using the AQ as a diagnostic screen rather than as a tool to identify specific traits of autism (McCarthy et al., 2015). This was reflected in the initial literature review, and it was concluded that using this as a starting point for data collection was a valid use of the screening method. A further contributing factor for the lack of present-day academic studies could be that, for 2020, there has been a worldwide pandemic and therefore, all research in prison settings has been suspended.

Within the review, only one study focused on offenders from ethnic minority groups that were also from a neurominority group. When examining this area, it was found that there were three main issues. BAME focused research was hard to conduct due to being in minority groups. Furthermore, it must be considered that there are significate differences in the neurominority community.

The study carried out by McCarthy showed, in their conclusions, that offenders from ethnic minority groups were at risk of their neurocognitive developmental disorders with difficulties and symptoms going unrecognised by the current screening instruments (Chaplin, McCarthy, & Underwood, (2013). The likely reason for this is that it is exceedingly difficult to conduct research in a prison setting. Many academics are university based and are only given limited access to prisons and offenders. It is tightly managed and controlled and for this reason the studies can be limited. However, these studies concluded that there was a prevalence of autism within the secure forensic environments that were higher than found in community environments (Woodbury-Smith & Dein, 2014). For as long as there are differences, there will be a neurodiversity movement causing a divide and all professionals have a different viewpoint depending on what area of autism, they practise in. The overall goal of the neurodiversity movement is to achieve acceptance and understanding of the specific needs of an individual. The argument remains the same; humans are living and existing in a world built on neurotypical norms, which in turn prevents the neurodiverse individuals from being given the opportunity to be the best versions of themselves that they can be.

There is a clear argument for alterations to the way that autistic offenders are managed and rehabilitated, from court through to the community. What is not known is how this can be achieved in an already overcrowded prison service. There may be an argument for the development of specialised forensic services and the provision of additional support services and adapted rehabilitation programmes within prisons specifically for autistic individuals. This is already being delivered by Genius Within CIC in some prisons, but this is not mainstream and not all offenders have access to this (https://www.geniuswithin.co.uk/positive-assessments/ 2020).

The preceding review has encouraged prison support for further exploration in this area and in turn make systematic changes in the way autistic offenders are rehabilitated and managed, both in prison and the community.

What needs to happen next: A systematic search process identified only eight original research publications that meet the inclusion criteria. These were, however, not without limitations. These have been listed in the findings section in this review.

All the sample sizes were small and not on a scale large enough to justify change in the way these offenders are managed within the prison setting. The studies had all been carried out by academic researchers known as 'outsiders.' None of the studies had an 'autism on autism' insider lens. Furthermore, the eight research studies found, revealed limitations, and all the studies did not have unlimited and unrestricted access to offenders over an extended period of time. So, it is hoped that the comprehensiveness and depth of this study is going to set it apart from other studies.

The next chapter looks at how the study examines the issue of designing and implementing cost effective solutions in a way that can bring about improvements for the offender, as well as operational change and low cost to the general public. The interventions refer to a model of delivery carried out at HMP Dartmoor. This delivery is known as The Support Change Project.

Chapter Three: Research Method

Chapter Introduction:

There are several aspects that this investigation was attempting to explore and therefore, the methodology was critically important as it needed to be structured in such a way so that each stage of the research confirmed, concluded, and built on the next stage. The method favoured the use of research questions, to align with HMPPs call for evidence and for this reason a hypothesis was not used in this study.

The methodology examined if the design and implementation of The Support Change Project brought about offender behavioural change and reduced reoffending whilst being cost effective. The use of inferential statistics was the most appropriate method as using tests of differences again gave HMPPS their desired outcomes. The Support Change Project was delivered in four stages.

Stage One: DSM-5 Screening of all offenders on arrival to HMP Dartmoor to identify offenders that were likely to meet the threshold of having autistic traits.

Stage Two: Strategy Profiling to identify support needs of the offenders.

Stage Three: Cognitive Assessments to identify strengths and support needs using WAIS IQ Cognitive Testing (Wechsler, 2008).

Stage Four: Group Interventions: engagement in a series of one-to-one and group work support focused sessions that have a high level of differentiation using the information collected in the previous stages. The interventions have a focus on resilience, coping, managing self internally and in external environment.

When the study completed the data analysis, it was missing the personal journeys of the offenders that took part in the study. This could have been shown in an IPA study, however, Covid restrictions prevented this from happening and so case studies were used instead to capture this.

The objectives and aims of the study:

- Is the true extent of prisoners, that are likely to be autistic in the prison at any one time, likely to be more than ten per cent?

- Do prisons currently have limited understanding of neurodiversity and its impact on offender engagement?

- Is differentiation needed within prison education to meet the needs of autistic offenders in order to rehabilitate with measurable outcomes?

- Do autistic offenders require specific differentiated engagement focusing on resilience, coping and wellbeing in order to be successfully rehabilitated?

- When offenders engage in interventions that have a focus on resilience, coping, and managing wellbeing, can reoffending reduce?

Introduction

Integration of the data in this study has been complex, even when there has been a strong theoretical rationale for each decision made which was discussed at various points of the study.

Research Question One: Literature Review There is scant academic literature available to understand the diagnosed and undiagnosed autistic offenders' journey through the criminal justice system.

Research Question Two: DSM-5 Screening of all offenders on arrival to HMP Dartmoor to identify offenders that are likely to meet the threshold of having autistic traits.

This stage was designed to answer the question of what is the true extent of prisoners that are likely to be autistic in the prison at any one time.

Research Question Three: Strategy Profiling to identify support needs of the offenders. This answers the question of what is the true extend of differentiation needed within prison education to meet the needs of the autistic prison community.

Research Question Four: Cognitive Assessments to identify strengths and support needs using WAIS IQ Cognitive Testing (Wechsler, 2008). This refers to cognitive strengths and weaknesses and supports the idea that an offender has needs that require specific differentiation in order to access rehabilitative activities.

Research Question Five: Group Interventions: engagement in a series of one-to-one and group work support focused sessions that have a high level of differentiation using the information collected in the previous stages. Offenders benefit from differentiated learning specific to autism.

Research Question Six: Case Studies to support the idea that differentiated learning for autistic offenders is reducing reoffending and increasing positive attitudes towards rehabilitation.

This chapter outlines the development of the study and details the steps taken to justify the selected methodological approach. It aims to demonstrate the ways in which the research design evolved throughout the Covid-19 pandemic and how decisions were made regarding the most effective way in which the study was carried out. Furthermore, this chapter seeks to show clarity in terms of the decision-making process and rationale throughout the doctoral journey. It seeks to illustrate how present and past research has influenced the methodologies into topics concerning autistic offenders within the criminal justice system. At the time of the study previous research formed insufficient basis of which to make firm recommendations for HMPPS for the support of autistic offenders. The study aimed to use the knowledge gained from both the initial and following literature review to inform and make recommendations to support the rehabilitation of autistic offenders.

Firstly, this chapter outlines how the literature review was conducted and how it has influenced the selection of methodologies within this investigation addressing limitations found in the available studies. The decision to structure the chapter in this way was influenced by Dodd's (2014) doctoral research, which explored challenges within disability focused research.

The structure of this chapter has also been influenced by McMillan and Weyers (2013), in that it explored all the broad research themes in order to achieve the desired conclusions that influence practice and delivery in HMPPS prisons for autistic offenders.

The Support Change Project focuses on using a realistic evaluative method. There is an awareness that evaluation has become axiomatic in as much that everything is evaluated these days. The project chose to situate its methodology using evaluations as this method is favoured by HMPPS. However, it is important to acknowledge the limitations in as much that generally the size of effect has been meagre in relation to the effort expended (Crain, 2011).

Reflexivity was explored to gain an understanding how the researcher's role as an autistic professional working in the criminal justice field, influenced the process designing, implementing and reviewing a series of interventions to improve rehabilitation of autistic offenders at HMP Dartmoor. This study acknowledges and refers to the unique perspective of an 'insider – insider' research perspective. In the wider sense, this study has the unique stance of reflecting on how the social world is interpreted through an autistic lens. This was the first study that has this unusual perspective. The systematic review uncovered a series of limitations. The review found only eight studies were a direct match for the search criteria of autistic offenders in prison within the UK. Within these eight studies all eight used outdated language such as autistic spectrum disorder derived from the medical model. There have been many studies that have sought to understand disability in terms of disorder of difference (Baron-Cohen, 2019) but none have written academic publications that reflect the neurodiversity model accurately within its methodology. Another of the recent literature reviews, Autism behind bars, (Robertson & McGillivay, 2015) also contained out of date language. It did not acknowledge person first language and did not discuss autistic identity.

Participants were referred to throughout the paper as being diagnosed with ASD (autistic spectrum disorder) which, as already discussed, is dated language and not accepted by the majority of neurodivergent people.

The methodologies found within the literature review were all primary focused on a negative perspective looking at how offenders had arrived at being places within the criminal justice system. The studies were limited as none looked at rehabilitation using a positive stance, and none carried out any analysis of successful rehabilitation programmes. Barton says the language people use to describe individuals with disabilities influences their expectations and interactions with them (Barton, 1993). The studies to date have all been negative from a 'what has gone wrong' perspective. This study wanted to analyse 'what has gone well' for this particular group of people. The methodologies used in this study primarily focused on measuring rehabilitation in a cost-effective way that can be operationally easy to implement in prisons nationally. McCarthy highlighted several studies which described limitations on using the AQ as a diagnostic screen rather than as a tool to identify specific traits of autism (Chaplin, McCarthy, & Underwood, 2013). This was reflected in the initial literature review, and it was concluded that using this as a starting point for data collection was a valid use of the screening method despite its methodological limitations. Due to the limitations of the studies reviewed, the justification was outlined using a critical realist stance as this seemed to be the most appropriate (Bhaskar, 2008). The relationship between epistemology, methodology, and methods is examined throughout the chapter, and highlights how, as an autistic researcher looking at autistic offenders, that perceived the conditions and boundaries of human knowledge. It was imperative to establish whether the social phenomena investigated can be adequately examined within the parameters of the specified quantitative research design (Wodak & Meyer, 2016). This also provides clarity and ease of reading as the investigation strives to be accessible for any person working in the criminal justice system from officer to researcher. It also sought to ensure the reader can understand the rationale of the research approach selected.

To examine the above research objectives, the researcher first needed to consider what the research intended to achieve in terms of change and development within operational practices throughout the criminal justice system. The study considered the impact that the research had upon autistic adults within the criminal justice system. It was the first study to carry out a large sample study with a comparison study running alongside.

In all the papers reviewed in the literature review there were no comparison studies found. It was the recommendation of Robertson and McGillivay (2015) that future studies used comparisons. Therefore, the study had significant impact in criminal justice disability studies, as well as having a contribution towards changing rehabilitation for neurodiverse offenders. The research established the sociological and psychological perspectives, as well as developing and incorporating a clear understanding of the evolution of neurodiversity to the present time. This research offered empirical findings that illustrate the essential need for an investigation into how offenders that are defined as neurodiverse are rehabilitated within the criminal justice system.

This study made an original contribution as part of the Evidence Review on Neurodiversity in the Criminal Justice System which is being carried out by the Ministry of Justice in 2020/2021 by answering research questions using tests of differences within inferential statistics. The aim of this national review was to develop policy to improve awareness of neurodiversity in the criminal justice system with the aim of better access to rehabilitation and to reduce reoffending. This study formed an integral part of this review (Justiceinspectorates.gov.uk). The call for evidence closed on 15 January 2021 and this investigation was submitted as part of the review. The impact of this research was that operational change was introduced within UK prisons in 2022. There was a change to policy as a result of offenders sharing their experiences, taking part in the study and through the findings of this research. The research has suggested that emphasis be placed on designing, implementing and reviewing differentiated behavioural change programmes for autistic offenders. When carrying out research there was a tendency to carry out either qualitative or quantitative research. For a study to be robust it needs to contain all types of research and consider further study when one area is not achieved.

This has been the case in this study. The methodology was impacted as a result of the Covid-19 pandemic and the research design had to be rewritten in order to meet the outcomes needed within the researcher's role and for HMPPS Publications. When research remains only in the medical field the full research cycle was incomplete and so this study had a strong focus on post-doctoral research in order to achieve a fully robust study.

Generally beginning with interpretative or critical method is an appropriate starting point for a study that has so many areas that need researching such as this one. The researcher touched on the primary focuses at the start of this chapter and is identified in more detail later in this chapter. The researcher has acknowledged previously that the medical model has a lack of construction and so the study needed to use broader methodologies. Ideally this study would have carried this out using an in-depth analysis of the lived experiences of all of the offenders, but this was not possible due to the Covid-19 pandemic and subsequent restrictions. The study opted instead for the use of case studies, which is also widely accepted as evidential within HMPPS research. The critical research was then carried out using a mixed method study using incidental questionnaires to record the impact of offenders engaging within the programme.

This part of the study focused on what kind of participant does it work for and is it successful? This was achieved through prevalence and incidental analysis studies within the data collections. Following this empirical, positivist research was carried out by looking at how autism prevailed against the general population and against the prison population. It is known from the literature review that autism studies are not well represented within academia. The survey selected for this study was a suitable methodology for this analysis. Pilot studies were created, and data was analysed constantly throughout the study timeframe. Evaluations were shared with the prison and HMPPS and improvements suggested. The methodology was flawed in as much that the researcher only knew that it worked for the duration of the study, and it was not known if it always worked. Therefore, this was a limitation of this study and future research, where if the same model is replicated was a different setting, such as service personnel leaving their respective armed services. If the model worked in a different setting, the researcher would confidently be able to say that the methodology in this study was robust.

A comparison analysis of both settings and a systematic review would be the ideal, alongside the samples not being exposed to world pandemics respectively. The methodology of this study needed to be iterative and circular, and this study was not fully this, however, it does provide a starting point of which other studies can rest upon.

The research process involved formulating an intervention design that acknowledged the varying epistemological and ontological positions from a psychological and sociological perspective whilst providing the outcomes required by HMPPS. All aspects of this study were interrelated and took the stance that neurodiverse research has a strong intersectionality perspective. Intersectionality is a perspective that explores the interactions of social markers which include race, class, gender, age, and sexual orientation that shape an individual's or group's experience (Bowleg, 2017). Furthermore, intersectionality is a theoretical framework wherein consideration of heterogeneity across different intersections of social positions is integral to understanding health and social experiences. Research was first published by Crenshaw (1989, pp. 139–168). The research was then developed using black feminist theory to gain a better understanding of intersectionality by Collins (Collins, Bilge, 2020). Intersectionality posits that, social positions that, exist on a hierarchy of social power, are not independent. Crenshaw (1991). These positions supported the research by taking the position that intersectionality is not independent, but all experiences shape human experience. Furthermore intersectionality has commonly been used within research focusing on identity and marginalization (Bowleg 2012), more recently it has developed a focus on epidemiology and public health research methodology (Bauer, 2014). This is further supported by Bowleg (2012) who states that public health researchers need to understand its core tenets: multiple intersecting identities, historically oppressed and marginalized populations, and the social-structural context of health. This has been considered within the methodology and literature review by exploring the emergence of neurodiversity over the last thirty years. It is for this reason that within The Support Change Project, all offenders engage on a one-to-one basis for the initial phase of the programme so that there is time factored in to consider individual social identities.

Inequalities across intersections exist and these were considered on an individual basis. Within the prison population, there were a range of social identities and intersectionality existing within its own internal hierarchy and this was considered carefully when bringing groups of vulnerable offenders together in group environments. Intersectionality theoretical frameworks require this researcher to avoid assuming homogeneity across intersections (Bauer, 2014; Bowleg, 2012).

Outcomes and processes need to structure their research and its interpretation around social power, and this was addressed within the model of The Support Change Project. This study met a basic threshold of engagement with intersectionality, as it has used a whole prison engagement approach, across all levels, from the offender to the governor.

This study required consideration throughout to determine that the research objectives, through to analysis and interpretation, provided credible findings that contribute to the body of knowledge and provide meaningful conclusions within the Ministry of Justice review on Neurodiversity within the Criminal Justice System.

The Research Design: Mixed methods

A limitation found within the literature review was highlighted by Allen et al, (2008). They found that no published papers up until 2007 had used standardised qualitative measures. The survey design involved the planning of the whole project in advance to be able to determine its measurable outcomes using tests of differences and inferential statistics. This process was used to outline the steps to take when conducting the survey data collection within the prison. The initial planning was to decide on the research questions that would meet the desired outcomes from HMPPS and to determine how this could be achieved. From this, the planning of how the inferential statistics would be interpreted was considered due to the decision to use research questions and not a hypothesis. Survey research is defined as the process of conducting research to answer questions defined in the aims and objectives using surveys that the researcher gives to survey participants.

The data collected from surveys was then statistically analysed using SPSS to draw meaningful research conclusions. The survey or the questionnaire contains a set of questions that the study would like to ask the participants. The design of the questionnaire was dependent on the outcomes desired. When understanding the aims and objectives and linking them to the survey, the researcher made clear what the study aimed to learn from the offenders. From this, the researcher was able to select the type of survey that is best used within the study. Sampling was also another consideration when creating a survey and this is addressed later in this chapter.

Previous studies by Borzycki, (2005) found that higher rates of reoffending were due to the impaired abilities of the offenders to manage self, but it did not suggest a range of appropriate interventions with measurable outcomes. This has been a difficulty found in many published studies and this is likely due to the lack of prison access.

Finding a research design, that suits all the outcomes required from the study, was a complicated process that evolved throughout the doctorial process. The researcher decided that a mixed-methods research design can be a pragmatic approach that suited the required outcomes of the study. There were several differing requirements from HMPPS, The University of Derby and Genius Within CIC. The research suited a mixed methods approach by collecting both narrative and numerical data by employing both structured and emergent designs. The data was analysed using both statistical and content descriptive narratives. The research attempted to make meta-inferences as answers to its research questions by integrating the inferences gleaned from their qualitative and quantitative findings.

HMPPS relies heavily on quantitative-based data analytic strategies, however the research benefited from incorporating the advantages of both quantitative and qualitative methodologies into one cohesive framework. Mixed methods, ideally, includes the benefits of both methods (Johnson, Onwuegbuzie, & Turner, 2007): Quantitative analyses employ descriptive and inferential statistics, whereas qualitative analyses produce expressive data that provide descriptive details (often in narrative form) to examine the study's research objectives. Whereas quantitative data may be collected through questionnaires and surveys, qualitative data could have been collected through interviews (Creswell, 2013).

This study would have been able to answer the research questions more in-depth, had it been able to carry out an IPA study using semi-structured interviews to gain an understanding of the lived experience of the offenders. However, due to the Covid-19 pandemic this was not possible, and the research design needed to be adapted accordingly. Mixed methods research questions should be conducted and be both logical and sequential research questions

(Onwuegbuzie & Leech, 2006). Researchers need to construct three separate types of hypotheses for a mixed methods research project.

For the purpose of this study, it was appropriate to use research questions due to HMPPS' wish to answer questions about neurodiversity in prisons today. The aims and objectives answer the research questions using mixed method approaches. These questions are answered fully using a mixed methods research design. The purpose of this investigation was to demonstrate developing preliminary evidence to support or inform practice surrounding the interventions that are available to neurodiverse offenders, that are currently detained in prisons today. The study selected the triangulation model to ensure that intervention evidence was included, as this is an area that is lacking in the original research design.

Determining an appropriate design, which considers the aims, objectives, and intended outcomes of the research, has been extremely complex. As already stated, the researcher initially favoured a triangulation research design, as it seemed to be the most appropriate method for a mixed method study that sought to achieve the project aims and objectives; however, when the study design changed to a quantitative study the research design also needed to be reconsidered. An exploration of possible methodologies and analytic frameworks required the researcher to examine and consider the opportunities and limitations of various designs, as this has been previously identified as a limitation and flaw in studies reviewed in the literature review chapter. The research questions have provided the framework to develop the researcher's critical understanding of previous relevant research. This developed understanding has justified the choice of research design and has provided a contextual understanding for the decision-making processes within the methodology design.

This foundation then allowed the researcher to carry out systematic analysis to reach informed conclusions to see if The Support Change Project is an effective tool that can be used in a prison environment.

Due to the global Covid-19 pandemic and the change in the shape and design of the research, the researcher found that the design needed to be reviewed several times during the study. The purpose of changing the design, within the study, was to ensure the efficiency and effectiveness of the research study in terms of answering the research objectives and questions.

The researcher considered carrying out a cross sectional and longitudinal survey within each data collection. The longitudinal study uses time as the main variable, and tries to make an in depth study of how a small sample changes and fluctuates over time. A cross sectional study, on the other hand, takes a snapshot of a population at a certain time, allowing conclusions about phenomena (Shuttleworth, 2010). This was used within the study, as it focused on four periods of time within the study.

A cross sectional study was considered, as the research was a disability study looking, initially, at the prevalence of autism in a prison population. This method meant the researcher could look at a wide range of ages, ethnicities, and social backgrounds, however, this study was limited to male offenders between the ages of nineteen to fifty years. A cross sectional study was decided as the most appropriate design for the initial data collection, looking at the prevalence of autism in the prison setting at any one time. By using a cross-sectional study method, it was able to determine that there are a high number of offenders, that have traits of autism, but are not aware of this or have chosen not to disclose.

Next, a longitudinal study was then carried out to look at the identified trend and establish operation interventions that would improve neurodiverse offenders' rehabilitation and thus reduce reoffending. This panel data, or time series cross-sectional data collection, took eighteen months to gather, as it was extremely time consuming. This was despite the researcher working within the prison. The researcher was motivated by achieving an extensive study in which participants engaging could potentially achieve a bigger operational impact in terms of reducing reoffending. The questionnaires were designed with a focus on being inclusive and accessible for neurodiverse offenders.

The initial data collection was the pilot survey and the researcher received feedback on how to make the questionnaires more inclusive by participating offenders. This was implemented in subsequent surveys by making the paperwork suitable for people that were dyslexic and visually impaired. Following this, the surveys were analysed, and the results are communicated in the following chapter. In contrast, longitudinal studies allow the research to look at the impact the project has had on the offenders over a period. This was the favored approach in the final data collection, as the study was measuring improvements in areas such as resilience, coping and attitudes towards rehabilitation.

A cohort study is a subset of the longitudinal study and it allowed the researcher to observe the effect on a specific group of participants, over a pre-determined timeframe. Quite often, a longitudinal study is an extended case study, but the researcher was not able to be confident that the offenders would remain at HMP Dartmoor for a definite period. There are several reasons why offenders move between prisons, such as attending courses, for security reasons and to be closer to family. Some of the observations can be speculative, as with many case studies, but they allow a unique and valuable perspective (Shuttleworth, 2010). For the purpose of this study, witnessing perspectives change was crucial in order to determine the effectiveness of the study.

There are multiple ways for this to occur, including triangulation, following a thread, and the mixed methods matrix (O'Cathain, Murphy, & Nicholl, 2010). Yet understanding the overall reasoning for using a mixed methods triangulation design was useful as it combines the approaches and in practice helped lessen the challenge of mixed methods data integration (Bryman, 2006).

Figure 5 *Research Matrix.*
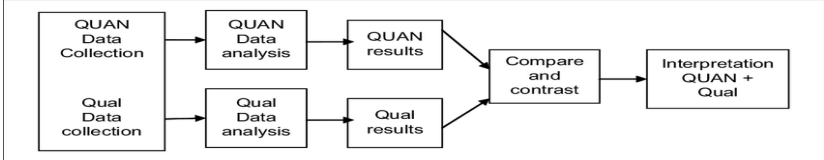
(O'Cathain, Murphy, & Nicholl, 2010).

Note. There are several types of mixed methods research approaches, and the concurrent transformative approach was best suited to this design, as it is theory driven and allowed the researcher to examine phenomena on several different levels.

This approach has been useful in as much that it has provided for a more meaningful interpretation of the data and phenomenon being examined (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Had the researcher been able to carry out an IPA study, it would have been possible to see the dynamic between the qualitative and quantitative portions of the study. This has not been possible due to the impact of Covid-19 in the prison and so this was a limitation of the study.

The initial research method was that the qualitative study would have mirrored the quantitative study. The alternative of doing an IPA was to include case studies. HMPPS reported that they were happy for this to take place, as there was no direct interaction needed with the offenders, whom at the time were locked in their cells for twenty-three hours a day in the height of the pandemic. There has been a risk that the adapted research design is too abstract and inferential but by using the Clean Language framework throughout, the thesis has ensured that all statements made are based on what the research has seen and heard so therefore, can be evidential.

The Study: Following the literature review, supporting the gaps in research that had been anticipated, The Support Change Project was designed to support offenders coming into prison with a long-term aim of reducing reoffending. Each stage of the project had research questions that it sought to test, review, and analyse. The purpose of the study was to create interventions for the offenders, where they would learn transferable skills that they could take into the

community to reduce the likelihood of reoffending. The Research and Control Groups were identical, in terms of offenders and location to begin with, and the only difference between them was that access to the programme was given to offenders in the Research Group. It can be argued that process alone is responsible for the outcomes, however, it must be reflected upon the fact that the study took place in a global pandemic.

Hume (Bell, 2008) argues that causation is unobservable (a perception of the mind) and that one can only make such inferences on the basis of observational data. Therefore, this study has been focused on achieving causational changes that can clearly be achieved from the participation of offenders on The Support Change Project.

The Support Change Project was designed following the results from the pilot study. It consisted of a series of interventions, as detailed below, with the key aim of improving coping, resilience and wellbeing. The literature review and the researcher's experiences revealed that offenders, that are likely to be autistic, found coping in the community extremely challenging after seemingly thriving in the structured, ordered environment of a prison.

The study wanted to give the offenders the soft skills required to transition from prison to the community more effectively. The initial results of the data collection clearly showed that there was a high prevalence of people that have autistic traits in HMP Dartmoor and so it was obvious that differentiated rehabilitative learning prior to release was also required.

The Support Change Project was built upon the below structure with the key aim of improving overall wellbeing. For the purposes of this study The Support Change Project would carry out incidental evaluations throughout the six-month programme as detailed below. The data collections would be implemented at the start of the project, at the end of the first small group session, in the mid-way point and at the end of the project. This is explained in more detail below.

Stage One: DSM-5 Screening Offenders were screened on arrival to HMP Dartmoor to identify offenders that are likely to meet the threshold of having autistic traits. Initially, two surveys of 248 and 252 offenders were screened. Following the initial data collection, screening was carried out on every prisoner that entered HMP Dartmoor within the first two weeks of their custodial sentence. This phase is known as the induction phase. The offenders are not released into the general population at this stage and are housed on an induction wing.

This information was then shared at an 'allocations' professionals meeting for new offenders as well as education, health, and security. This early information was especially useful for knowing where to place the offender in the prison population and what 'work' they might be able to carry out. All offenders would complete the screening in paper form at induction and if they met the threshold then they were considered likely to have autistic traits. This stage was designed to answer the question of what is the true extent of prisoners that are likely to be autistic in the prison at any one time.

Stage Two: Strategy Profiling (see Appendix A3 for example of Strategy Profiler) To identify support needs of one hundred and fifty offenders from Stage One. Offenders struggle to access and engage in rehabilitation teaching within prisons due to lack of differentiation of teaching methods. This was to answer the question of what is the true extend of differentiation needed within prison education to meet the needs of the autistic prison community. Strategy Profiling to identify support needs of the offenders. All new inmates would complete the Genius Within CIC Strategy Profiler as part of the induction process. The Strategy Profiler is a paper-based screening tool used by Genius Within CIC to identify symptom clusters. The results of this would be shared with all departments in the prison. From this, offenders that selected they self-identify as needing support in specific areas, for example, they struggled with numeracy, would be given additional numeracy support in education, and placed in a working environment that was less reliant on numeracy as a strength. Similarly, they could be placed on a quieter wing if they indicated that they struggled with interpersonal skills.

Stage Three: Cognitive Assessments was to identify strengths and support needs using WAIS IQ Cognitive Testing of one hundred offenders selected from Stage Two. This assessment would show simply if an offender has what is described as a spiky profile. This refers to cognitive strengths and weaknesses and supports the idea that an offender has needs that require specific differentiation in order to access rehabilitative activities. Cognitive Assessments to identify strengths and support needs. These are a series of six standardised Wechsler Tests which are described as a Positive Assessment by Genius Within CIC.

The Support Change Project steers away from negative messages by explicitly focusing on strengths and the support needed to progress, rehabilitate, and be released.

The aim of the cognitive assessment process is to establish strengths and weaknesses that are specific to the person, rather than based on assumptions related to a pre-existing diagnosis. The cognitive profiling specifically searches for cognitive and practical skills and highlights functional difficulties for which the researcher can recommend adjustments and strategies. The offender will receive a copy of their cognitive profile and it clearly identifies the areas that they need support with when accessing prison education and rehabilitation-based courses. Nearly always, these profiles show the offender a new and positive perspective of looking at themselves and raises self-esteem. These assessments were carried out in the first six weeks of the offender's induction to HMP Dartmoor.

The Support Change Project carried out one hundred assessments on offenders that were identified as potentially benefitting from this assessment from the DSM-5 and Strategy Profiler information. For the purposes of this study the researcher particularly focused on offenders that identified themselves as struggling with social and interpersonal skills.

Stage Four: Group Interventions: (see Appendix A2 for examples of incidental questionnaires used) Offender engagement in a series of one-to-one and group work support focused sessions that have a high level of differentiation using the information collected in the previous stages. The interventions have a focus on resilience, coping, managing self internally

and in external environment. Offenders were placed into intervention groups with similar support needs and strengths and the teaching material was adapted accordingly. Engagement in a series of one-to-one and group work support focused sessions within The Support Change Project. From the one hundred offenders that had a positive assessment, one hundred offenders were invited to take part in The Support Change Project, respectively there were fifty offenders in the Research Group and fifty offenders in the Control Group. Intersectionality, prison hierarchy and security were considered in depth in formulating groups. Groups were created according to offence, vulnerability, wing and security information. The project relied upon the intelligence from security and allocations meetings to make these decisions.

Some offenders were only allowed to work on a one-to-one basis as they were found to be too high risk to work in a group for risk factors attributing to themselves and others. Once the groups had been identified and approved, the offenders were split into a Control and a Research Group.

The Research Group was led by the researcher and the Control Group was led by a colleague in another area of the prison. The Research Group had access to the interventions and the Control Group of fifty offenders were allowed to read, play cards and socialise in a classroom with no interventions. The Research Group of fifty offenders attended a three-day course delivered in small groups where their support needs had been considered and adapted for. The course is called the Memory Genius course and is a product designed by Genius Within CIC, specifically aimed at neurodiverse offenders. It focuses on an individual's internal needs.

This programme was previously researched as part of the doctoral thesis of Doyle (2017) with a dyslexia cohort and adapted for autism as part of this project. The relevance, in considering memory and attention as a focal point in the course delivery, is that most neurominorities experience a deficit in working memory, which is the brains capacity to 'hold' information whilst thinking (Gathercole & Pickering, 2000; Swanson & Siegel, 2001).

A lower working memory ability means that during the long, complex structured questions, favoured in police and legal interviewing, the individual might forget the beginning of the sentence by the time they get to the end. Short, simple, singular clause questioning is recommended to adjust for this, otherwise incomplete answers may suggest that the individual is being elusive, which they may not be. The course focused on strengthening this awareness and put in place several strategies that they could self-manage. The focus of this delivery was looking at the internal self.

The Research Group attended a group learning course where they received a formal Level Two Qualification: The ILM Leadership and Team Skills course. The focus of this course was to develop skills, knowledge and understanding in working in group settings. This course had a training or employment focus and was neurodiverse specific. It was modelled around a clean language model called Clean Language by a psychotherapist called David Grove.

It is primarily used in counselling, psychotherapy, and coaching. It was a powerful framework in the criminal justice field, as it supported the offenders to develop their own symbols and metaphors to explain how they were feeling, which was not emotionally based or carried another person's interpretation of the same event. It was simply a set of questions that allowed a person to use their own words to express their own experience.

It focused on the evidence and not the interpretation of an event which is useful for someone that is autistic as communication can be a barrier. The model only looked at what is seen and what is heard, and these are facts that could not be misinterpreted. Once an autistic person could recognise these facts or evidence, they could then work on what their inference was. Inference and intention can vary from one person to another, and this is acceptable. The events can be explored by using questions such as "and that's like what?" and 'what did you see and hear in that moment'.

Humans by nature often rely on their inferences of what has happened as their evidence, but an inference was simply a person's experience of an event. The only evidence that was reliable

and cannot be disputed is what has been seen and heard by all parties. This model was further developed by James Lawley and Penny Tompkins (2000). The researcher had previous training with the founders directly and was able to use this model in the study. Through the journey of discovering metaphors and symbolic modelling, the participants have understood about group dynamics and how to engage in positive communication. The Clean Language model also teaches offenders how to manage themselves by advocating for adjustments to prevent overwhelm in response to change. At the end of the research period the offenders in the Control Group were given access to the courses and interventions.

They were, in fact, keen to attend as they felt they had missed out by being in the Control Group once they saw that the Research Group had access to the group work and interventions. This then caused a high number of offender self-referrals to take part in The Support Change Project. At the end of the study 210 offenders had taken part in the programme. However, for the purpose of evaluation, one hundred offenders were evaluated as part of this study due to HMPPS needing the data at an earlier point. The remaining data could be used for post-doctoral research purposes.

Incidental questionnaires were used to record the offenders progress from screening through to progress within The Support Change Project. The areas that were most relevant to record improvements, over a period of time, were Cope, WEMWBS and Resilience. Referenced below. These questionnaires were specifically selected because they have a strong focus on emotional wellbeing.

The COPE Inventory (see Appendix A2 for The Cope Inventory). (Carver, Scheier, & Weintraub, 1989). Developed to record coping responses. The inventory included some responses that are defined as dysfunctional to show the researcher when someone had what was described as poor coping skills. The questionnaire also showed when a person had good coping skills according to the ranges and thresholds described below.

The Warwick-Edinburgh Mental Wellbeing Scale (see Appendix A2 for WEMWS). (Tennant, et al., 2007a) was developed to be able to record levels of positive and negative mental wellbeing against the general population. The WEMWBS' positive focus, within its questions, offers a developmental perspective. It was a useful tool for policy makers, programme participants and survey respondents towards mental wellbeing.

The researcher wanted to know and understand the levels of overall wellbeing that offenders felt at the start, interim and end of the interventions.

The Resilience questionnaire (see Appendix A2 for Resilience Questionnaire). (Smith et al., 2008) consists of fifty self-report questions designed to determine resilience and self-efficacy. It was designed to record the strengths of personality traits associated with resilience. The researcher chose this questionnaire because many offenders reported feelings of not being able to cope and feelings of low resilience when faced with release. This questionnaire provided an understanding of the offender's current characteristics and greater self-awareness of areas that would need improvement if they were to be successful upon release.

The CFO3 Questionnaire (see Appendix A2 for CFO3 Questionnaire) A HMPPS designed a questionnaire to monitor offenders changing attitudes towards reoffending. This was used within the prison routinely and this was built into the project so that it could understand the offenders changing attitudes and formed part of the presentation of evidence to HMPPS.

Group Questionnaire (see Appendix A2 for example of group questionnaire) Given to the offenders at the start and at the end of each course to measure the specific improvements according to the individual course material. The questionnaire was a product of Genius Within CIC and permission was sought to use it for the purposes of this research.

Once the research design was established and redesigned to allow for Covid restrictions on research carried out in prisons, the researcher began to develop the research questions. For each section of the study a question needed to be proved or disproved. These were carried out through the implementation of a range of interventions and are explained below. Their effectiveness was tested using incidental testing.

- The study carried out an extensive literature review to understand the diagnosed and undiagnosed autistic offenders' journey through the criminal justice system.
- DSM-5 Screening of all offenders on arrival to HMP Dartmoor to identify offenders that are likely to meet the threshold of having autistic traits. Survey one: 248 offenders and Survey two: 252 offenders took part.
- Strategy Profiling to identify the support needs of one hundred offenders.
- Cognitive Assessments on one hundred offenders to identify strengths and support needs.

Engagement in a series of one-to-one and group work support-focused sessions within The Support Change Project. The sample for this phase was fifty offenders in the Research Group and fifty offenders in the Control Group.

Ethical Considerations

This section explains how the study implemented ethical guidelines throughout the interventions at HMP Dartmoor within The Support Change Project. The study used guidance provided by the National Disability Authority (2009) which contained a list of focused considerations when carrying out research on potential people from neurominority groups including neurodiverse offenders.

Ethical issues were considered throughout the research process, from the design stage to data collection and analysis. This section explicitly explores how ethical guidelines were implemented and reviewed throughout the study.

The research ethical considerations for the study were robustly based on the following six principles:

1. Promoting the inclusion and participation of disabled people in research and research dissemination.
2. Ensuring that during the research attempts were made to meet the participants' access requirements.
3. Avoiding harm to research participants by ensuring signposting and access to support.
4. Ensuring voluntary and informed consent from each participant before participation.
5. Understanding and fulfilling relevant legal responsibilities applicable within role as researcher and role employed within the prison.
6. Maintaining the highest professional research standards and capacities throughout the study.

The study acknowledged the historical and contemporary research undertaken by academic researchers. The process followed the guidelines outlined in the Statement of Ethical Practice, described by the British Sociological Association (2017). Permission by the Governor at HMP Dartmoor, Bridie Oakes Richards. Single site access was granted. Following this single site HMPPS access permission being granted, ethical approval was applied for and granted by the College of Health, Psychology and Social Care Research Ethics Committee. Formally known as The College of Health and Social Care College Research Ethics Committee.

In addition to this, the researcher was in the position where they needed to consider several ethical frameworks including the British Psychological Society, BPS, (2007), The College of Health, Psychology and Social care, (formally known as The College of Health and Social Care College Research Ethics Committee), HMPPS Ethical Guidelines and HMP Dartmoor site ethical guidelines and operational regulations.

Participants were all identified as having impairments, health conditions or experiencing disablement, they are classified as "vulnerable" (British Psychological Association, 2017). Ethics was considered in a step-by-step process to protect both the researcher and the vulnerable participants. This section explores this step-by-step process using the British Psychological Association Statement of Ethical Practice as a guideline.

The Process of taking part in the study was to ensure that ethical guidelines were adhered to and robustly considered throughout the study and is outlined below.

Attention was paid to ensure a high level of protection for the participants and signposting for support was given great care. Guidelines and reports were reviewed (Office for Disability Issues, 2011) to ensure that the safety, wellbeing, and protection of all participants, taking part in the study, remained paramount. The basis for collecting data was achieved by obtaining the consent of the participant to take part in the study. This was done, using initially, a third party known as a gatekeeper, who in this study was the offender manager or an identified offender acting as a gatekeeper. The participants all had the legal capacity to be able to give an informed consent to participate in the study. Anyone deemed as particularly vulnerable by healthcare was not considered able to make informed consent.

Consent was given when participants were verbally briefed and asked to sign a consent form. The form was made available for the participants to take away and discuss with key workers or professionals in the prison. The consent form was read out by the researcher and its contents fully explained to the participants.

The participants understood that their participation was voluntary and that they were free to withdraw for two weeks following the end of the project, without giving a reason.

They understood that there was no benefit for taking part in the study and there was no consequence if the participant chose to refuse or withdraw. It was made explicit that they understood that they are taking part in this study for no benefit to themselves.

Within the consent process, it was made clear by the researcher that any information given by the participant may be used in future reports, articles, or presentations by the research team, as well as the media and that the researchers name or any identifying data was not used. Any identifiable information was redacted, and the assessments and screening were not viewed by anyone other than the participant, the researcher and professionals within the prison.

It was explained that this research was being carried out for the researcher's doctorate study and that it was also going to be used for the purpose of enhancing academic research.

The legal basis on which the data was collected was explained to the participant and the following obligations outlined. That the researcher would not seek more information than what was essentially necessary for the study. The researcher ensured anonymity by using ID codes to analyse the data. The data was stored in password protected databases and only named researchers had access to it. All data that needed to be destroyed was done so, by shredding and permanently deleting using HMPPS guidelines.

It was explained to the particpant that The University of Derby acted as the Data Controller for this study. Researchers on the project that had access to the data were highly qualified and experienced and were careful to ensure the security of their data.

The process of making a complaint was explained to the participant. In the unlikely event that the participant felt that they would like to make a complaint regarding the use of their information, they were advised that they could contact the Data Protection Officer at the University of Derby. The participants gave both verbal and written consent to take part in the study through engaging in The Support Change Project at HMP Dartmoor.

Debriefing the participants was carried out in a step-by-step process to ensure that all of them felt supported as they exited The Support Change Project. Participants were given an opportunity to discuss and reflect upon this in a one-to-one setting. It was explained that they could withdraw at any time for up to a period of two weeks after the end of the study known as

The Support Change Project. If a participant decided to do this, they could contact the researcher and they would be withdrawn immediately. Following this, the researcher would send the participant a letter to confirm their withdrawal from the study. No offenders withdrew from the study. It was explained that there were no negative effects of doing this and no questions would be asked. The debrief concluded if they had any questions or comments about the study or the procedure, participants were free to contact the researcher by email or telephone. The participants were advised that if they would like to submit a complaint, they could send details of their complaint to the course director. All relevant contact details were given to the participants.

The information in the letter provided to the participants outlined the process of taking part in the study. If a complaint were to be submitted it would be investigated following standard procedures and, if they choose to do this, there would be no negative impact to the participant in any way. During the debrief the participants were also given a list of support agencies and professionals they could access from within the prison and when they are released.

Confidentiality was a primary consideration for the project as the participants all have an offending history. The purpose of making the study screening and assessments confidential and anonymous was to prevent any possible risk of coercion from either the participant or the researcher. It was also to ensure the privacy of the individual and protect them from misuse of any personal or research data by a third party.

Data retention was also of high importance and any transfer of data was securely coded through an end-to-end encrypted secure drop box method. The system used was approved for such transfer by the data protection controller at the University of Derby and HMPPS. The paper-based assessments and screening were kept securely, in a locked cabinet, for a minimum of seven years. The destruction date was displayed on each file and within the destruction log. Information was redacted to such an extent that it would be impossible to identify a participant from it.

Legitimate Interest

The study was considered to have a lawful basis to process personal data in line with the 'lawfulness, fairness and transparency' principle. The researcher was confidently able to balance legitimate interests of the study and the necessity of processing the personal data of the offender's journeys against the interests, rights, and freedoms of the individual. These interests are balanced. The key elements of the legitimate interest's provision can be broken down into a three-part test:

Purpose test – The legitimate interest in exploring the offender's journey through the criminal justice system was considered. It was explored if there were missed opportunities that learning could be applied going forward. These were shared with the Governor at HMP Dartmoor.

Necessity test – The processing necessary for this purpose, as the main part of the study, was mixed methods. The case studies were written by the researcher.

Balancing test – The legitimate interest overridden by the individual's interests, rights or freedom as all participants fully consented to the study and were aware of its purpose. They were safeguarded by being made anonymous within the study.

Protection of Participants

Participants did not need additional support as their risk was low. They were carefully selected as being emotionally secure at the time of the study. The inclusion and exclusion criteria confidently ruled out the selection of vulnerable participants.

The plan in place, should the need arise for post interview support is detailed below:

1. Participants were advised that they could contact the researcher post intervention and discuss further any concerns in relation to the research and its impact.
2. The participants had access to independent healthcare professionals. They were detained at HMP Dartmoor and details were given on how to access ongoing support post intervention.

3. Participants were able to self-refer to mental health services in the prison if they required independent advice and support. Furthermore, they could freely access any of the services detailed on the information sheet. These services were easily available to the participants, and they could access all the support groups also listed.

4. Each participant was approved to take part in the study using a gatekeeper process. The gatekeeper assessed minimal risk and capacity.

They were informed that their data would remain anonymous and confidential. GDPR was explained to them as well as the process of retaining the data. The researcher had initially thought to allow each participant to decide on their respective level of confidentiality, as initial questioning revealed that the participants were keen to take part in the study and were happy to be identified.

However, when obtaining ethics permissions from the College of Health, Psychology and Social Care Research Ethics Committee, the Chair recommended that participants should not be identified as it could potentially increase their vulnerability, as they were all serving sentences, and the identification of participants could impact either negatively or positively on their sentences. The researcher therefore decided that the study was going to be entirely confidential and anonymous for all offenders taking part in the study. The protection of all participants was paramount. Coding was used in place of real names. They were selected using a numerical process and a master sheet that could only be accessed by the researcher.

Permission to share the cognitive report and screening information with Allocations, Security and Education was sought. This was carried out verbally. It was agreed that the participant would read the cognitive report prior to it being shared and would verbally consent to sharing. They would then be given several copies so they could also be active in sharing the reports and support information.

Three participants expressed a willingness to be identified; however, it was deemed ethically inappropriate to allow this and the decision was made for all participants to be anonymous.

This was explained verbally both at the time of consent and at the point of debrief, and the information was also contained in the consent and debrief paperwork. Participants were made aware that participation was voluntary.

All participants were provided with updates of the study itself, through poster displays and opportunities to receive personal and one-to-one feedback. In hindsight, this needed to be better managed as many participants requested personal feedback which took six months to complete. Had the researcher not been employed within the prison this would have been very problematic to the study.

As there was no direct benefit to taking part in the study, the researcher needed to be clear about what the benefits were in taking part from a bigger picture perspective. The study was explained in terms of exposing disabling barriers (Finkelstein, 1998) and that it aspired to have an impact on the "individual self-assertion and experiences of feeling powerful" (Mann, Hosman, Schaalma, & de Vries, 2004).

Participants received no financial payment or voucher reward for engaging with the study, due to it taking place within a custodial environment and needing to respect the researcher's role working in the prison. Within the subsequent data collections, participants were encouraged to provide the researcher with details of access requirements and support needs that they felt they had. This was not essential as the purpose of the data collections was to ascertain unmet support needs across the prison. All participants were informed, at the point of consent and again at the debrief stage, that if they experienced levels of distress that could not be addressed by the researcher, that they would be able to access alternative support systems within the prison healthcare services. The researcher made sure that healthcare was aware of the study and to make sure that they spoke to the participants within their healthcare sessions.

Access to services outside of the prison is limited due to the participants being serving prisoners, however, there is a strong healthcare and chaplaincy presence at HMP Dartmoor. A

phase of reflection of a period of two months was deemed necessary to consider the theoretical framework underpinning the research questions.

Sampling and Recruitment

Sampling had been a reoccurring limitation found within the literature review. Myers (2004) not only used outdated language in all his studies but in one study of forty participants only two were in a prison setting. Again, Paterson (2008) used small sample sizes of four offenders in a prison setting in Wales. For this study to be effective it required a large sample size.

Sampling took place in a four-stage process aligned with each stage of the process.

1. DSM-5 Screening of all offenders on arrival to HMP Dartmoor to identify offenders that are likely to meet the threshold of having autistic traits. Survey one: 248 and Survey two: 252 offenders.
2. Strategy Profiling to identify support needs of the one hundred and fifty offenders.
3. Cognitive Assessments on one hundred to identify strengths and support needs.
4. Engagement in a series of one-to-one and group work support focused sessions within The Support Change Project. The sample for this phase was fifty offenders in the Research Group and fifty offenders in the Control Group.

All offenders that took part in the study were invited to access the interventions either at the time of the study or after the study depending on if they were in the research or the Control Group. Offenders were offered access regardless of if they identified as being disabled or being autistic.

Diagnosis was not an inclusion or exclusion criteria due to the known difficulty of obtaining a diagnosis within the criminal justice system. Participants taking part in the study had a diverse range of impairments, health conditions or non-neurotypicality. Non-typical offenders formed the Control Group and offenders that identified as autistic through screening formed the Research Group. Participants were not selected because of their conditions or labels as the study expected to discover many participants had unknown support needs. The study was

successful in being far reaching in order to thoroughly examine the prison population at that time. The purpose of this, is that it would imply that the findings are restricted to focusing on issues specifically associated to individuals of groupings (Barnes, 2014). The study was approved on the basis that specific offences were not discussed in the thesis. This is obviously a limitation but presents a basis for post-doctoral research. The research sought to identify disability in positive terms and to highlight the strengths as well as support needs as previously identified on the spiky profile. It sought to separate neurodiversity conditions such as autism from co-occurring conditions such as anxiety and depression. Previous studies within the literature review have combined these existing and cooccurring diagnoses and then have made conclusions that the existing condition is the driving force behind offending behaviour, when it is likely that the presentation of the co-occurring condition was partially responsible. Studies have published autistic-based research based on times when offenders' behaviours were impacted by co-occurring conditions triggering poor decision making and impaired consequential thinking. By not taking into consideration the type of impairment, health condition or neurotypical labels, there is a risk of excluding individuals who are less widely represented (Barnes & Cotterell, 2012).

Although the specifics of cognitive impairment, health conditions and neurotypical labels were not considered as part of the selection criteria, participants were not discouraged from exploring aspects of their health, impairments, and labels during the data collection (Soldatic & Meekosha, 2014).

From these discussions, referrals for additional support were able to be carried out which increased the engagement and access to services that the offender had. It is essential to consider language surrounding neurodiversity, madness, and distress (McWade, 2015). There is much literature that examined, discussed, and challenged the idea of neurodiversity in general settings; however, the research in criminal justice settings, that focuses on autism as a neurodiversity, is difficult to find and when a publication is found it is littered with methodology limitations. Neurodiversity activists and academics working and researching in

this field attempt to critique the diagnosis, actions, and policy initiatives that reinforce normalisation and propose normative ways of functioning (Gillespie-Lynch et al., 2017).

When considering the methodology, it could be argued that the sample was wide; however, one of the considerations was to ensure that the selection was inclusive as this was a previous limitation in other studies. The researcher was confident in being able to demonstrate that it provided a representative group. The participants represented a perspective as well as a population. The sample size is related to the chosen methodology.

It has certainly come under scrutiny due to the change in the research design as a result of the Covid-19 pandemic and that the study itself did not need to be a mixed method design in order to answer the research question. The study attempted to focus on the transferability of the findings; the intention was to establish if there were a high number of unknown autistic offenders in a prison at any one time, and to then understand their support needs in a way that was transferable to operational practice that would then have an impact on reducing reoffending. The criteria were used to guide the methodological process and were also operationalised in practice. The findings were used to design and implement a project focusing on autistic offenders that then supported them through their release and into the community. Participants were identified as serving custodial sentences at HMP Dartmoor in Devon. It is a category C prison for male offenders.

Participants were resident in the UK. However, one participant was resident in New Zealand and was detained on entering the UK for an historical offence.

A sociological approach would dictate those discussions of people from neurominority groups' experiences, including their narratives and perceptions of disabling barriers, be rooted within the political, cultural and economic structures (Barnes, 2001). Initially, it was felt that this would be a quantitative study and would include a discussion of people from neurominority groups' lived experiences. However, it was found that the mixed method data answered the questions that were unanswered and that knowing more about the lived experiences provided

opportunities for post-doctoral exploration within the National Autistic Society. Therefore, this study decided to sample for mixed method study only. For this research to produce meaningful outcomes, which are equally transformative and inspired change within the criminal justice system, it has needed incidental evaluations at initial, interim, and final points of engagement.

Post Intervention Support and Sign Posting was a considerable consideration when thinking about sampling as the study is focused on selecting the most vulnerable members of the prison population. Understanding the levels and types of disability within a prison at any one time is an essential part of the research as it is widely acknowledged that prisons are not aware of this currently. The aim was to provide open- rather than closed-ended criteria to maximise the number of participants that would take part in the study.

There were two main limitations of the sampling used. The first was the use of the gatekeepers in the data collection stage one and stage two. The study failed to consider the intersectionality and prison hierarchy bias and how this would impact on the study in terms of coercion. The second limitation is that each stage of the study used different offenders.

Only thirty-eight offenders proceeded through all four stages of the study within the Research Group. Twelve offenders joined the study at different points of the project. This is as a result of releases, transfers and withdrawal of offenders from the study. The fifty offenders in the Control Group were the same offenders throughout the study.

Data Analysis

The study turned the raw data into meaningful data that represent the offender's journey and development within the criminal justice system. This process was carried out using rational and critical thinking. It sought to notice the frequencies of variables and differences between the variables. The purpose of this was to answer the research questions.

The study aimed to be objective, despite its many limitations present within the research design that, as previously discussed, was reviewed and changed to support the study. The study used

two different types of software to organise the data for analysing, Microsoft Excel and SPSS. This study used T-tests as it is the best method for the purposes of the study. T-tests were used to understand the nature of relationships between two individual variables, which in the case of the study are the participants taking part in the study and the Control Group. The researcher was able to look at the data in isolation and then how they interrelate to each other to draw conclusions. A limitation of this method was that it was not able to indicate causations. The offenders provided pre-intervention and post-intervention evaluation scores. For the purpose of this study, the scores from the six most popular coaching topics were analysed; memory, organisation, time management, stress management, understanding neurodiversity and concentration.

T-tests were used to assess the effectiveness of the interventions. The purpose of this was to assess if there were any differences between the cohorts of offenders in terms of performance improvement. Bonferroni corrections were applied for twelve dependent variables (six x two intervals), then reduced to eight according guidance on reducing type II error (Perrett & Mundfrom, 2010). For the purpose of this study the researcher favoured Bonferroni Corrections, with a Type 2 error reduction calculation (Perret and Mundform, 2010) resulting in an adjusted p-value of .00625.

Bonferroni was responsible for lowering the level of the P-Value for each measure to reduce an artifact where people tend to score similarly when measured at the same time. Perret and Mundform suggested that this was too stringent, in particular for studies with >3 groups mean the number must be divided by 1.5 and rounded up or down.

Early 'intervention' methods aim to disrupt the reoffending rate by identifying neurodiversity and additional support needs. Expectations from such interventions would be:

a)   A 'reduction' in the 32.7 per cent reoffending rate, i.e., 201 offenders at HMP Dartmoor.

b)   An 'increase' in offender interpersonal skills.

With granted access to the HMP Dartmoor offender population, it was important to establish the sample size needed to maximise confidence in the results whilst minimising margin for error so that the survey results reflected the views of the overall population.

For a smaller margin of error, a larger sample size is needed. The higher the sampling confidence level the researcher required, the larger the sample size needed to be. For empirical surveys it is standard practice to work to a ninety-five per cent confidence level and a five per cent margin of error. If we apply this to HMP Dartmoor, the sample size required to achieve standard practice is 237.

Note: this calculation maximises out at 385 for N=20,000 and above, i.e., if applied to the total HMP population, N=84,700, a sample size of 385 would be enough to meet standard practice.

To prove repeatability and confidence levels, two initial surveys (Survey-1; Part-A & Part-B) were conducted each using a sample size of two hundred and fifty (margin of error = 4.78 per cent) with HMP Dartmoor offenders to detect traits of autism neurodiversity using the industry standard DSM-V AQ-12 test. Both surveys detected one-in-five offenders (20 per cent) with autistic traits. A further survey was conducted to rank order Categories of Strengths and Weaknesses to help identify areas to focus intervention support. This survey used a sample size of one hundred and fifty (margin of error = 6.96 per cent) and found interpersonal skills to be lacking.

When using independent samples such as a research and Control Group and analysing T Tests, Cohen's D test is determined by calculating the mean difference between the two groups and then dividing the result by the pooled standard deviation. This was appropriate in this study as both groups have similar standard deviations and are of the same size (Cohen, 1992).

Research within Disability Contexts

The study needed to consider ontological, epistemological, and methodological roots of disability-focused studies to provide a framework to conceptualise the findings of this study. In Chapter Two, it considered the social model of disability which can be heuristic. It is integral to researchers, academics, and campaigners, who frame their work through a traditional materialist and radical structuralism lens (Goodley & Runswick-Cole, 2016). Goodley attempts to provide an account of the sociological theories that underpin the inception and continuous development of neurodiversity studies. It was essential to consider both the medical model and the social model to underpin this current research. A critical realist approach (Bhaskar, 2008) was used as an epistemological basis for understanding disability and disablement and is a favoured approach in current neurodiversity-based studies. It focuses on capturing participants' representations of the social world, whilst acknowledging that such representations are affected by context (Porpora, 1989).

Research is effectively flawed in three ways (Oliver, 1990; Oliver, 1996). Firstly, it has not reflected the experience of disablement from the individual perspective. Secondly, it has not provided recommendations that encourage change to national policies, particularly within the criminal justice system and the criminal justice system has failed to recognise neurodiversity currently within its prisons and this has had an impact on rehabilitation.

And thirdly, that this research was included within the current HMPPS neurodiversity review and was pivotal to bringing about change within the criminal justice system for autistic offenders serving sentences. It is hoped that the current reviews that are underway, address these concerns and that this study feeds into this review because I have prioritised (1) participant voice in the analysis (2) the research has demonstrated cost effective offender management for autistic offenders (3) the work is situated within a policy development project.

Researcher Position

The researcher is autistic and worked with autistic offenders in a prison setting. This provided an advantage when addressing the complexity of the research topic and went some way towards understanding, unravelling, and comprehending the tension between researcher, topic, and respondent group (Tedlock, 2000). As a well-known autistic researcher within the prison, the researcher could use that mutual understanding of what it is like to be autistic to gain trust. The researcher was able to relate with ease to some of the experiences that autistic offenders shared.

Researching autistic rehabilitation through an autistic lens is a unique position and carries a unique contribution to research in this field. The researcher being autistic, allowed them to emphasise the sensitivity required when undertaking research that included or referred to individuals, organisations, and knowledge sources already known to the researcher (Costley, Elliott & Gibbs, 2010). This experience supports the position as an autistic person who aspires to support the inclusiveness and effectiveness of provision for neurodiverse offenders, detained in the criminal justice system.

The ethics of insider research needs to be considered (Floyd & Arthur, 2012). It is the researcher's belief that they benefited from being in this position because it allowed them unrestricted access within HMP Dartmoor to be able to carry out an extensive quantitative research study. The researcher had unlimited access to all wings and work areas within the prison, which enabled the researcher to carry out an extensive study over several years. Had the researcher not been in this insider position, it is certain this study would have seen the limitations within the methodology seen in many other criminology studies. Being an insider allowed for a stronger rapport with the participants and a basis for established trust. There were no ethical considerations with this access, as unrestricted access merely refers to the fact that the researcher had keys that allowed them independent access across the prison. This methodology outlines the ontological and epistemological stance to the participants that have taken part in this study. As a result of the researcher's insider position, it was essential to account for the power relations within the research process and to acknowledge her position as a member of rehabilitation professionals employed within HMP Dartmoor.

According to Tregaskis (2004), disabled researchers are required both to explore the complexity surrounding personal investment in the research process and to acknowledge how research is affected by conducting it with people who also identify as disabled.

There are arguments given by Morris (1991) and Reeve, Reeve (2002), who suggest that the personal experience of disability has a clear political dimension. The researcher would argue against this and state that as they do not consider themselves to be a disability activist and therefore there can be no political agenda. This distinction is not easy to make, as their own personal bias of being an autistic person means that the researcher is likely to have additional empathy. This intersectionality is positive, in as much that the researcher was considered as an 'insider' in this study; however, in order to reduce their own personal bias, the researcher needed to use clean language rigorously to ensure that their interpretations did not influence the study. This was carried out effectively, as the Clean Language model relies on only what the researcher has seen and heard and then allows an inference of these and a conclusion, or in Clean Language it is called it impact.

The researcher's own personal bias with autistic offenders cannot be ignored because in the discussion and conclusion they drew together their inferences and concluding the impact of the study. To reduce bias here, the researcher made sure that every inference and impact was supported with what they had seen and heard.

The contribution of the findings, within the HMPPS neurodiversity review, would improve autistic offenders' position within the criminal justice system, as well as challenge stereotyping autistic offenders with criminal behaviours, as explored within the literature review. Strategies were implemented to reduce the idea that power and authoritative control could be adopted by the researcher. Remaining open to the possibility of clarifying the researcher's position within the prison and separating their role working within the prison from the work as a researcher, was imperative. Stone and Priestley carried out research that suggested disabled researchers are not excluded from conducting research. In designing this research, the researcher strived

to reduce any inadvertent, abuses of power and considered the impact that the researcher's position might have upon the findings (Stone & Priestley, 1996).

Being perceived as being a trusted member of prison staff cannot categorically guarantee that the researcher knew if an offender felt uncomfortable sharing personal information, but they were able to gauge this more accurately than someone not employed within the prison.

Finch made several arguments about the personalisation of the researcher. He suggests, respondents may come to regret sharing information so openly because of their familiarisation with the researcher (Finch, 1993). Tregaskis made several suggestions to be able to show reflectiveness when working with vulnerable adults (Tregaskis, 2004). To alleviate concerns and allow space to reflect, participants were offered feedback on their contributions and time to talk about any additional concerns.

There was a need to consider reciprocity between participant and researcher during the creation of the research (Oliver, 1990; Oliver, 1996) and the impact of power relations in the research process (Allan, 2010). The researcher was satisfied that the safeguarding concerns described above were considered and they were able to work from a neutral position within the prison throughout the study.

Rasmussen (2006 cited in Cisse & Rasmussen, 2022) suggested that the researcher must deconstruct their own identities if they are to be able to regard their position.

This is in many ways essential from an insider stance to understand the context in which the research has developed and the conclusions that have arisen (Rasmussen, 2006, cited in Cisse & Rasmussen, 2022). It must also be considered that this research was being carried out from a unique position based on the researcher's identity characteristics of being an autistic woman. Tregaskis (2004) highlighted that disability studies have historically been dominated by white men. This statement is supported when one considers the research carried out by Baron-Cohen. He seldom references a female or disabled researcher in his publications, yet he is perceived to

have contributed to autistic research in his lifetime, as well as the development of the argued medical model (Baron-Cohen, 2017). As a white, western-educated, cognitively impaired female from a working-class background, the researcher's position was considered both privileged and unique within disability research. Reflexivity is integral to the process of generating knowledge through qualitative research (Hammersley & Atkinson, 2007).

As previously discussed, there is a lack of contemporary literature exploring disability from the perspective of disabled researchers (Sheldon, 2017). To explore reflexivity to a satisfactory level the researcher needs to go beyond the credibility of the findings to achieve trustworthiness in the research (Buckner, 2005).

The research aspires to have a meaningful impact on the development and existence of the neurodiversity movement, and it would like to be seen as a pivotal study that lays the foundations for further research, as well as the acceptance of disability – insider research in the future. The research aims to be readable and accessible for all readers, in particular autistic professionals and participants. It, therefore, seeks to remove abstract language and terminology in its quest to be inclusive and accessible. The research was be disseminated to the professional bodies that could use it, to bring about change within the criminal justice system.

Discussion

The chapter highlights the importance of an emancipatory disability research approach that focuses on autistic offenders within the criminal justice system. Emancipatory research is concerned with the demystification of the structures and processes which create the term described as disability (Barnes, 2001). The Support Change Project established a dialogue between the researcher and the autistic person. To achieve this, the researcher put her knowledge and skills at the disposal of the autistic offender. This study has attempted to achieve this outcome by allowing the project to be a process of development and change. The researcher was able to do this because of their insider access. The researcher could afford the time to allow the project to evolve naturally. This freedom of time enabled the researcher to reflect and make responsive changes as the project developed. With this in mind, the aims of

this study have been used as guidance of disabling barriers rooted within social structures and conclusions as to how to address them (Barnes 2001). The study also aims to produce meaningful and transferable outcomes, that can make an operational impact within prisons for neurodiverse offenders with the long-term goal of reducing reoffending.

The researcher used this study as a framework to utilise sociological themes, concepts, and power relations with the aim of producing a change to how to rehabilitate neurodiverse offenders. The research sits within disability studies and seeks to adopt a methodology that was intrinsically linked to the social model of disability. These links have been found and critically evaluated within this study, within the literature review. To achieve an operation outcome with lasting impact, the research has aspired to the six core principles outlined by Stone and Priestley (1996). The ontological and epistemological bases for research reflect a critical realist stance, given that it is essential to understand the complexity of the various processes and structures that may both cause and affect the regularities and events within the social world (Carter & Little, 2007).

Chapter Conclusion: This chapter has set out the design and implementation of The Support Change Project. It has ensured that it is both robust and ethical. It has considered the advantages of being an insider researcher as well as reflected upon the disadvantages.

The project is broken into five stages which each have a separate measurable outcome. The next chapter explores the outcomes of the interventions delivered to the offenders.

The researcher would have preferred to use a hypothesis to analyse the tests of differences but this was not possible due to HMPPS wanting specific questions answered within the study as well as favouring an analytic strategy.

Chapter Four

Stage One DSM-5 Screening of all offenders on arrival to HMP Dartmoor to identify offenders that are likely to meet the threshold of having autistic traits.

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Introduction: There is no data currently available, either in prisons or nationally, as to how many offenders have a formal diagnosis of autism. Offenders can self-disclose and often it is not until they are in crisis that this is revealed.

This study is working on the basis that formal diagnoses are limited due to various reasons, such as exclusion from school. A Humanistic and Integrative approach is considered, where the focus is on the social context of 'self and other' and the importance of narrative. However, the purpose of data collection one is a simple screening process to estimate how many offenders could have autism or traits of autism.

</div>

Introduction

This data collection created a starting point of which to carry out further research by identifying how many offenders were likely to be autistic by using the DSM-5. At the time of the study there was no accurate data available to show how many offenders either were autistic or were autistic traits and so this data collection was needed to identify if there were likely to be high numbers of autistic offenders. The question that this data collection was attempting to answer was to determine how many offenders' autistic traits had, diagnosed or undiagnosed at any one point in UK prisons. The expected outcome was based on published prevalence studies finding around one in a hundred male and female adults meet the screening threshold. An accurate prediction was not possible due to a lack of empirical evidence. Formal diagnoses are unlikely as explored in the literature review. It was likely that many offenders did not complete school and had limited access to diagnostic services.

The UK reoffending rate is now more than seventy per cent which consists of many of the above defined offenders. To reduce this statistic of reoffending The Support Change Project's

aims were to implement, monitor and review how autistic offenders benefit from preventative measures.

To begin this journey, diagnostic screening, and ongoing assessments carried out at the start of the criminal justice journey were essential and have been carried out to determine how many offenders were autistic or had autistic traits. Hoekstra et al (2008) found that the autism thresholds can be described as a set of traits. However, more widely used are the psychometric scales, AQ, Autism-Spectrum Quotient (Baron-Cohen,Wheelwright, Skinner, Martin, & Clubley, 2001b) and the Social Responsiveness Scale (Axelrud et al., 2017), which have allowed a subthreshold of autistic traits to be measured more precisely. For the purposes of determining the answer to the question above, this measurement to determine how many offenders meet the subthreshold at any one time was both the most practical and efficient. These decisions were made because it was found that the offenders in the study did not have a formal diagnosis. At the time of the study there were only three offenders with a formal diagnosis at HMP Dartmoor. The study could not offer a diagnosis and so the paper screening tool was the most appropriate screening process available within the study. In addition to this, it is important to recognise that the DSM-5 is the only autism recognisable method for identifying autism in prisons currently. The ADR-I is more suitable and is favoured in community settings but has not been widely used in prison settings (Bastiaansen et al., 2011).

Methods

Participants: This stage was made open to all offenders detained at HMP Dartmoor. The purpose of the collection was to determine how many offenders screened met the threshold of autism at any one time in a prison population. This survey screens for traits of autism, within the induction phase, of all offenders entering prison.

Design: Twelve questions were used to assess a population of five hundred offenders, across six wings, within the six hundred and forty offender capacity at HMP Dartmoor.

The survey is considered an Autism Quotient (Baron-Cohen, Wheelwright, Skinner, Martin, & Clubley (2001). Each question carefully identified an autism trait. Understanding autism traits in isolation was essential as it showed if that participant could be autistic. For the purposes of this research, each question was weighted one mark per question answered and the score range zero to twelve. A score of four considered the threshold of detection as described on the table below. The study determined how many offenders had autistic traits that might have contributed towards their offending behaviour. The screener was made in paper format and the researcher supported each offender to complete the questionnaire when needed.

Items and Materials: This study was disseminated using a paper self-reporting questionnaire This location of new offenders coming into the prison was a classroom with no technological access.

Procedure: This data collection was carried out in a class setting in groups of twelve to twenty new offenders that were being inducted into the prison. The data was then analysed and reported upon.

Table 2 *Survey-1 Survey Score Markers.*

Survey Score	AQ12 Autistic Marker
< 4	Lacking Traits
= 4	Threshold (Borderline case)
> 4	Positive Traits
> 6+	Strong Traits

Note: The survey sought to distinguish offenders that scored above 4 as it was deemed that if they were tested for autism there would be a reasonable chance they would be positively diagnosed.

Findings

Data was collected and scored in two separate surveys. When the first survey was carried out it revealed a higher-than-expected number of offenders that scored on or above this threshold of having autism or autistic traits. This did not support the hypothesis estimate of one in a hundred offenders. Prisons currently record only if an offender has self-declared that they have autism. At the time of the study HMP Dartmoor had three offenders' identities held on their records as being diagnosed or self-reported with autism. This initial collection revealed a much higher prevalence. The study was repeated, and the survey resulted in the second data collection score increasing from thirteen per cent to sixteen per cent. The increased prevalence is due to the induction of new autistic offenders in the prison, between the first and the second survey. The results remained between these two scores and each time it was checked for reliability through test, re-test and using the interrater method.

- AQ12 Autistic Marker Survey 1: N=248 completed March 2018.
- AQ12 Autistic Marker Survey 2: N=252 completed January 2019.
- Within this study two N=250 population autism surveys were conducted during 2018 across six wings of HMP Dartmoor.
- Analysis carried out of the combined N=500 survey showed nineteen per cent (one-in-five) of the population exhibited borderline to strong autistic traits.

This was applied to the UK HM Prison population, and it translates to 13,600 neurominority offenders at a cost to the taxpayer of £517 million annually. This figure was achieved by using the total numbers of offenders in prison at any one time and then applying the lower thirteen per cent of autistic offenders to this, leaving us with 13,600 potential offenders that are likely to be autistic. This shows that the current investment in neurominority offenders is much needed, and steps are now being taken by HMPPS to address this by carrying out a national neurodiversity review.

Table 3 *AQ Survey 1 and 2 Representing Numbers of Offenders that took part in the Study.*

Wing	Survey 1	Survey 2
A	43	90
B	51	48
D	40	26
E	25	41
F	10	27
G	79	20

Note: Table 3 shows the initial data collection and then the second survey carried out to confirm the initial results. The table shows how many offenders, from each wing, that took part. There was a significant increase of participation when the researcher used offenders as gatekeepers to take part in the study. This was particularly evident on A-Wing. Offenders were more willing to take part in a study if they felt there is a level of trust present. Offenders were less willing to commit to something that has no gain to them if they see trusted peers taking part. By using orderlies as gatekeepers, this encouraged high numbers of offenders wanting to know what they were doing and to be part of it. This is defined as snowballing (Browne, 2005). This was previously discussed in the methodology chapter in detail.

Table 4 *Survey 1 and 2 Showing Offenders that meet the Threshold Criteria of Autism.*

Score	Survey 1	Survey 2
<4	205	201
4-6	38	40
7-8	4	10
9-10	1	1
11-12	0	0

Note. There were forty-three offenders that meet the threshold in the data collection one. The threshold has been set at scores above four to represent where an offender has traits of autism. When the collection was repeated for reliability, there were fifty-one offenders that met the criteria. This was much higher than expected and this confirms a need to carry out further research in this area.

Discussion

The N=500 survey resulted in 406 offenders scoring below threshold of 82.8 per cent and fifty-one offenders scoring above the threshold of 18.8 per cent. This means that 18.8 per cent of offenders were found to have autistic traits. This number is relevant in terms of what was expected within the hypothesis and leads the study to conclude that further investigation is required so that offenders from neurominority groups can be identified going forward and have access to screening, support, and ongoing interventions, to support rehabilitation and in the longer term reduce reoffending.

This study indicated a one-in-five HM Prison offender population, showing they have autistic traits. The study has also demonstrated that the AQ12 score threshold is accurate, as the data collection was carried out twice to confirm reliability. The mean and standard deviation values, when analysing the survey score data, also concur with the early independent autistic screening studies. The resulting conclusions are that the results are accurate. Within the analysis of the HMP Dartmoor study, there is a sixteen per cent probability of the offender population showing autistic traits.

The study concluded that the actual figure was at nineteen per cent. This survey concurs with the $1.73 < SD < 2.12$ range of early independent AQ testing of 6,934 participants conducted 2001-2014. The survey Mean and SD for the pre-set threshold appears realistic, i.e., Mean + SD = 2.24+1.78=4.02 (e.g., Score>=4). These statistics are compared to the general population. These initial findings contributed to exiting research by creating a clear picture of the level and extent of neurodiversity in the criminal justice system, in particular autistic traits. At the time of this study this information had not been previously available. This data was shared with HMPPS.

Limitations The most significant limitation of this data collection is the use of the DSM-5 questionnaire as it does not confirm a person's likelihood as being autistic. In addition to this it could be seen as misleading for the offender. They could think that they are autistic and then a formal diagnosis could show that they are not autistic. In addition to this observation, it was

important to consider other screening methods that would be more useful in this study. There is a strong need for a revised screening tool to be made available for prisons to use in the first instance when assessing an offender needs within a criminal justice setting.

In terms of data analysis, the researcher decided that they would not carry out tests for significance using t-tests as they were not required for the purpose of this data collection. Using the DSM-5 tests were merely to identify if offenders were likely to be autistic and no more. Epistemology justifies and evaluates the conceptualisation of knowledge and modifies the methodological approach taken (Carter & Little, 2007). Knowledge needs to be considered and explained when considering theoretical and empirical bases. The argument that the researcher is detached from the ontological and epistemological basis of the subject and object encountered to appear objective in their interpretation and discussions, is extremely unconvincing (McGhee, Marland, & Atkinson, 2007). Critical realism can be achieved within this study, by attempting to understand what could be achieved in terms of operational change, brought about by the study in the criminal justice system. The limited epistemology within this study has an impact of how transferable the study can be.

This offers a different perspective on how the participants benefited from taking part in the study. Furthermore, critical realism and the social model are deemed compatible (Dodd, 2014). This is because disablement, by the self-identified disabled people within this study, can be recognised as one of many experiences. However, in this study the participants were not self-identified as disabled, and this can also be seen as a limitation.

Data collection, analysis, and macro- to micro-sociological theories all depend upon and are influenced by the epistemological position adopted. It is a precarious status, though, as the disputes over flawed, limited assumptions for an explanation of knowledge, reality, and interaction are contested under the various research paradigms (Kivunja & Kuyini, 2017).

Intersectionality was considered at the design stage of the research but felt that as the offenders were all males, between the ages of eighteen and fifty years of age and at HMP Dartmoor

existing in the same structure and routine, it would be difficult to reflect upon intersectionality and therefore, this is a limitation of this data collection.

When the researcher carried out the data collections, that used large samples of participants, it became apparent that intersectionality was evident, and this was compounded within the hidden hierarchy between the offenders themselves. This study did not use gatekeepers and it was considered a limitation in as much that the time taken to encourage participants to take part in the study had not been considered prior to the data collection. The subsequent study selected offenders that were 'top dogs' as gatekeepers, as the researcher felt that they would be more influential in encouraging offenders to engage in the study, once this was in operation and the snow balling effect of sampling was taking place (Browne, 2005). The researcher was unable to reverse this decision. On reflection the study should have allowed the sample from participants on a self-referral basis, even though it would almost certainly mean there would have been a much smaller sample size. Intersectionality and prison hierarchy should have therefore, been considered in the research design.

> **Conclusions and what needs to happen next:** This short pilot study data collection identified not only that there is a need for further research but there is an urgency for more in-depth research to learn more about the support needs of neurodiverse offenders. At this stage, the researcher is concerned with how rehabilitation can be truly effective if the offenders, professionals, and prison staff members are not aware of the extent of the neurodiversity issue within prisons.

Chapter Five: Strategy Profiler

Introduction: The previous data collection concluded that between thirteen to nineteen per cent of offenders were screening positive with traits of autism. These were far higher than expected figures and encouraged the researcher to move away from the individual and look at the general population in prisons. It could never be cost effective to cascade interventions on an individual basis and so the next study needed to examine the support needs of individuals' cluster specific needs of offenders into groups. This would mean that potentially group interventions might have a positive impact whilst being more cost effective.

Introduction

The purpose of this data collection was to identify the 'support needs' of the offenders that were identified from an initial AQ survey screening for autistic traits. Initial findings of the previous survey found 18.8 per cent of offenders would be suitable for further screening. This translates to one-in-five of the prison population exhibiting borderline to strong autistic traits and would benefit from further investigation. The DSM-5 questions acted as a screening tool only. This method did not provide any detail of support needs that are prevalent in this group of offenders.

The Genius Within CIC Strategy Profiler was developed to identify individual support or symptom clusters (Doyle, 2017). The question that needed to be answered in this stage was, are there any specific symptom clusters among this group of offenders. This sample group was made up of offenders that indicated as being on the threshold in the previous collection. New offenders had also joined the prison and completed the induction process that was now in progress at this point of the study and formed part of both the Research and the Control Group at this stage.

Method

Participants: The survey was deployed to one hundred offenders at HMP Dartmoor. Fifty offenders were in the Research Group and fifty offenders were in the Control Group. They were selected from separate areas of the prison so that there was no sharing of information present. The participants in the Research Group were selected from the previous DSM-5

screened participants as being likely to have autistic traits. The participants were then approved by security to take part in the Genius Within CIC – Strategy Profiler. (See Appendix A3 for Strategy Profiler example).

Design: The survey is paper based and comprised of fifty-two questions. The purpose of the questionnaire was to identify areas of support that the offenders would need when entering prison.

Questions categorised by:
- Communication
- Memory & Concentration
- Organisation & Time Management
- Written Word
- Numerical Skills
- Orientation & Dexterity
- Interpersonal Skills

In response to each survey completed, strengths and weaknesses were collated, and further analysis was made to understand the significance of autism-specific categories. The questions were designed to reveal strong markers in categories such as interpersonal skills and communication it would support the idea that the offender might have autistic traits and would therefore, benefit from additional support to be able to access educational programmes within the prison. Offenders were given the option of self-reporting and completing the questionnaire in a classroom basis or booking a time with the researcher to read the questionnaire out. All the offenders that took part opted to self-report despite support being readily available.

Items and Materials: This survey is usually deployed in electronic format, however, for the purposes of this study a paper format was created by the researcher. The offenders were given 'yes' and 'no' response options. The questions were designed by Genus Within employees from groups representing a broad spectrum of neurodivergency such as the researcher.

Reliability and validity measures are unknown to the researcher. The paper version of the Strategy Profiler was reviewed and approved by Genius Within CIC as being an appropriate tool to use within a prison context. The doctorate researcher carried out the research independently of external influence, however, all materials were approved by all parties involved in the research including internal and external supervisors.

Procedure: The location of the offenders that completed this survey were on the accommodation wings. The collections took place in an office off the wings without technological access. The researcher explored the idea of the profiler being accessed in electronic format through education but at the time of the study Genius Within CIC were trouble shooting the profiler in another location in terms of its security access.

The researcher decided considering this and prison access to computers being limited, that a paper-based survey would be more appropriate.

Findings

For the purposes of this study, the researcher opted to first focus on the questions below which represent nine of the fifty-two questions. The researcher then looked at the survey as a whole and shared the findings with prison education so that they were further able to support offenders. The whole questionnaire was too broad to report upon within this thesis as only the section below directly related to autism. The preferred answers are highlighted below. If the offender answered the questions 44 and 45 as 'no' and the proceeding questions as 'yes', this was indicative of possible autistic traits, although again not conclusive.

Table 5 *Interpersonal Skills Category on the "Strategy Profiler" Questionnaire.*

Category		Question	Yes	No
Interpersonal Skills	44	I prefer to do things with others rather than on my own.	22	58
	45	I find social situations easy.	47	33
	46	I find it difficult to make small talk with other people.	37	43
	47	I struggle to understand other people's emotions.	23	57
	48	I suffer from sensory overwhelm – sometimes things are too loud, bright or crowded.	35	45
	49	I feel 'on the go' all the time and restless.	26	54
	50	I frequently feel frustrated by work or colleagues.	34	46
	51	I tend to overwork and then burn out in cycles.	27	53
	52	I often feel stressed.	41	39

(Genius Within CIC 2020).

Note. This table shows the questions given for the Final Strategy profiler questionnaire's Interpersonal section and the tallied scores reported.

The dark grey boxes indicate where a point would be allocated and was indicative of the offender requiring support. In this test the threshold was set at five. If offenders received more than five points this was the threshold set for needing support.

In the interpersonal section, twenty-eight (fifty-six per cent) of the Research Group had a score OVER five (n= 50) compared to seven (fifteen per cent) of the Control Group (n = 48). A one sample t-test was used to establish if either group were statistically significant from a score of five (or a welch two sample t-test comparing the Research and Control Groups).

The Research Group mean was 5.8, $t_{49} = 2.1106$, $p = 0.04$. Whereas the Control Group mean was 4.04, $t_{47} = -3.2355$, $p < 0.005$. Some offenders reported 'n/a' in the Control Group which is why the degrees of freedom are shorter. It was concluded that there is limited value in the t-test for this particular group of offenders. However, comparing the two groups in an unpaired t-test showed that the Research and Control Group were statistically different. In the Welch two sample t-test x the mean was 5.8, y-mean 4.04, $t_{91.53} = 3.6553$, p value < 0.0005

When looking outside of the autism-specific categories, it was evident that the participants all had additional support needs. This information was widely shared with educational professionals within the prison. This percentage represented ninety-seven of the one hundred offenders surveyed. These offenders indicated that they may well benefit from tailored additional support in areas such as Memory & Concentration, Interpersonal Skills and Communication.

Table 6 *Survey 2, Strengths vs Weakness Totals per Category.*

CATEGORY	Strength	Weakness
Interpersonal Skills	56%	44%
Memory & Concentration	57%	43%
Written Word	60%	40%
Creativity	63%	37%
Communication	66%	34%
Problem Solving	68%	32%
Visual & Practical Skills	71%	29%

Note. Table 6 shows the strengths and weaknesses self reported in the Strategy Profiler as a whole. There were significant differences in communication, problem solving, and visual and practical skills in comparison to the general public. It is important to remember that these answers were self reported and were based on the individuals own perspective of themselves.

Whereas Table 6 shows the strengths and weaknesses per category, the data also shows autism markers per category. This is important as it supports the hypothesis that there are a higher number of offenders that are autistic than expected by HMPPS.

In autism, many of the building blocks of interpersonal relationships, such as communication, social cognition, and processing of emotional signals, are impaired. Also, characteristics of memory function in autism have been studied for decades. Individuals with autism both have specific difficulties with memory and memory strengths. Memory difficulty is not part of the diagnostic criteria for an autism diagnosis, but it is a common difficulty experienced by many individuals with this diagnosis. As the symptoms of autism and ADHD overlap, screening for Memory, Concentration, Communication & Interpersonal Skills is a reasonable approach to determine required adjustments. This supports the hypothesis that there are higher numbers of offenders with autistic traits meeting the sub threshold at HMP Dartmoor than initially expected.

Discussion

Information has been placed in ascending strength order to rank categories that may benefit with additional support. This data revealed that there are symptom clusters found in this group of self-reported support needs. The reliability is questionable because many of the offenders reported 'no' to questions around communication, which if they were autistic, there would be communication deficits, as this is one of the sub threshold markers. It is evident from this that the strategy profiler is best used as an early indicator of support needs, as it is easy to deploy to offenders when they are first inducted into prison. However, further cognitive testing is required to achieve an accurate and reliable source of data that professionals can use to support an offender within the criminal justice system. The WAIS cognitive testing is reliable within the criminal justice field and is more widely accepted by professionals.

Limitations

The strategy profiler took around thirty minutes to deliver and then a further fifteen minutes to write up. Additionally, the findings were shared with prison education. This was a time-consuming process. The findings then needed to be disseminated and shared among healthcare professionals which took up further time. The strategy profiler's aim was to identify support needs, and this was successful in doing this.

The questions in the strategy profiler were not autism-specific when considering the diagnostic criteria of the ADR-I, but they did serve the purpose of identifying support needs of the offenders (Bastiaansen et al., 2011). The survey is not necessarily indicative of an offender being autistic, a full diagnosis would be required to achieve this. These questions need to be revised before they are used across the prison service generally or a separate questionnaire designed that is autism specific and supported by current ADR-I and ADOS research (Bastiaansen et al., 2011).

Conclusions and what needs to happen next: This study showed that all offenders have support needs in various amounts. They can clearly be seen in clusters and the outcome of this study is that there are seven areas of need, and all the prisoners fall into more than one cluster. This supports the idea that neurodiversity needs to be looked at in terms of support needs and move away from diagnostic approaches, if reducing offending is to occur.

The strongest outcomes and themes found in this study are lack of awareness of strengths and weaknesses of the offender, limited awareness of coping and resilience and poor social and emotional awareness. Their lapses in awareness and knowledge are explored further in the next two chapters.

Chapter Six

Stage Three: Positive Assessments - Cognitive Assessments using WAIS to identify strengths and support needs.

> **Introduction:** In the second data collection, it was evident that offenders have a noticeable lack of awareness of their support needs and what they need to do to be at their best. This chapter explores the value of Genius Within CIC's WAIS based Positive Assessments within a prison setting.
>
> Although, WAIS based Positive Assessments might not be cost effective on a large scale, there is still value in exploring the benefits and to examine any potential ways that they can be used in the prison in a larger scale, rather than the present method of referral through professionals. The researcher's personal experience conducting WAIS-based Positive Assessments has been extremely positive and impactful for the offender and can act as a reference of their strengths to use to secure employment when they are released. The positive assessment is based on WAIS cognitive assessments and specifically identifies neurological strengths and weaknesses and looks to identify what employment industries an offender might do well in post release.

Introduction

From the previous strategy profiler data collection, it was found that although it has its uses as a method of early indication of support and symptom clusters, it did not act as a reliable and accurate tool that professionals can use to support a neurominority offender. This chapter explores if using the WAIS-based Positive Assessments can provide more accurate information of cognitive differences among offenders at HMP Dartmoor. Offenders can be reliably scored using the industry standard WAIS-V (Wechsler, 2008). The Positive Assessment consisted of 6 Wechsler IQ tests drawn together to specifically focus on strengths and support needs. It is a product used by Genius Within CIC within its social inclusion projects (Doyle, 2017). (See Appendix A1 Positive Assessment example).

The purpose of positive assessment is to identify **weaknesses** and **strengths** in:

- **working with hands**, shown in the block design task.
- **working out rules**, shown in the matrix reasoning task.
- **verbal memory**, shown in the verbal memory task.
- **understanding how things are related and explaining categories,** shown in the similarities task.
- **scanning visual information quickly and accurately**, shown in the symbol search task.
- **understanding a range of vocabulary**, shown in the vocabulary task.

Positive assessments have been used by professionals employed at Genius Within CIC, specifically to identify support needs using a range of tests. The purpose is to identify cognitive weaknesses and strengths according to industry standards. Each test was evaluated to conclude the effectiveness from an operational point of view. The purpose is to identify levels of human intelligence, whereby in life and employment, many jobs require different skills, and all people have their strengths and weaknesses.

Up to thirteen offenders are inducted weekly at HMP Dartmoor. Currently, these are profiled for neurodiverse traits and then selected offenders undergo a WAIS-IV (Wechsler, 2008) IQ test known by Genius Within CIC as a Positive Assessment (Doyle, 2017). It is beneficial to know what an individual is weak at; however, knowing what an individual excels at is beneficial also. Nearly every person that took part in this study was unable to identify a strength which was assumed to have come from low self-esteem and learned helplessness. The project specifically unpacks and explores this as part of their rehabilitation.

To answer the objectives of the study, the only appropriate method was using a mixed methodology. The research used mixed methods to answer the research questions, it sought to find out if each offender has a spiky profile that was representative of a person that was from a neurominority group.

Method

Participants: Participants were recruited for the study from the scores found in the strategy profiling already that had been conducted. Their suitability to take part in the study was discussed at a multi professional allocations meeting, case by case and it is only at this point would the participant be approached to have a cognitive assessment.

The eligibility criteria consisted of the following criteria:
1. Participant having cognitive test.
2. Report being analysed and shared.
3. Support plans being put in place.

The age range of male offenders to be assessed was between eighteen years old and fifty-eight years old. Participants were selected from the previous data collection based on the one hundred offenders with the highest screened support needs. One hundred participants took part in this part of the study. They were selected from the previous strategy profiler cohort.

Design: The materials used within the Positive Assessment test provided by Genius Within CIC include the use of six sub-tests taken from Wechsler Adult Intelligence Scale-IV. (Wechsler, 2008). The index examines and focuses an individual's ability to understand, use and think with spoken language. It demonstrates the breadth and depth of knowledge acquired from the participant's environment. It measures long-term memory, working memory and perceptual reasoning.

Block Design

This sub-test consists of two-dimensional block pictorial designs which the participant attempted to copy using four and then sixteen three-dimensional blocks. This sub-test looked at visual-motor skills, the ability to process geometric patterns and use part-whole recognition skills. The Block Design test required the offender to view a picture in the Stimulus Book and to use one-color or two-colour blocks to recreate the design within a specified time limit.

The researcher needed to examine the skill management of blocks. Each construction was scored individually within a record book and the scores were added together at the end of the test to provide a 'raw' score. As the tests progressed the time reduces, and the number of blocks change to increase the difficulty of the test. The standard Block Design scoring procedure is always used when calculating the VSI and FSIQ. The researcher needed to be competent by practising presenting the blocks to the participant. Examiners frequently neglect to present the top surfaces of the blocks in the manner specified in the Administration and Scoring Manual (Moon, Blakey, Gorsuch, & Fantuzzo, 1991; Ryan, J. J., & Schnakenberg-Ott, S. D., 2003).

Matrix Reasoning

The Matrix Reasoning test was nonverbal reasoning task where the offenders identified missing parts contained within a pattern. The test focused on identifying patterns within geometric designs. This subtest measured non-verbal reasoning skills. It looked specifically at broad visual intelligence as well as perceptual organization skills. It was delivered using a book format. The test was timed, and the participant was allowed to either point to the missing piece of the puzzle or say its corresponding number.

Vocabulary

The vocabulary sub-test required the offender to try to define and describe up to thirty words. Each word was more complex to describe than the previous. This sub-test assessed the participant's understanding of words and focuses on a person's language development. The test measured the offender's ability to use expressive language skills. The researcher was able to understand, to an extent, someone's cultural and educational experiences as well as their ability to use the words in the test appropriately. The test required the retrieval of information from long-term memory.

Similarities

The Similarities test was a sub-test consisting of eighteen pairs of words such as fork, spoon etc. The words had more complex and less obvious relationships as the test progresses. The offenders were asked to identify the qualitative relationship between the two words. This means

how they related to one another. The sub-test reflected on the offender's ability around abstract thinking skills as well as concept formation skills and verbal reasoning.

Symbol Search

The offender was given a booklet containing only lines of symbols. The offender then needed to scan a search group of identified symbols and indicate whether one of the symbols was in the line. The offender circled the symbol if it was present. This test was a timed test and is carried out under pressure to assess accuracy. This test measured processing speed against working memory whilst using visual stimuli.

Digit Span

This test had three parts and it focused on assessing memory. Part one is the Digit Span Forward test where the offender attempted to recall digits in order. The second test was the Digit Span test focused on backward recall. Then finally the Digit Span Sequencing focused on the offender's ability to recall digits in ascending order. This test measured auditory recall, short term memory and working memory.

Materials and Items: The materials required to carry out the WAIS based Positive Assessment included the WAIS-1V Record Form, WAIS-1V Response Booklet 1 Symbol Search coding, WAIS Books, Stop Clock and Block Design blocks.

Procedure: The assessments were conducted during the morning regime within the prison and lasted sixty to ninety minutes. They were recorded with the consent of both the Governor of the prison and the participant. A familiarisation period was used to ensure the participant was comfortable and able to give informed consent. Clean set up was the most appropriate set up method as a conducive environment was of high importance.

This involves ensuring that the environment works for the participant, and they are supported to achieve the outcomes of the meeting. This can be achieved by asking the participant to choose where they sit, enabling them to state their personal needs and being clear about what

they would like to have happen. Clean set up has been used with Goal Setting theory (Shaw, Senior, Peel, Cooke & Donnelly, 2008). The SMART and GROW model explain the benefits of clear set up within an academic context. Furthermore, Marian Way describes this set up from a practitioner's point of view.

The researcher had been fortunate to have had the experience of working with Marian, early in her career, and so has used this model extensively and is competent in using it with offenders (Way, 2013). The researcher found that spending time to go through what they need in terms of support and environmental factors that they can focus and get the most from the cognitive assessment. This was a useful model to use with offenders, as it gives them time to 'park' outside issues they might be carrying and really focus on the outcomes of the session.

If the participant became upset and wished to terminate the cognitive assessment, this would have been done without question, as it would be ethically inappropriate to continue if the assessment were likely to cause distress. No participants involved in the research requested to terminate the interview and all stated that they found it beneficial, and a high proportion asked for their Offender Manager or Supervisor to receive a copy of the report.

Offenders were assessed on six of the ten cognitive 'core' sub-tests, each sub-test was scored between one and nineteen. This was recognised among professionals and provides more reliable data for professionals working with complex offenders. The data was collated in two stages, an initial N=50, then extended to N=100 to understand if and how much the analysed data would change when increasing the number of samples. For each offender, a WAIS based Positive Assessment takes ninety minutes to conduct face to face. The assessment can take up to one hour to write-up and a further thirty minutes to provide assessment feedback. The cognitive tests were conducted by the researcher, who is a qualified and registered test user. They were planned to take place at a convenient time for the offender, lasting up to two hours, depending on the support needed to access the tests. The test answers were recorded in a paper booklet.

Findings

HMP Dartmoor offenders were scored using the industry standard WAIS-V positive assessment questionnaire. Offenders were assessed on six of the ten cognitive 'core' sub-tests; each sub-test scored between one and nineteen. The age range, of male offenders assessed, was between eighteen years old and fifty-eight years old.

Table 7 *WAIS-IV Sub-test Index Mean (N=100)*

Subtest Name	Subtest Abbrev.	WAIS-IV Index	Mean Score	Based on N=100 Sample Size
Block Design	BD	Perceptual Reasoning (PRI)	10.72	Strength Subtest
Similarities	SI	Verbal Comprehension (VCI)	10.53	
Matrix Reasoning	MR	Perceptual Reasoning (PRI)	10.51	
Symbol Search	SS	Processing Speed (PSI)	9.78	
Vocabulary	VC	Verbal Comprehension (VCI)	9.59	
Digit Span	DS	Working Memory (WMI)	8.42	Weak Subtest

Note. Table 7 showing the sub-test index mean. Also showing sub-test abbreviations.

The data was collated in two stages, an initial N=50, then extended to N=100 to understand if and how much the analysed data would change when increasing the number of samples. Looking at the statistics, the Mean changed by only +0.29 (+0.5 per cent) and the standard deviation (SD) by only +0.47 (+3 per cent), i.e., negligible in terms of doubling sample size. The Digit Span sub-test (Working Memory Index) was found to have the lowest Mean score, whereas Block Design sub-test (Perceptual Reasoning Index) was found to have the highest Mean score overall. Memory deficits are common for people that are from neurominority groups. With fourteen per cent of offenders exhibiting -1SD deviations from statistical Mean,

i.e., ID's: 32, 23, 87, 47, 55, 68, 22, 86, 39, 60, 41, 62, 15, 79. It is these ID's which have been identified for further interventions within the Support Change Programme.

The following tabulates the sub-test score results raw data for the extended N=100 data. The results showed that each previously identified potentially autistic person had a typical spiky profile (Doyle, 2017). This is where there are specific cognitive strengths and weaknesses.

This is typical of a neurodiverse person and supports the idea that each person had a completely individual profile. As a result of these very individualised profiles there was difficultly in establishing correlations in this group.

Figure 6 *WAIS Similarity Scores across One Hundred Participants.*
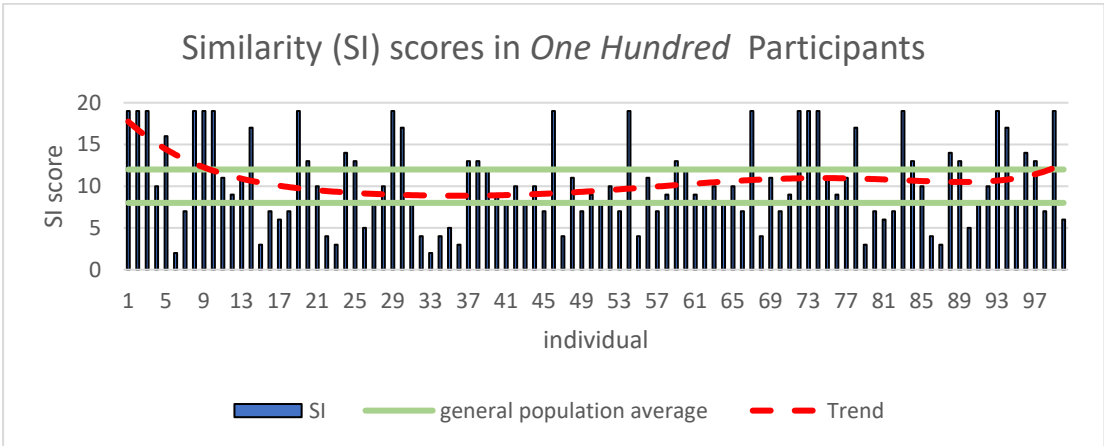
Note. Trendline is a. Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved undertaking the similarities test.

Figure 7 *WAIS Vocabulary Scores across One Hundred Participants.*
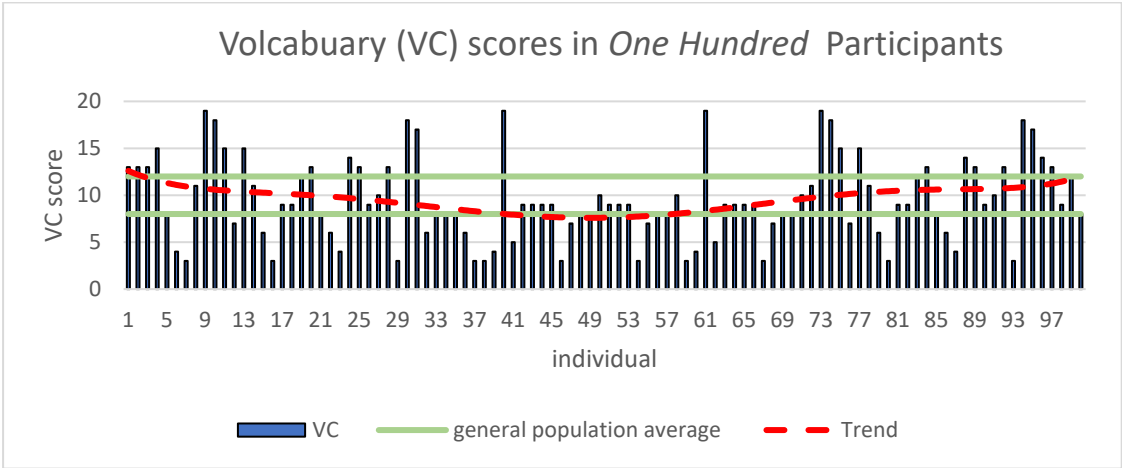
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved in the vocabulary test. The above clearly shows a greater number of offenders falling below the general population.

Figure 8 *WAIS Block Design Scores across One Hundred Participants.*
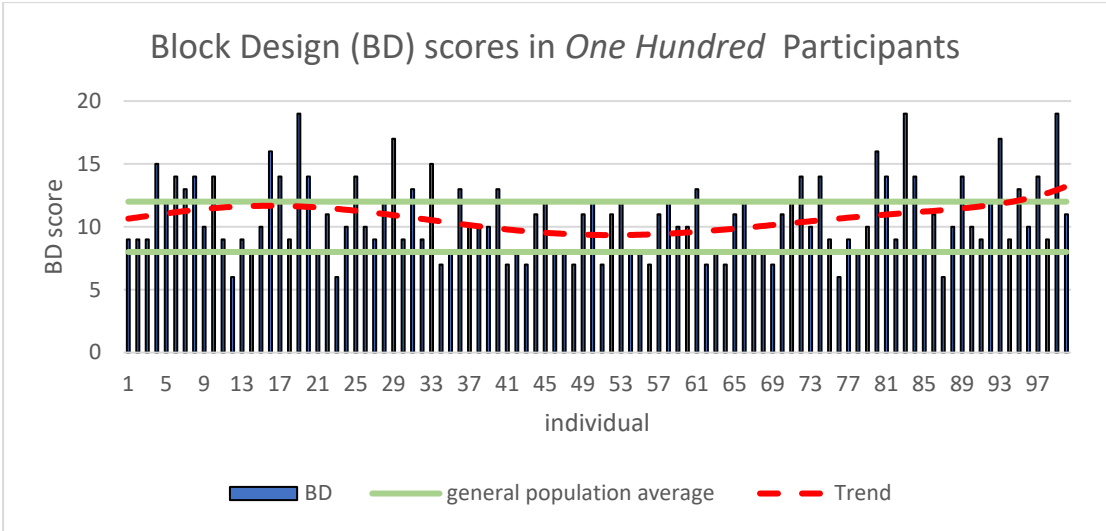
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved in the block design test. The above shows a greater number of offenders scoring above the general population average, which is indicative that neurodiverse offenders are visual thinkers and learners.

Figure 9 *WAIS Matrix Reasoning Scores across One Hundred Participants.*
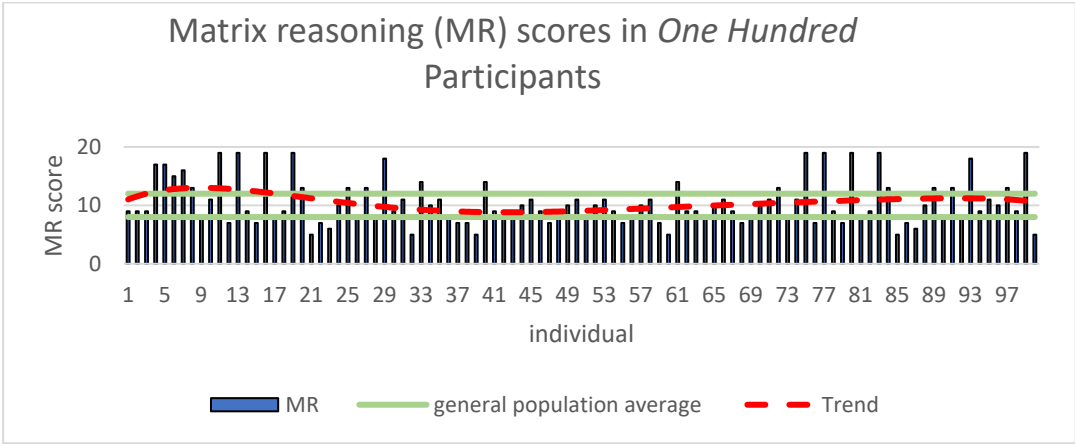
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved in the Matrix Reasoning test. The research shows there are a few offenders falling below the general population average which supports the idea that these offenders have a tendency towards being visual thinkers.

Figure 10 *WAIS Symbol Search Scores across One Hundred Participants.*
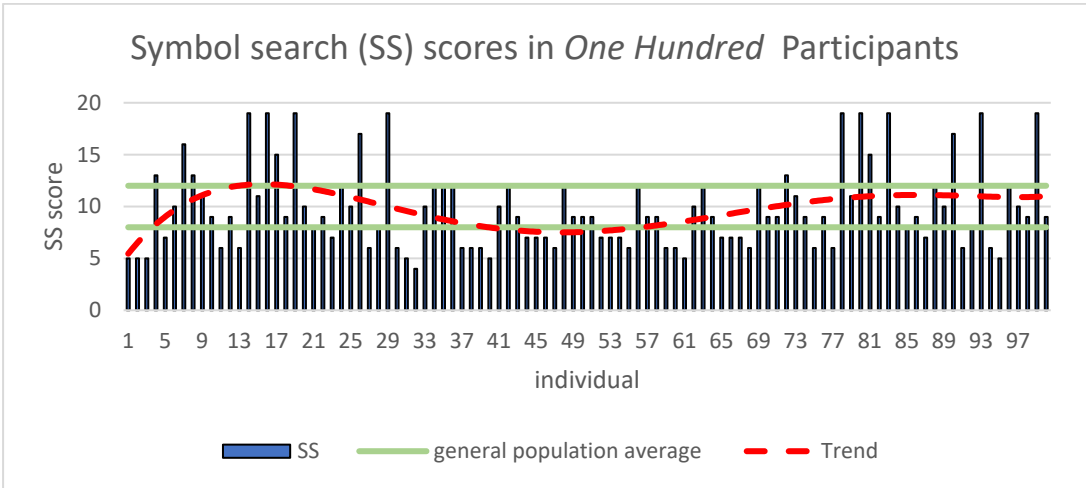
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved in the Symbol Search test. The research shows there are a number of offenders that score above the general population average. This would be defined as a neurodiversity strength within the WAIS Positive Assessment.

Figure 11 *WAIS Digit Span Scores across One Hundred Participants.*
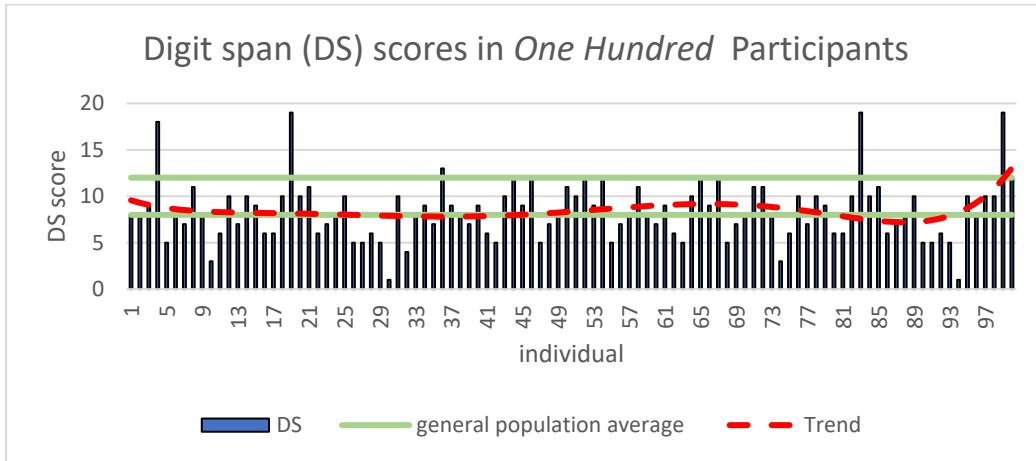
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores one hundred offenders achieved in the Digit Span test. There are larger numbers of offenders falling below the general population base line, which would be expected within a low interaction and stimulation prison environment.

Figure 12 *WAIS Final combined Scores across 100 Participants.*
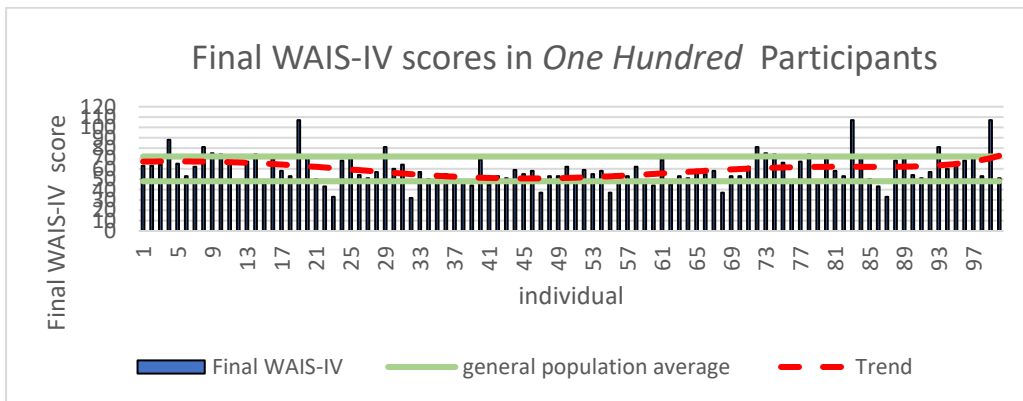
Note. Trendline is a Polynomial order 6. The trendline is suited for large amounts of dips and spikes representing the general public. This figure represents the scores 100 offenders achieved in all of the tests combined.

Table 8 *WAIS-IV Subtest Index Score Statistics (N=50).*

N=50	Age	SI	VC	BD	MR	SS	DS	Sum
Max	58	19	19	19	19	19	19	107
Mean	32.14	10.42	9.48	10.76	10.68	9.70	8.22	59.26
SD	8.90	5.41	4.52	2.96	3.95	4.06	3.20	13.77
Mode	32	19	8	9	9	6	8	53
Median	31.5	10	9	10	9	9	8	57.5
Min	20	2	3	6	5	4	1	32

Note. Tables 8 and 9 tabulate the statistics for the N=50, N=100 and the differences between the two sample sizes. The researcher chose to do two sample sizes. The initial plan was to do one collection but in the process of carrying it out they wanted to see if the data remained the same when the sample size was increased to test population size reliability.

Table 9 *WAIS-IV Subtest Index Score Statistics (N=100).*

N=100	Age	SI	VC	BD	MR	SS	DS	Sum
Max	58	19	19	19	19	19	19	107
Mean	31.96	10.53	9.59	10.72	10.51	9.78	8.42	59.55
SD	8.12	5.11	4.38	3.02	3.87	3.99	3.25	14.24
Mode	32	19	9	9	9	9	10	53
Median	31.5	10	9	10	9	9	8	57.5
Min	20	2	3	6	5	4	1	32

Note. Table 9 showed that the data remained consistent between the sample size of fifty and then the increased sample size of one hundred. Each offender had a unique spiky profile of cognitive support needs and strengths.

Table 10 *WAIS-IV Differences (d) between Effect Sample Size Statistics for each Subtest Index.*

d(N100-N50)	Age	SI	VC	BD	MR	SS	DS	Sum
d(Max)	0	0	0	0	0	0	0	0
d(Mean)	-0.18	0.11	0.11	-0.04	-0.17	0.08	0.20	0.29
d(SD)	-0.78	-0.29	-0.14	0.06	-0.08	-0.06	0.05	0.47
d(Mode)	0	0	1	0	0	3	2	0
d(Median)	0	0	0	0	0	0	0	0
d(Min)	0	0	0	0	0	0	0	0

Note. Table 10 shows the differences between the effect sample size statistics for each subtest, and this again confirms reliability. This data indicates that each offender has a unique spiky profile it was important to understand more about the subtest data 'Mean' values. They can be ordered high to low as shown in table below.

Table 11 *WAIS-IV Subtest Index Mean & SD Statistics (N=100).*

N=100	SI	VC	BD	MR	SS	DS	Sum
Mean	10.53	9.59	10.72	10.51	9.78	8.42	59.55
±SD	5.11	4.38	3.02	3.87	3.99	3.25	14.24
Mean – SD	5.42 (5)	5.21 (5)	7.70 (8)	6.64 (7)	5.79 (6)	5.17 (5)	45.31 (45)
Mean +SD	15.64	13.97	13.74	14.38	13.77	11.67	73.79

Note. The deviation of each subtest score for each offender and the sum of all the subtest deviations can be calculated.

The Mean and Standard-Deviation (SD) can be seen to determine what the boundary values are (Mean ± SD) that account for about sixty-eight per cent of sample size being analysed (non-exceptional). Any score outside of these boundaries can start to be considered significant (exceptional). The following plot indicates these boundaries:

Figure 13 *WAIS-IV Subtest Index Subtest & Sum Score Boundaries.*

	SI	VC	BD	MR	SS	DS	Sum
Mean – SD	5.42	5.21	7.7	6.64	5.79	5.17	45.31
Mean +SD	15.64	13.97	13.74	14.38	13.77	11.67	73.79
Mean	10.53	9.59	10.72	10.51	9.78	8.42	59.55
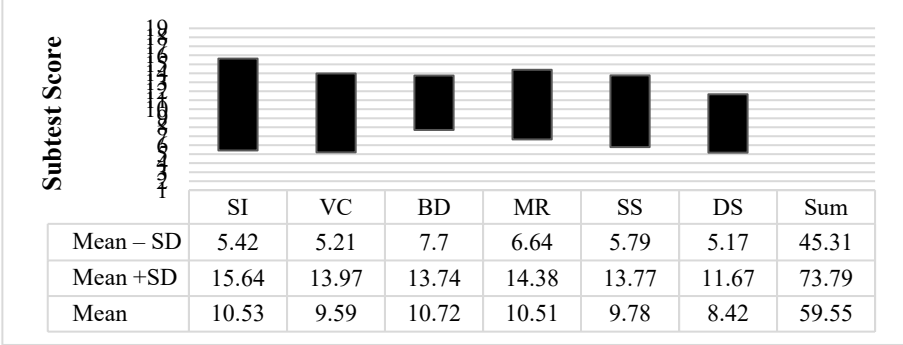
Note. Figure 13 identifies the numbers of offenders that fall below the 1SD boundary. The test tabulates how each subtest score deviates from the statistical mean organised in ascending sum of subtest score deviations (to group the IDs below Sum = -14, i.e. -1SD).

If scores calculate deviations from the statistical mean for each subtest, significance can be attached by either an isolated subtest deviation, sum of subtests deviations (subtest clusters) or the total sum of all the subtest deviations. Any offender scoring below -1SD should be given focus. By ordering the sum of subtest deviations in ascending order, all negative score deviations can be used to filter out the list of offenders with a -1SD score.

Given the initial screening for offenders meeting the sub threshold for autism, these results were as expected and are typical of this sample.

Figure 14 *WAIS-IV Sum of Subtest Score with -1SD boundary.*
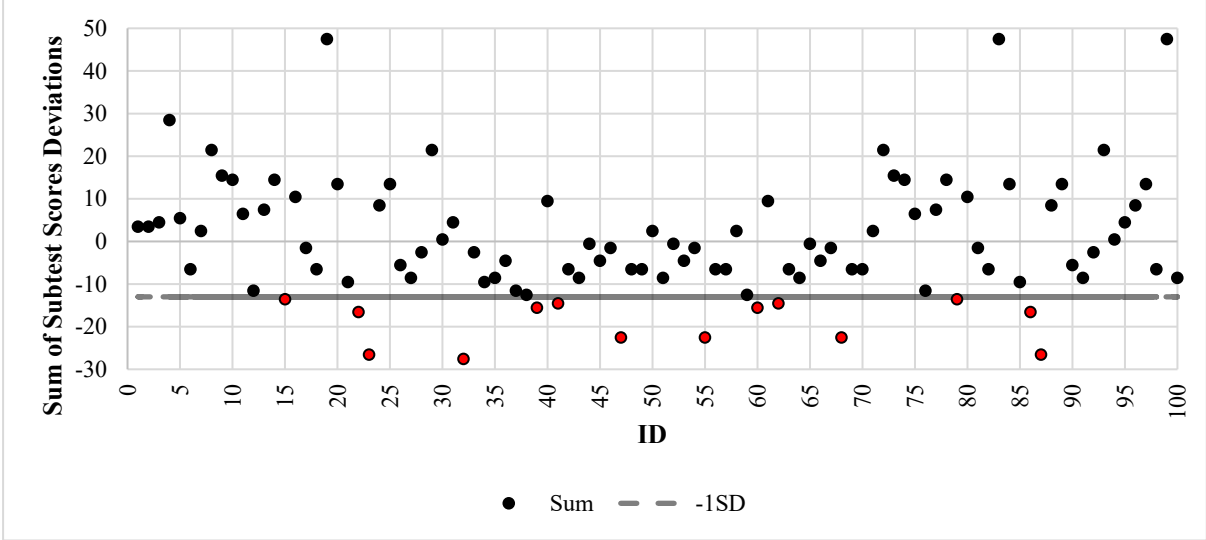
Note. The red dots represent the numbers of offenders that fall below the boundary. This figure visually shows this finding, and an autistic person is likely to understand this data more in this way.

Discussion

The main findings are that all participating offenders had a unique spiky profile, consisting of cognitive support needs and strengths. Definitive correlations between each cognitive test were not reported or explored as they were not required by HMPPS as part of their wider investigation, however this would be a useful post doctorate analysis.

The most useful outcome of carrying out the WAIS based Positive Assessments, was that it was recognised by all the professionals working with offenders and they were able to easily determine what areas an individual might need support with. For example, an offender with working memory support needs benefited from having information delivered in written form so that they were able to refer to it later if required.

Limitations

To be able to deliver assessments to the numbers of offenders that need WAIS based Positive Assessments, the assessment delivery time would need to reduce. Currently, the assessment takes one hour and fifteen minutes to carry out and then a further forty-five minutes to work

out the scores and write the assessment up. Ideally, the test would be a shorter test; however, equally concise and in fact more balanced in terms of increasing the core subtests assessed.

Also, to be able to auto-generate a one-page support profile which minimised the write-up feedback phase. Identified strengths were shared with allocations, security, and education to give an insight of what the offenders might be able to access and the support likely to be needed, to be able to create a level playing field, in terms of access. This was carried out through basic literacy and numeracy tests. Participants needed to reach a particular standard to access courses that might give these offenders the chance to learn a trade that is transferable into the community. To assess thirteen offenders requires one person each week to fully assess the continuous stream of new inmates. This equates to three days of human resource to carry out the assessment, write up and subsequent feedback. The six core sub-tests assessed were not completely balanced in terms of equal number of subtests per Index. In future studies, it would be interesting to supplement the Digit Span (DS) under the Working Memory Index with Arithmetic (AR) as this appears to be the weaker subtest. It was not known why this test is weaker and it provided post doctorate opportunities for further exploration.

In addition, to supplement the Symbol Search (SS) under the Processing Speed Index with Coding (CD) to get a fair balance of subtests (two-subtests per Index). The WAIS based Positive Assessment was limited to six tests which the researcher thought would be impactful but, it was limited in as much that the offenders use it as a tool to gain support into employment and so the value in terms of a prison intervention was not as valuable.

Conclusions and what needs to happen next: The WAIS based Positive Assessments showed that each offender was outside of what is considered neurotypical. Each assessment carried out was able to determine positive neuro strengths and areas that the offender would need support with. The area that did not support the need for interventions, on a larger scale to reach more identified offenders, was that their cognitive assessments took around ninety minutes to carry out, forty-five minutes to write, thirty minutes to disseminate and a further thirty minutes to feed back to the offender. This would equate to a full-time member of staff at each prison only carrying out these assessments and this does not have the impact that this investigation was searching for.

Chapter Seven

Stage Four - Support Change Interventions using Incidental Questionnaires

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Introduction: In this stage of the project, the study is focused on implementing the interventions that specifically look at focusing on improving resilience, increasing the ability to cope and changing thinking processes. The researcher used an intervention and Control Group in the same way as the previous studies and the offenders were measured using standard industry specific questionnaires at the start, interim and end of the project. The interim data was removed due to being a nonrepresentation due to the offenders being on twenty-three hours lock down in the height of the Covid-19 pandemic. Offenders were relieved to be out of their cells for any reason and this inflated the data.

Introduction

A final data collection pulled together the previous two surveys (surveys in stages one and two) plus three additional surveys deployed to measure coping, resilience and changing attitudes towards reoffending. These areas were selected by the researcher as, within her role at HMP Dartmoor, those were the main areas that she worked on with offenders as a psychotherapist. The study sought to explore on a deeper level if these areas improved, would rehabilitation be successful, and reoffending reduce. The researcher worked with the offenders on a weekly basis in an office situation near the wings. This was deemed to be a suitable location as the offenders were able to pop into the office and be independent in their own engagement. The researcher's environment consisted of a smaller private office and a larger adjoined area suitable for group interventions. Support varied from one offender to another depending on their emotional state at the time. Most of the group work was delivered in the height of the global pandemic which means most of the offenders were subjected to being locked in their cells for twenty-three hours a day with little or no interaction. For one group of offenders, their only access to natural day light in a six-week period was when they came to the offices. The offices had big windows that looked over the prison gardens. The environment for this engagement was much needed at the time of the study.

Method

Participants: There were eighty-six offenders selected to take part in the study. This comprised of forty-three in the Research Group and forty-three in the Control Group. These would be run alongside each other in different areas of the prison.

Design: The study opted to use the t-test repeated methods grouping. The hypothesis had an intended direction, and the significance was set at 0.05 with an effect size of 0.5 and a power size of 0.8. This revealed a sample size of eighty-four; however, the aim was to use one hundred and fifty participants in order to have carried out a study of a higher number of participants, in order to encourage subsequent change with HMPPS, in relation to the rehabilitation of offenders from neurominority groups. Below is the result of the sample calculator based on eighty-four participants as a guideline for ongoing research.

This section summarises the data collated from industry-standard questionnaires, as part of a study called The Support Change Project, using two assessment groups from HMP Dartmoor.

Five questionnaires, plus a course assessment questionnaire, were issued and completed every three months from the period of July 2019 through to March 2020 (9-months), to determine any decline or improvement at each phase.

The offenders provided pre-intervention and post-intervention evaluation scores. For the purpose of this study, the scores from the six most popular coaching topics were analysed; memory, organisation, time management, stress management, understanding neurodiversity and concentration.

Simple *t*-tests to assess the effectiveness of the interventions to assess if there were any differences between the cohorts of offenders in terms of performance improvement, Bonferroni corrections were applied for twelve dependent variables (six x two intervals), then reduced to eight according guidance on reducing type II error (Perrett & Mundfrom, 2010).

Bonferroni was responsible for lowering the level of the P-Value for each measure to reduce an artifact where people tend to score similarly when measured at the same time.

Perret and Mundform suggested that this was too stringent, in particular for studies with >3 groups mean the number must be divided by 1.5 and rounded up or down.

Early 'intervention' methods aim to disrupt the reoffending rate by identifying neurodiversity and additional support needs. Expectations from such interventions would be:

a)   A 'reduction' in the 32.7 per cent reoffending rate, i.e., 201 offenders at HMP Dartmoor.

b)   An 'increase' in offender Interpersonal Skills.

With granted access to the HMP Dartmoor offender population, it is important to establish the sample size needed to maximise confidence in the results whilst minimising margin for error so that the survey results reflect the views of the overall population.

For a smaller margin of error, a larger sample size is needed. The higher the sampling confidence level you want to have the larger the sample size needed to be. For empirical surveys it is standard practice to work to a ninety-five per cent confidence level and a five per cent margin of error. If this was applied to HMP Dartmoor, the sample size required to achieve standard practice is **237**.

> *Note: This calculation maximises out at 385 for N=20,000 and above, i.e., if applied to the total HMP population, N=84,700, a sample size of 385 would be enough to meet standard practice.*

To prove repeatability and confidence levels, two initial surveys (Survey-1; Part-A & Part-B) were conducted each using a sample size of two hundred and fifty (margin of error = 4.78 per cent) with HMP Dartmoor offenders to detect traits of autism neurodiversity using the industry

standard DSM-V AQ-12 test. Both surveys detected one-in-five offenders (20 per cent) with autistic traits. A further survey was conducted to rank order Categories of Strengths and Weaknesses to help identify areas to focus intervention support.

This survey used a sample size of one hundred and fifty (margin of error = 6.96 per cent) and found Interpersonal Skills to be lacking.

When using independent samples such as a Research and Control Group and analysing T Tests, Cohens D test is determined by calculating the mean difference between the two groups and then dividing the result by the pooled standard deviation. This was appropriate in this study as both groups have similar standard deviations and are of the same size.

Table 12 *Phase Schedule.*

Phase	Start Date	Finish Date
Initial	July 2019	September 2019
Interim	October 2019	December 2019
Final	January 2020	March 2020

Note. This table shows the testing periods for the interventions. This has been included to show where the interventions took place within Covid-19 lockdown conditions. This has been discussed fully in the limitation's sections throughout this study.

The forty-three offenders in the Control Group had no intervention, whereas, at each phase, the forty-three offenders in the Research Group had access to screening, a positive assessment, coaching, group work and engagement in a level two qualification programme. The Research Group were given access to The Support Change Programme at the end of the research phase to be ethical. Each questionnaire covered the following assessment categories. The interim phase has been noted to show where it fell within the Covid-19 pandemic.

Table 13 *Assessment Questionnaires* (see Appendix A2 Group Interventions using incidental Questionnaires).

Questionnaire	Questions	Assessment
COPE	60	Coping
Resilience	12	Resilience
WEMWBS	14	Emotional Well-being
CF03	11	Attitudes towards offending
Strategy Profiler (Interpersonal Section)	52	Neurodiversity awareness
Course	15	SCP Course Assessment

Note. This table shows the numbers of questions each questionnaire contained and the area of wellbeing, resilience and change behaviours that they relate to.

Materials and Items: The Support Change Project has used a booklet that contained all the questionnaires in them. They were given a resource folder with material from the interventions inside so that the offenders could read over the material in their cells and keep a journal. At the time of the study, the pandemic was also creating stressors for the offenders. They were not allowed visits and were in their cells twenty-three hours a day. The researcher made the decision to include additional wellbeing items and puzzles in their folders each week to be able to offer additional support.

Procedure: In order to measure reliability, this study was conducted using an Intervention & Control Group (Group-A & Group-B respectively). Each group was collected to establish results with a calculated margin of error = ten per cent and was expanded towards a sample size of 237 to understand if there is any movement in results based on a calculated margin of error = five per cent. This data collection is a 177-question survey strategy profiler (Genius Within, 2020). It is to be deployed in three phases with a separate Control Group & Research Group.

The Control Group were selected from an isolated area in the prison. They were all working in the grounds area of the prison and so were able to be accessed separately from the Research Group. From the previous data collections, the researcher acquired the knowledge that there was limited access and restricted contact time with HMP Dartmoor's potential autistic offenders. It was deemed realistic to work to a sample size of n=84 offering 10 per cent margin of error. i.e., with e=margin of error (decimal per cent), modified to 10 per cent i.e., e=10 per cent = 0.10: The sample size was determined using an online sample size calculator attached to the SPSS software.

The COPE questionnaire (Carver, Scheier, & Weintraub, 1989). Developed to record coping responses. The inventory includes some responses that are defined as dysfunctional in order to show the researcher when someone has what is described as poor coping skills. The questionnaire also shows when a person has good coping skills according to the ranges and thresholds described below.

The questionnaires include two pairs of polar-opposite tendencies. These were included because each scale is unipolar and because people cope differently in different environments such as a prison environment. The researcher chose a time-limited version of the questionnaire in where participants indicate the degree to which they have been having each response during a period up to the present.

The researcher was particularly interested in how the offenders were self-reporting as coping particularly at the start, again in the interim and at the end of the interventions. The researcher was interested in how offenders responded when they confront difficult or stressful events in their lives such as being in prison and away from usual support networks. Particular emphasis was made so that the offenders knew and fully understood that there were no right and wrong answers. They answered the questions with the following responses.

1 = I usually don't do this at all

2 = I usually do this a little bit

3 = I usually do this a medium amount

4 = I usually do this a lot

There are limitations around combining scales into "problem focused" and "emotion focused" aggregates, or into an "overall" coping index. For this reason, a combination of questionnaires was deployed to give more robust and meaningful data.

This questionnaire looks at three main areas of coping:

1)   Problem-Focused coping.

2)   Emotion-Focused coping.

3)   Avoidance-Focused coping.

Each main section contained five-sub-section questions, i.e., fifteen sub-sections in total. For every sub-section, a Likert value is assigned and then combined to form a score for the main sections (Problem-, Emotion- & Avoidance-Focussed) and an overall COPE score described on the next page.

RESILIENCE Questionnaires (Smith et al., 2008). There were several factors that needed to be considered to measure resilience. These included self-efficacy, coordination and planning, low anxiety, and ability to be persistent when facing adversity. This questionnaire was selected

because at the start of the research phase it was expected that the identified autistic offenders would not have strong markers in the above areas. Through focused interventions, offenders learnt how to positively advocate for themselves and ask for support when they needed it.

They learnt about their own support needs and knew strategies to support themselves. The interventions included coaching to manage and regulate emotions, as well as developing the ability to seek and use supportive factors available to them to self-manage. The offenders then revisited the resilience questionnaire at the end of the programme, and it was expected that their resilience levels were improved.

The questionnaire deployed is an abbreviated version of the Nicholson McBride Resilience Questionnaire (NMRQ). There were twelve questions, using a five-point Likert scale. This questionnaire looked at levels of resilience and are score banded.

Table 14 *RESILIENCE Questionnaire Score Banding.*

Score Range: Level	Description
0-37: Developing	Score indicates that, although you may not always feel at the mercy of events, you would in fact benefit significantly from developing aspects of your behaviour.
38-43: Established	Score indicates that you may occasionally have tough days when you cannot quite make things go your way, but you rarely feel ready to give up.
44-48: Strong	Score is above average indicating you are pretty good at rolling with the punches, and you have an impressive track record of turning setbacks into opportunities.
49-60: Exceptional	Score indicates that you are very resilient most of the time and rarely fail to bounce back – whatever life throws at you. You believe in making your own luck.

Note. The questionnaire consisted of twelve self-report questions designed to determine resilience and self-efficacy. It was designed to record the strengths of personality traits associated with resilience.

The researcher chose this questionnaire because many offenders reported feelings of not being able to cope and feelings of low resilience when faced with release. This questionnaire provided an understanding of the offender's current characteristics and greater self-awareness of areas that would need improvement if they were to be successful upon release.

Traits considered within the questionnaire were adaptability and self-control. The ability to accept and overcome changes was key when considering release. The first few weeks post release were stressful and sometimes overwhelming for offenders. The programme supported forty-two offenders into the community from the Research Group.

The offender needed to be able to learn to accept setbacks and difficulties whilst remaining focused on their rehabilitation.

Self-control was also considered to be important as offenders would be making independent decisions each day when released and they needed to reflect rehabilitated behaviours. They needed to be focused on making positive decisions when facing adversity.

The questionnaire's outcomes were determined in a point score basis. If the participant scored between sixteen and thirty-seven, they were considered to have impaired resilience, and this impacted the likelihood of a successful rehabilitation. If an offender scored this, the researcher would look at carrying out one-to-one work with the offender. This took place with a higher than expected number of offenders as they were being released into a global pandemic and this held additional challenges when accessing support services. If an offender scored thirty-eight and fifty-nine, they received interventions around focusing goals and efforts. This was carried out throughout the group work phase and one-to-one. The offenders worked on a learning and development plan with some support from the researcher. At the end of the programme the study hoped that offenders scored between sixty and eighty demonstrating strong feelings of self-sufficiency and positive ways of dealing with stress.

WEMWBS Questionnaires (Tennant, et al, 2007a) was developed to be able to record levels of positive and negative mental wellbeing against the general population. The researcher wanted to know and understand the levels of overall wellbeing that offenders felt at the start, interim and end of the interventions. The questionnaire was a fourteen-item scale questionnaire which had five response categories. The researcher added the scores together to provide a single score. The questions covered both feeling and functioning aspects of mental wellbeing. It was easily accessible which suited the participants within this study. The scale has been used widely throughout mental health professions and indeed several offenders taking part in the study recognised its format and purpose (Tennant et al., 2007a). The scale is scored by adding responses to each item answered with the minimum scale score being fourteen and the maximum being seventy. The mean score was 50.7 ± 0.4, SD=8.79, N=1749. The hypothesis, that this survey wanted to test was, could wellbeing be improved as the result of group work that has a wellbeing focus within it?

Considerations when understanding wellbeing:

a) A score (x) less than 40, i.e., $x<40$, is considered high risk of major depression.
b) A score (x) between 41-45, $41<x<45$, is considered a high risk of psychological distress.

From the WEMWBS data analysed:

i)	Control Group (n=43)	:	x = 43.63 to 43.74
ii)	Research Group (n=43)	:	x = 39.98 to 52.09
iii)	Groups combined (n=86)	:	x = 41.80 to 47.92

Group Work

A questionnaire was given to the offenders at the start and at the end of each course to measure the specific improvements according to the individual course material. The questionnaire is a product of Genius Within CIC and permission was sought to use it for the purposes of this research. The course name is Memory Genius. This data was collected at the start, during the

engagement period and the end of the group work interventions, with the focus on measuring improvement in key areas. This questionnaire had fifteen questions, using a ten-point Likert scale and is a self-assessment of how, in general, The Support Change Project has helped the individual in terms of progression and development. The offender completed the questionnaire during the induction phase when entering prison and then again when they had completed one of the courses. They then completed the final survey, when they had completed the two group work courses within a six-month timeframe. These were compared against a Control Group, who did not access the courses delivered within the prison.

Offenders were asked to self-evaluate their strengths in a range of areas including Memory, Organisation, Concentrating, Verbal Communication, Numeracy, Listening and taking notes, Finding Directions and Literacy. They used a scoring system from one (Very Poor) through to ten (This is a talent).

Reducing Reoffending.

The CFO3 Questionnaire is a HMPPS designed questionnaire to monitor offenders changing attitudes towards reoffending. This was used within the prison routinely and this was built into the project so that it could understand the offenders changing attitudes and formed part of the presentation of evidence to HMPPS. The purpose of this survey is to know if the project had any impact on their attitudes towards reoffending. The questionnaire has eleven questions, this consists of nine main questions (Q1-Q9) and two advisory questions (Q10 & Q11) using a five-point Likert scale and is a self-assessment of the support the offender feels they have received on the European Social Fund (ESF) and the HMPPS CF03 (Co-Financed Organisation Round 3) programme. The data collection examined how attitudes towards reoffending had changed throughout involvement with the project. The questionnaire included questions such as: How confident are you to not reoffend? How confident are you to gain employment? How confident are you to positively change?

Findings

Table 15 *Sample table for Reporting results of test of normality.*

Questionnaires	Group	Skewness	Kurtosis	Shapiro–Wilk Statistics	p-value	Degree of freedom
COPE	Control	.19	.34	.98	.716	50.00
COPE	Research	0.46	-.58	.96	.060	50.00
Resilience	Control	-.55	5.42	.87	<.001	50.00
Resilience	Research	-.23	-1.50	.91	.001	50.00
WEMWBS	Control	-1.54	8.49	.78	<.001	50.00
WEMWBS	Research	-.30	-1.12	.94	.010	50.00
CF03	Control	-.92	2.82	.78	<.001	50.00
CF03	Research	-.29	-.38	.94	.018	50.00
Course	Research	-.14	-1.25	.94	.020	50.00
Interpersonal	Control	.32	.40	.94	.018	50.00
Interpersonal	Research	.46	.55	.94	.015	50.00

Note. Reporting the results of normality was essential when deciding which would be the appropriate test for the data. This shows that the Research Group improves throughout the interventions.

Table 16 *Paired T-Test: Before and After interventions.*

Questionnaire		N	Mean	SD	Min	Max	t-statistics	r (correlation)	p-value
COPE	Research Final VS Initial	50.00	34.54	31.02	-44.00	93.00	7.87	.29	.001
COPE	Control	50.00	.10	12.89	-28.00	33.00	.055	.87	.956

Note. Sample table for results of paired t-test (before and after). Both intervention and control were carried out. Groups for every outcome were measured. Variables that meet the assumption of normality were identified.

Table 17 *Independent T-Test.*

Questionnaire		N	Between group Mean difference	Standard error	CI-Lower band	CI-Upper band	t-statistics	p-value
COPE	Control VS Research	100.00	-34.44	4.75	-43.92	-24.95	-7.25	<.001

Note. Independent t-test between group differences. The design was not randomised calculating the change from baseline were carried out first. Post intervention values minus baseline values. The analysis was run on the 'change-from-baseline' data.

Table 18 *Nonparametric tests results.*

Questionnaire		N	Median	Inter-quartile range	Min	Max	z-score	p-value
Resilience	Research Initial VS Final	50.00	11.40	21.00	-7.00	31.00	4.83	<.001
Resilience	Control Initial VS Final	50.00	0.00	5.75	-27.00	21.00	-.58	.560
WEMWBS	Research Initial VS Final	50.00	17.00	26.00	-15.00	41.00	5.24	<.001
WEMWBS	Control	50.00	1.00	5.25	-36.00	28.00	2.43	.015
CF03	Research Initial VS Final	50.00	0.00	6.00	-6.00	10.00	4.82	<.001
CF03	Control	50.00	0.00	1.00	-8.00	8.00	-.49	.624
Course	Research Initial VS Final	50.00	27.50	46.50	-26.00	69.00	4.77	<.001
Interpersonal	Research Initial VS Final	50.00	0.00	3.00	-6.00	6.00	58.12	.306
Interpersonal	Control	50.00	0.00	1.25	-3.00	4.00	1.31	.190

Note. When normality is not assumed for before and after. Both were done for this intervention and Control Groups for every outcome measure. Variables that do not meet the assumption of normality.

Table 19 *Mann Whitney U - When normality is not assumed for between group difference.*

Questionnaire		N	Standard Error	Mann-Whitney U	z-Score	p-value
Resilience	Control VS Research	100.00	144.60	1921.50	4.64	<.001
WEMWBS	Control VS Research	100.00	144.90	1923.50	4.65	<.001
CF03	Control VS Research	100.00	141.96	1948.50	4.92	<.001
Interpersonal	Control VS Research	100.00	141.64	978.00	-1.92	.055

Note. Mann Whitney U was used when normality was not achieved between the group differences.

Figure 15 *COPE Mean Scores for Research and Control Groups.*
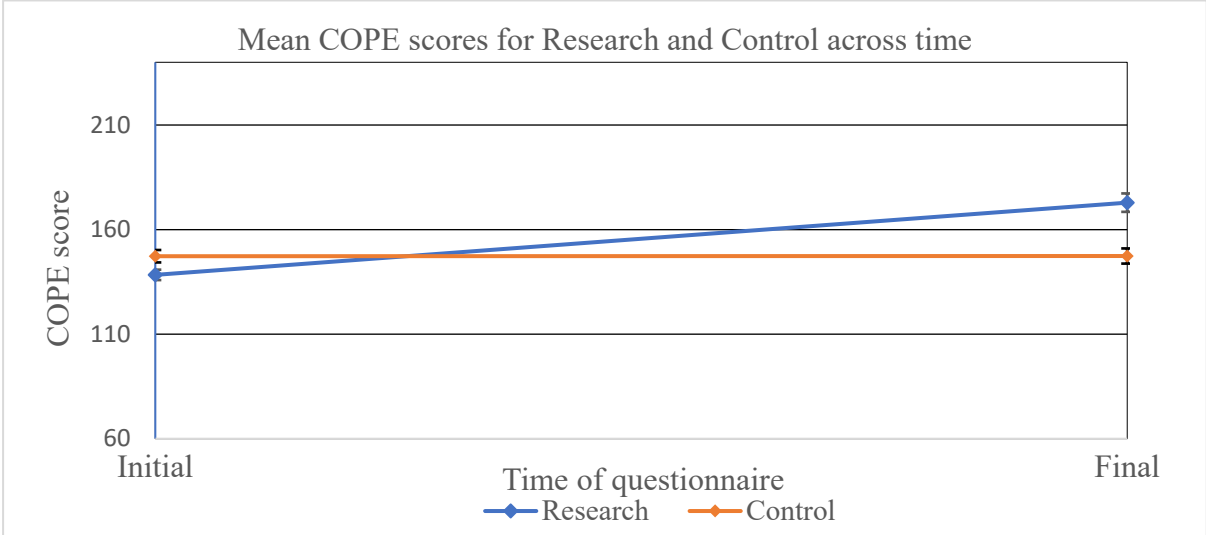
Note. The researcher has decided to include the plot graphs within the findings with the clear intention of ensuring they are accessible for the general public, specifically autistic professionals working within the criminal justice system. Within the COPE scores above, the Research Group improved in feelings of coping and wellbeing, whereas the Research Group remained roughly the same throughout.

Figure 16 *Resilience Mean Scores for Research and Control Groups.*

Mean Resilience scores for Research and Control across time
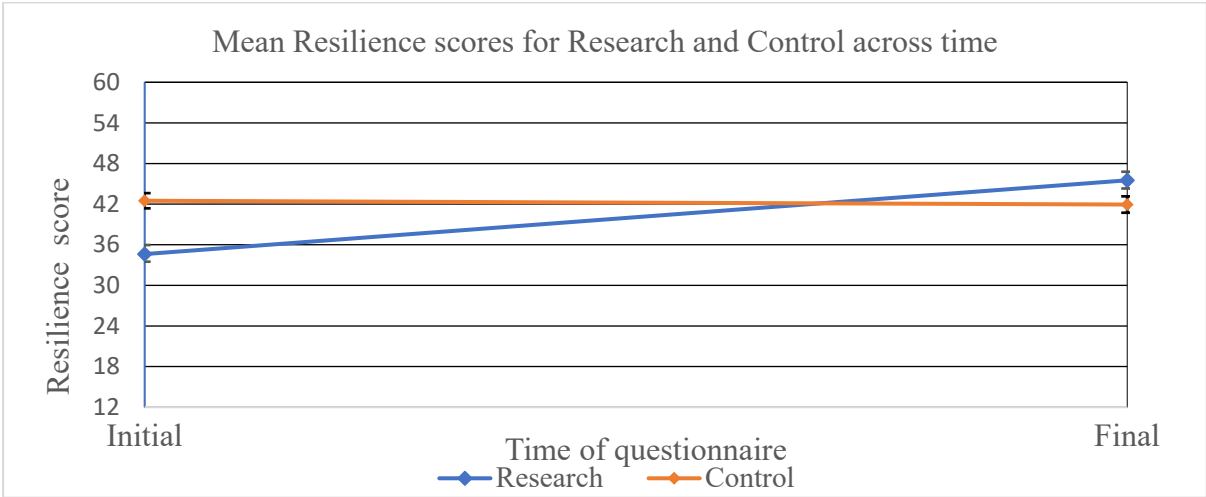
Note. The above shows that the Research Group started with a lower score and ended exceeding the Control Group in feelings of resilience.

Figure 17 *WEMWBS Mean Scores for Research and Control Groups.*

Mean WEMWBS scores for Research and Control across time
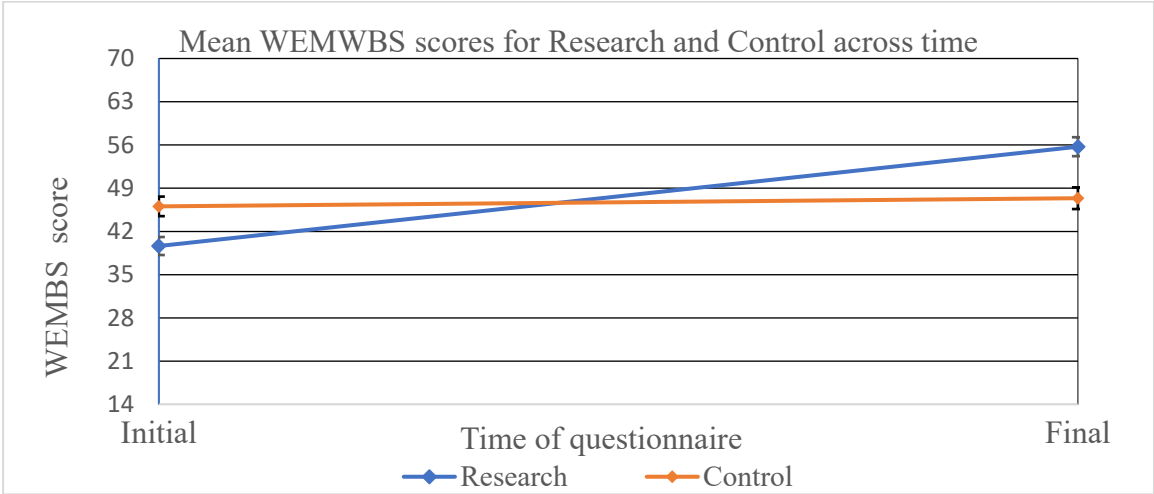
Note. This clearly shows that the Research Group have had a similar response as per the Resilience test and have seen a sharp increase in general wellbeing.

Figure 18 *Reducing Reoffending Mean Scores for Research and Control Groups.*

Mean CF03 scores for Research and Control across time
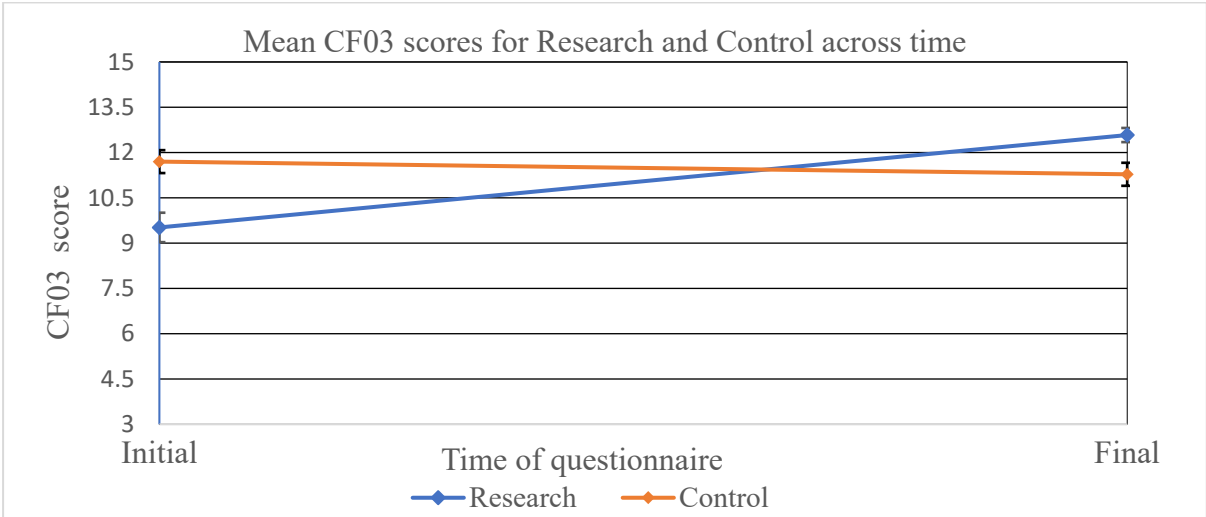
Note. Here there is actually a decline in attitudes towards reoffending from the Control Group. This can be explained as the testing phase was in the middle of lockdown and therefore, many offenders were experiencing extreme stress being locked in cells for twenty-three hours a day for three months. The Research Group were allowed out of their cells to attend the programme in small groups, and this resulted in positive feelings towards release.

Figure 19 *Group Work Mean Scores for Research and Control Groups.*

Mean Course scores for Research across time
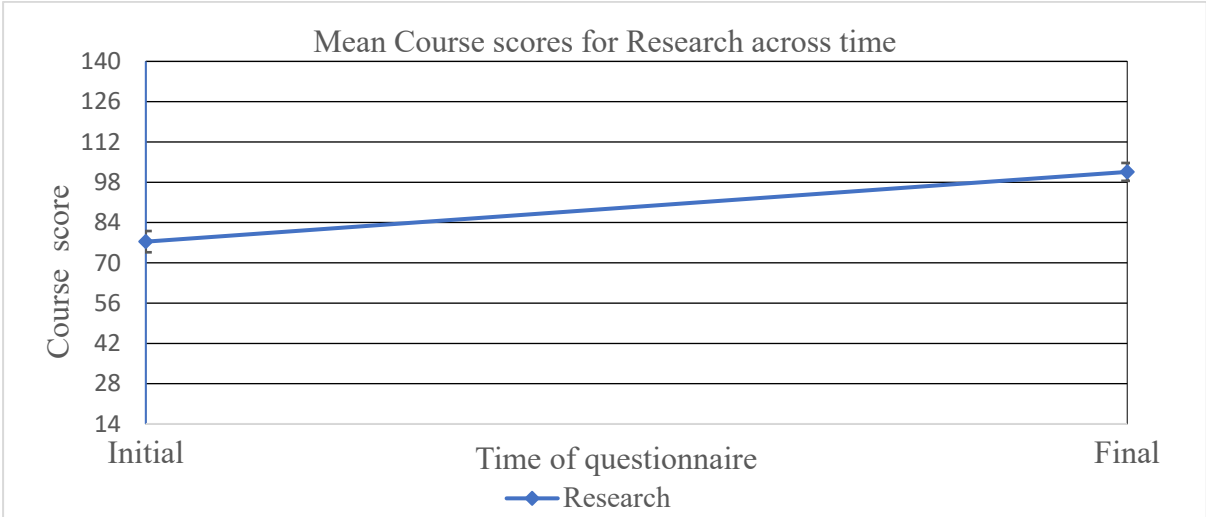
Note. The Research Group were given permission to attend the course. The Control Group did not have access to this intervention due to Covid-19 restrictions. It was assumed that being allowed to engage in these interventions increased overall positive attitudes.

Figure 20 *Interpersonal Mean Scores for Research and Control Groups.*

Mean Interpersonal scores for Research and Control across time
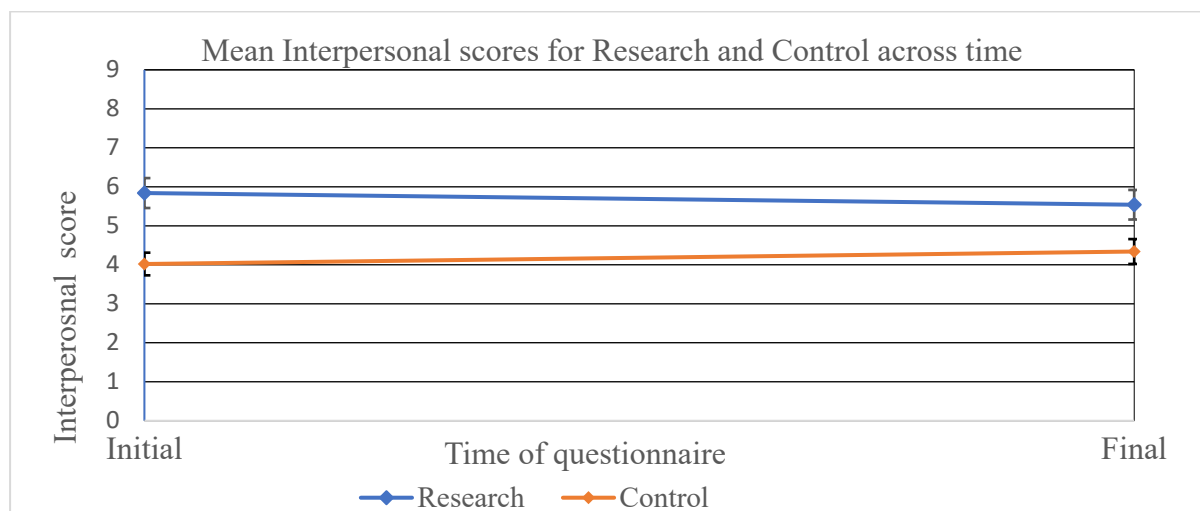
Note. Interpersonal skills remained relatively the same throughout the test phase within both groups.

The Cope Questionnaire

The Cope questionnaire showed the Research Group improved in their general coping management from start to end. This was in contrast with the Control Group, where there was no reported improvement. The results found the t-test within the Research Group contained the mean of differences 34.54, $t_{49} = 7.87$, p value <0.001. These were found to be significant. However, the initial scores were worse before the treatment (initial mean and SD) than after treatment (final mean and SD). This improvement, (difference of means), was statistically significant (T and P value). Within the Control Group a paired t-test was carried out and the mean of differences were found to be 0.1, $t_{47} = 0.55$ p value = 0.956. These were not found to be significant. Within the Control Group Cope data scores, the initial mean was 147 SD = 21.01 and the final scores adjusted slightly to 147, standard deviation of 25.64. The Research Group Cope data had an initial mean of 138, standard deviation of 2.71. The final scores were 173, standard deviation 31.13.

Within the t-test all data was compared using mean scores. Both are significant but the final comparison is significantly different. This indicates small differences to start but a large gap for the final data collection.

The Independent sample t-test statistic are between group mean difference -34.44 t_{99}=-7.25 p value <0.001. The Research Group had lower coping scores at the start of the project than the Control Group. The Control Group had roughly the same coping skills at the start of the experiment and at the end. The Research Groups reported the largest increase in positive coping behaviours.

Interestingly, at the interim test the largest mean increase was recorded. This is likely to be as a result of the offenders being allowed out of their cells to attend the interventions. Had this study been carried out when there was not a pandemic present it is unlikely that the result would have increased in the way that they did. As a result of this the interim data was removed from the findings to avoid inflating the overall results. This was seen as a limitation within the study as the interim data could not be reliably reported upon.

RESILIENCE

Using a Shapiro-Wilk both control and research had a non-normal distribution <0.001, 0.001 respectively. Research means 34.62 45.52 control 42.5 41.94. The t-test signed rank test found that the Research Group improved in resilience from start to end. $Z49 = 4.83$ p value < 0.001. However, the Control Group also improved in resilience from start to end using a t-test signed rank test. $Z49 = - 0.58$, p value = 0.56. This improvement was not significant, and the Research Group demonstrated greater levels of improvement overall. The Control and Research Group were compared in the Mann Whitney test. The initial test scores $Z_{99} = 4.64$ p<0.001improvement between the two groups. However, the Research and Control Group had lower resilience scores at the start of the experiment (34.62, 42.5) than final (45.52, 41.94). The Research Groups reported the largest increase in feelings of resilience.

WEMWBS

Both the Control and Research Groups showed non normal distribution, Shapiro-Wilk <0.001, 0.010 The Research Group means were reported as 39.64 55.72. The Control Group means were reported as 46.06 47.38. These figures showed that the Research Group improved in their scores reflecting improved emotional wellbeing from start to end. This was reported through a t-test signed rank test $Z_{49} = 5.24$ p<0.001 to show the improvement between the two groups.

The Control Group also improved in emotional wellbeing from start to end as found in the t-test $Z_{49} = 2.43$ p = 0.15 and were therefore, not significant. The Control and Research Group scores were compared using a t-test. The mean score from the Control Group was reported as forty-two, in contrast to the Research Group at thirty-four. This was found to be significant. The final scores were compared. $Z_{99} = 4.65$ <0.001 between the groups. The Research and Control Group has significant but marginally different emotional wellbeing at the start of the data collection.

It is clear from the tables above that wellbeing did improve for the offenders in the Research Group, once they were given the skills and the knowledge, through a series of group work exercises that had a wellbeing focus. Each offender created a personal wellbeing toolkit that they could take to their cells and develop over a six-month period. The Research Groups reported the largest increase in positive wellbeing.

Reducing Reoffending

Both Control and Research had non normal distribution <0.001, 0.018 between the groups. The Research Group mean was 9.52 12.58 and the Control Group mean was 11.7 11.28. The t-test showed that the Research Group improved in attitudes towards reoffending from start to end $Z_{49} = 4.82$, p value <0.001. However, the t-test showed that the Control Group also improved in attitudes towards reoffending from start to end with $Z_{49} = -0.49$ p value = 0.624. This is, therefore, not significant. The Mann Whitney U test was used to see how the Control and Research Group compare. This was significant difference of $Z_{99} = 4.92$ p value <0.001 between the groups.

The study examined, many people in each group scored over nine points versus below nine. The researcher set nine as the threshold in this data collection. The Research Group reported a 22/50 initial score which increased to 47/50 in the final collection.

The initial standard deviation was 3.447803 not normal median = nine and the final scores reported a standard deviation of 1.864454. The Control Group reported an initial 37/49 score which decreased to 30/46. The initial 12 SD was 2.70813, whereas the final standard deviation was 4.398074 not normal median = twelve.

The offenders were given the option to select one of the following four answers: No Confidence, Very Little Confidence, Not Sure, Confident and Extremely Confident. The data was collected at three stages, initial, interim, and final. The Control Group mean score declined, whereas the Research Group mean score improved at each phase, showing clear signs of progression and improvement. It was clear that there were improvements in offenders' attitudes towards not reoffending and this means that engaging in the project was making a positive difference.

Group Work

The Shapiro Wilks test showed that group work was not normally distributed 0.020 research means 77.36 101.6. However, within the group work data, the higher the scores the more the participant had improved generally overall. The study was interested in the improvement between the first and the last questionnaire. The t-test was used and showed a difference of $Z_{49}=4.77$ p <0.001. The researcher then studied the ranking of what skill set area saw the most improvement between beginning and end. The scores reported that the median was seventy-three, standard deviation was 25.9257. The Research Group reported the largest increase in their scores from the start of the groupwork to the end.

Interpersonal

Both the Control and Research Groups were non normally distributed 0.018, 0.015 Research means 5.84 5.54 Control means 4.02 4.34. There were nine questions with scores from one to

nine, with one being the lowest score and nine the highest. In the interpersonal section, twenty-eight (fifty-six per cent) of the Research Group had a score OVER five (n= 50) compared to seven (fifteen per cent) of the Control Group (n = 48). A Mann Whitney U was used to establish if either group were statistically significant from a score of five. Within the initial test the Research Group scored a mean of 5.8, and the control a mean of 4.02. The final questionnaires reported a decline for the Research Group to 5.5 and a decline within the Control Group to 4.3. This is likely to be a false result due to the fact interpersonal skills were restricted during the Covid-19 lockdown.

The participants were in cells for twenty-three hours a day and therefore a likely decline of interpersonal skills is expected. The differences between the Research and Control Groups were examined using the Mann Whitney U two sample t-test. The Initial Research mean was reported to be 5.8, and the control mean was 4. The final scores showed the Research Group mean declined to 5.5 and the Control mean to 4.1 Z_{99} = -1.92 p = 0.055 which was not significant.

The t-test was used to look at how research and Control Group changed between time frames Z_{49} = 58.12 p value = 0.306 and is considered to be not significant. The Control Group changed between timeframes. The t-test showed the Z99 = 1.31 p value = 0.190. The Control Group initial mean was 4 SD= 2.055257 whereas the final mean was 4 SD = 2.255243. The Research Group initial mean was 5.8 SD = 21.99443 whereas the final mean was 5.5 SD = 2.681836. The Research Groups reported the largest increase in interpersonal behaviours and awareness.

Discussion

Cope: There was a significant improvement in coping within the Research Group. In contrast, there was no significant improvement in the Control Group. The interim data showed an unpredicted significant increase. On reflection the researcher found that this phase of the data was collected after the offenders had been locked in their cells for twenty-three hours a day as a result of the Covid-19 outbreaks. The offenders in the Research Group were given special permission to leave their cells to attend the group sessions. In contrast, the Control Group

remained in their cells and so there were no increases in coping shown. Overall looking at the start to the end of the groups there was a significant overall increase. This showed that offenders were able to substitute activities to take their minds off things.

They felt able to ask for advice. They developed a restraint from acting too quickly. Instead, they were more confident talking to people, making a plan and taking things one step at a time.

WEMWBS: The Control and Research Group had different starting points. The Research Group made marked improvements. They felt more optimistic about the future and reported feeling more relaxed and useful. The offenders also reported feeling better when dealing with problems and were generally feeling good about themselves. They showed an interest in new things such as new starts and beginnings post release.

Resilience: The Research Group improved from start to end significantly. The Research Group reported as having reduced resilience skills at the start of the interventions. The Control Group were much higher at the start of the test phase. The Research Group reported being less worried about what cannot be influenced, improved ability to keep things in perspective and were generally reporting to feel less anxious. There was also a reduction of reported conflict within this group, and they had increased feelings of feeling confident and secure.

Group Work: Within the group work there was an additional focus on wellbeing, and this could have impacted the data. The phase used for the data collection again was in the middle of the pandemic where offenders were locked in their cells for twenty-three hours a day. Additional resources were given to the offenders to increase overall wellbeing. Overall, the Research Group saw increases in scores concerned with memory, numeracy, literacy, communication, organisation, stress management and understanding neuro differences

Reducing Reoffending: This research improved throughout the interventions. The Control Group dipped in the middle of the interventions. As previously explained, this is likely as a result of the offenders not being let out of their cells for long periods of time. There were

significant improvements in offenders' confidence not to reoffend, gaining employment on release, positive change and they all reported that they found The Support Change Project helpful to them. Indeed, when the Control Group had access to the interventions after the testing phase, they all reported that this project was very helpful too.

Limitations

The obvious limitations were that the research was carried out within the Covid-19 pandemic as all the interim scores were elevated. However, the start to end scores all significantly increased. The project started before the pandemic and ended when the prison returned to normal regime again. This means the start to end data is more reliable and less influenced by the pandemic.

Conclusions and what needs to happen next: The data shows that there was an identified need for offenders with traits of autism and/or a diagnosis, to be identified within the first two weeks of their custodial sentence. From this, they engaged in The Support Change Project for a period of six months. The data show that the offenders that took part in this study had a marked improvement in all areas assessed.

Chapter Eight

HMPPS Case Studies Supplementary Evidence to Support Findings

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Introduction: In addition to the data collections, the HMPPS Neurodiversity review requested that there was a selection of case studies carried out to give the study context in terms of how the interventions impacted them personally.

The case studies, on reflection, do provide context in terms of personalising the study and they have been included within the findings. The obvious limitations of using case studies are that they do not have the rich content that would be found in an IPA study. This was not possible due to the Covid -19 pandemic and restricted access to offenders. The case studies were submitted for the call for evidence in 2020.

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Introduction

This section outlines four case studies of offenders to add relatable context to the data shown in the findings. The purpose of this section is so that the reader can see the impact working with offenders from neurominority groups has had on their rehabilitation. The researcher selected four case studies at random and detailed their journey through the criminal justice system. The rationale behind including the case studies was that initially this study proposed to include an IPA study to examine the lived experiences of the offenders. Owing to Covid-19, this was not permitted due to prison restrictions and operational reasons. It was requested that instead the research provide four case studies to describe the lived experiences in detail of offenders that engaged within the project.

Method

Participants: four offenders that had engaged in the study and had left HMP Dartmoor and released to the Plymouth area were selected. At the time of the study there were only four offenders that met this criterion against the timeline that the case studies were required.

Design: The case studies were designed using a simple format. Background summary, interventions engaged with, internal and external focus and outcomes.

Materials and Items: The data was created from case notes made by the researcher and the data collected from attending the projects.

Procedure: The research compiled the case studies and included them in the study to give an alternative lived experience perspective.

Results

Case Study One

Background

DM had committed a series of offences since leaving school. He had a volatile relationship with his partner, a drug habit and was habitually in debt with outstanding court orders. DM was unemployed, although he had worked in the past this work was sporadic and, due to his poor relationships, short lived. DM was referred to Genius Within CIC (via CFO3) through the probation service initial assessment. Initially DM was in a very fragile and emotional state and was reluctant to engage with the project. There were multiple support needs identified, because of emotional wellbeing and self-management needing to be addressed. Support needs were housing, relationships, substance misuse and financial management. When DM completed the strategy profiler, he indicated support needs in the interpersonal skills and communication sections. He said that he tends to misinterpret things that other people say, he finds it confusing when rules change and that he suffers from sensory overwhelm. These were some of the answers that indicated that he met the threshold to engage in the project.

Intervention through The Support Change Project

An eight-week plan was drawn up at the initial assessment to cover:

• two weeks building confidence and self-esteem
• three weeks consequential thinking
• three weeks psychological interventions

Sign postings to other agencies, such as housing and debt management were also identified. DM was very defensive and blamed everyone else for his problems.

It was imperative to build confidence and self-esteem and then carry out work on consequential thinking skills, where the researcher looked at his actions from an evidential point of view as well as focusing on his behaviour in relationships. Once the researcher was able to engage his consequential thinking, as the range of evidence-based psychology interventions were used, so DM became aware of himself and his actions. From this the researcher was able to work around how they could be used in the future, at their best. The researcher then broke this down into stages with achievable goals.

Internal Focused Interventions

The goals were initially small, wellbeing goals such as managing sleep, reducing negative coping behaviours, and making a meal.

Group Work Programme: DM completed a group course covering cognitive skills to manage stress, resilience and coping skills and internal management and understanding. The course was internally focused so that DM gained a better understanding of self.

External Interventions

DM attended a group course that focuses on an individual in a group setting. This includes local communities, attending courses on release, work settings, and being released into a hostel. Focus was on DM having the skills to be able to manage any group environment. He was able to use the Clean Language model to be able to advocate for himself and his support needs.

Outcomes

In terms of resilience, DM did not respond well to perceived criticism initially; however, at the end of the project he was able to see this as feedback and he scored five which means he can now see feedback positively and the researcher was able to infer that he is able to onboard and reflect more openly since engaging in the project.

At the start of the project, DM said that his only motivation for engaging was so that he could gain direct financial support through participating, however, at the end of the project he reflected that the one-to-one casework had improved his motivation and he was positively engaging in education and training. He reported feeling increased feelings of usefulness, being more interested in other people, and feeling good about himself.

By the end of the project, DM's motivation, resilience, and attitudes towards not reoffending had changed positively. He has increased self-awareness and is engaging with probation services and was able to work towards a goal of finding employment on release from HMP Dartmoor, which was achievable with his new skills found through group interventions. He now has secure employment, is in a long-term relationship and has a flat of his own.

Case Study Two

Background

High complex case MP was not engaging whilst serving a custodial sentence at HMP Dartmoor. He had been in the care system from birth and transitioned into the criminal justice system from the age of sixteen. He had, at the time of referral, over twenty offences including sexual and violent offences. MP has suffered significant emotional distress and he was regularly self-harming. There were concerns that he might relapse with substance misuse if he was not already at that point. During the initial assessment meeting, MP was very agitated and distressed. It was identified that he felt unheard and was engaging in a very acrimonious relationship with, CJS and family members including the mother of his child. He completed the strategy profiler and indicated that he misinterprets what others say as he takes things literally. He also said that he finds it difficult when rules change and he finds social situations difficult due to sensory overwhelm.

Intervention through Support Change Project

A sixteen-week health and wellbeing plan was drawn up where the offender engaged in ten weekly one-to-one sessions. This was followed by a group work intervention and then further weekly, one-to-one sessions to consolidate learning.

The offender was able to access bespoke casework sessions. During his time on the project, he accessed the following interventions, each time using the clean set up to establish a safe working space for MP to work in.

A number of interventions were used including work around being the best version of yourself, understanding Clean language: what it is and how to use it, and calming the anxious voice. Internal focused Interventions included work in groups focusing on Cognitive skills to manage stress, improving Resilience and internal management, and understanding. External Interventions included the completion of the ILM Level 2 Leadership and Team Skills Course and a Level 3 Emergency First Aid Qualification.

Outcomes

MP served the remainder of his custodial sentence. On release, MP trained to be a cycle mechanic. He continues to volunteer in a bike shop, living independently and seeing his son for supervised access under the supervision of NPS. MP is now a self-aware individual aware of the environment and the interactions around him. He can see himself in this world in a different way. He is engaging with services and professionals, and he has not been back to prison for over two years. In his initial assessment, MP stated that he disagrees with the statement that he is calm in a crisis, and he would describe himself as an anxious person, as well as indicating that he does not manage stress well. He does not describe himself as being a cheerful person or close to other people. It was inferred from his answers that he was very disconnected from other people and not engaging well in prison life. By the end of the project, he was able to feel confident about influencing what he can rather than worrying about what he cannot. His attitude was less of being a victim within the criminal justice system but making the most of resources and activities he can engage in. He was feeling confident about securing

employment and not reoffending by the end of the project which was a marked improvement from the isolated offender at the start of the project.

Case Study Three

Background

The offence was fraud. KG was operating a business providing a service tarmacking driveways. He failed to have adequate insurance. He also defrauded several customers by taking payment for work that he did not carry out. This was his first offence and he received a custodial sentence.

KG was referred to Genius Within CIC through an employment organisation called Tomorrow's People in Plymouth. They specialise in long-term unemployed interventions. The researcher was working collaboratively from their offices at the time. They were funded by the Job Centre, and the researcher was funded by HMPPS. They felt that this participant was not engaging in activities that would lead to employment and felt that he would be receiving benefit sanctions soon due to nonengagement.

They wanted the researcher to specifically focus on health and wellbeing as he was not showing the ability to manage his emotions and had been having several outbursts in the offices of Tomorrow's People. KG completed the strategy profiler and reported in the assessment that he finds it hard to understand what someone is saying and he can often misinterpret what has been said.

He indicated that he finds it hard to remember when he is going somewhere. Interpersonally, he finds it hard to make small talk and struggles to understand people's emotions. He also indicated that he often feels stressed.

Intervention through Support Change Project

When the researcher met KG for the first time, he was in a state of denial and was working in a self-employed capacity that was in breach of his license conditions. The researcher carried out some immediate work on consequential thinking skills. This involved the researcher looking at his actions from an evidential point of view, where he was able to see that he needed to cease working in order to serve his licence according to the restrictions. KG agreed to attending daily sessions, allowing intense input, so that he was quickly self-managing again and not at risk of benefit sanctions.

A range of interventions were carried out in the initial weeks. The first four weeks were focused on building confidence and self-esteem. He had low self-confidence as he felt a significant amount of guilt in relation to his offence. For instance, some of the customers he defrauded money from were elderly. The researcher looked at 'Being the best version of himself' over four sessions. Next, the researcher looked at what that looks like and then broke it down into easy steps that were achievable, on a week-by-week basis. This was then written up in a goal setting plan that he was able to work towards and, more importantly, see his achievements on it. Within the plan, the researcher made sure that it included areas of work determined to be necessary by his offender manager as part of his sentence plan. This plan was then shared with all the professionals so that everybody was working from the same plan and towards joint outcomes.

Internal Interventions

Courses: KG attended the Memory Genius course held at Plymouth Probation, with three other offenders with similar action plans. The researcher looked at how KG could manage himself. This course was internally focused so that he would gain a better understanding of himself.

External interventions

KG then attended the Institute of Learning and Management Leadership and Team Skills Course. This is where he focused on himself in group and team settings. He benefitted from

this because he was able to see how he needs to manage his immediate environment to be able to be at his best.

Outcomes

In the initial questionnaires KG stated that he struggled to remain calm in a crisis and keep things in perspective. He did not feel confident to trust his own intuition and does not manage stress well. After he engaged on the project for six months, he said that he strongly agrees with the statement that he can keep things in perspective and that he feels confident finding solutions to problems. He agrees that he is now able to manage his stress levels better and has an increased awareness of intuition and feels confident and secure in his position.

He had increased confidence in gaining employment on release and was feeling more optimistic about the future. KG completed all these outcomes, and then he was helped to complete a CV, disclosure letter and a job search plan. KG applied to attend a plumbing course, for which the researcher provided a cognitive assessment so that he would have the right support in place. A position for him was brokered on a construction site and supported him into the role by using a series of role plays, so that he could practise effective workplace communication. Sustainability: KG has remained in employment for three years and has not reoffended. He has a new partner and a baby.

Case Study Four

Background

This offender has a drugs offence where he was part of a significant drugs operation. He received an eight-year sentence. The referral: DB self-referred to Genius Within CIC, having previously worked with another provider but felt his needs were not being met. He said very early on that he wanted to change, and he wanted the best possible support so that he would not be tempted to reoffend or revert to substance misuse. Once the researcher was able to confirm that psychology-based interventions would be an additional support that he could not get from another provider, he accepted the transfer. He completed the strategy profiler and he indicated

that he prefers to do things on his own rather than with others, he finds social situations hard and finds small talk difficult. He indicated that he often feels stressed, overwhelmed and burns out in cycles.

Intervention through Support Change Project

The Support Change Project spent several sessions exploring what his 'best possible self' looked like, and what the barriers were that could prevent him from being successful. He was clear that he wanted to engage in behavioural change work, as he had heard from another offender who had worked with us that we are specialist providers. A plan of what needed to be achieved and a timeline in which to achieve it was written.

He had high expectations, and the researcher made an agreement that he would commit to high engagement on a weekly basis in return for commitment towards behavioural change. A visual plan was created of what the participant would achieve each week and what the exit outcome looked like.

Internal Interventions

For DB, it was to be emotionally regulated, managing behaviours, to be substance misuse free, employed and in regular contact with his son. Interventions: Victim empathy was explored over several weeks. He was able to see that he would not want drugs supplied to his own children and that the people that he had sold drugs to were someone's child. Once he developed consequential thinking, he was able to commit to behavioural change.

DB was able to use a clean language framework to be able to voice what he had seen and heard, to know that his behavioural patterns had changed.

DB was supported to create a CV, disclosure letter and a job search plan. Courses: DB attended the Memory Genius course held at HMP Dartmoor with other offenders with similar action plans. DB explored how he could manage himself in relation to negative and positive coping

behaviours. For DB, it was substance misuse. This course was internally focused so that he would gain a better understanding of himself.

External Interventions

DB then attended the Institute of Learning and Management Leadership and Team Skills Course. This is where he focused on himself in group and team settings. He benefitted from this because he was able to see how he needs to manage his immediate environment to be able to be at his best. DB has shown commitment for this change throughout.

Outcomes

On the initial questionnaires, DB indicated that he is rarely interested in other people and he does not feel close to anyone. The researcher inferred from this that DB was feeling isolated in the prison. He indicated that his biggest barriers to post-release employment were his previous convictions and lack of education and training.

The researcher noticed that this person was very isolated and gave neutral answers throughout the questionnaires but strongly indicated that he was seeking change in the future. The researcher was able to use their experience working in the prison to know that this was a person who did not want to stand out but would like help and support to bring about change. The researcher used her discretion to bring him onto the project in the hope that he would slowly engage.

However, despite having exceptional outcomes, he still chose to record neutral answers on the final questionnaires. At the end of the project, he was just about to be released and was feeling highly anxious. This would have impacted his answers.

The researcher contacted him six months post-release and then asked him the questions again and he gave positive verbal answers stating that he agrees he now manages stress much better and is feeling good about himself. He now feels that he can make up his mind about things and feels interested in new things. DB was released into the Plymouth location where the researcher

continued to work with him on a weekly basis. He was released homeless, so the immediate support needed was around housing. The project placed him in a hotel over the weekend as he was not granted emergency housing by Plymouth City Council. The researcher supported DB to overturn this and secure housing. He was eventually supported into a flat where he is now able to see his son. This has been one of DB's main focuses for his future. DB was linked into a range of support services in the Plymouth area to ensure that he had adequate support paths should he need it. DB was supported with food packages and benefit support, as well as providing him bedding and essentials for his temporary accommodation. Sustainability: Genius Within CIC then brokered a job in a warehouse where he has secured full-time employment. He is now financially independent through employment, in a secure relationship and regularly seeing his son.

Discussion

These case studies show that The Support Change Project made a significant impact to the lives of these four men. There were many more case studies that could have been used. There is no doubt that the format of the interventions had made a significant impact on the individual lives of these offenders.

Limitations

These case studies have been written from the perspective of the researcher and there is likely to be some unconscious bias present. The researcher's personal bias would have become apparent due to working with the offenders for an extended period of time. In addition, both the participants in this study and the researcher are autistic which would mean there has been a double insider-insider unconscious bias. The researcher has addressed this through developing their own authorial identity where they widely acknowledged the unique perspective of this research.

Conclusion and what needs to happen next: These case studies were useful in humanising the data and showing the real impact of the project. The researcher would have liked to have carried out an IPA study to explore this more fully, however, the Covid-19 pandemic prevented the researcher from doing so. This does provide opportunities for post doctorate research through the National Autistic Society.

Chapter Nine

General Discussion

The Support Change Project ran at HMP Dartmoor in blocks of six months per cohort. The offenders that took part reported overall improvements in coping, resilience, attitudes towards rehabilitation and at the end of the project only two offenders had reoffended. The project has been submitted in the call of evidence by HMPPS and has been presented at the International Criminal Justice Conference in 2018 and 2019. This chapter discusses and evaluates the implementation of the project.

Introduction

The findings from all the studies outlined in this thesis will be discussed. It was found when carrying out the extensive literature review in Chapter Two, using mixed methods to scrutinise available academic research within the criminal justice system, that there was a lack of literature available and this was later supported by HMPPS instigating its own enquiry into available research in 2020, which was three years into this study. The researcher was able to submit a full literature review of all current literature and this formed part of their review. The hypothesis stating that there is scant literature specifically supporting autism research is, therefore, supported. The literature review highlighted that there had not been a specific project or intervention within a prison that was specifically targeting neurodiverse offenders. A project like this would provide valuable data and new knowledge. It was at this point that the researcher found the gap in academic knowledge, and they started to design and create The Support Change Project. The researcher carried out a mixed methods study.

The initial study specifically focused on how many offenders, at any one time, had autistic traits within HMP Dartmoor. The data collection sought to quantify the numbers of offenders that are found as having some traits but do not quite meet the full criteria of being autistic, described as meeting the 'threshold'. This data collection revealed significantly more offenders than anticipated that had autistic traits in prison at any one time.

This collection was then repeated for accuracy. These findings answer the research questions and reveal that there is a need for individualised support for offenders that are from neurominority groups in the criminal justice system.

This supported the next phase that was to design, implement and review 'The Support Change Project' at HMP Dartmoor, to establish operational value in differentiating for offenders from different neurominority groups. The final phase was to establish if this cost-effective model of change behaviour practice was effective by providing an evaluation of The Support Change Project within HMP Dartmoor. This evaluation supported the hypothesis that there is a need for individualised and differentiated learning within prisons. This model can be used by HMPPS to develop and influence future policy and change.

General Evaluation of The Support Change Project

As part of the researcher's role at Genius Within CIC, the researcher designed, implemented, and evaluated The Support Change Project at HMP Dartmoor. This model is now being disseminated across other prisons and is being reviewed by HMPPS in their neurodiversity review. Through delivering The Support Change Project at HMP Dartmoor over the last four years, it has been easy to determine that illness, stress, and poor coping abilities could impact on offender's emotional wellbeing which can have a knock-on effect with engagement within the prison. Many neurodivergent offenders within the criminal justice system would describe their personal journey as a particularly stressful experience. The Support Change Project has focused on increasing coping and resilience skills, so that they are in a place of control where they can self-advocate for themselves, first in the prison and then in the community. The Support Change Project initially focused on looking at an offender's **internal** behaviours and responses.; once they had achieved understanding and a level of control, the researcher looked at how this then fitted into their environment by focusing on **external** influences, triggers and factors. This was delivered in two small group interactive courses, delivered by a trained forensic psychotherapist. The most robust way to discuss the effectiveness of The Support Change Project is to look at four case studies that represent the overall study findings.

Following this, it can then examine and discuss the findings of the study in terms of effectiveness.

At the start of the programme, the study needed to determine how many offenders were neurodivergent in a general sense. The expectation was that there was unlikely to be high numbers and had estimated that this would come in at around five per cent of offenders. The pilot study carried out at HMP Dartmoor was the first study of its kind where it screened the entire offender population. This research has found that there are many undiagnosed and misdiagnosed neurodivergent offenders serving sentences within HMP Dartmoor.

These offenders are found to have varying difficulties but are still in need of support whilst in custody and through the gate into the community.

The project was able to clearly see that these offenders need to learn to understand themselves better with the hope of reducing reoffending in the future.

There are several areas that need to be individually discussed so that the researcher can conclude this study effectively:

Pilot Study Discussion

A profiling survey of N=80 incarcerated offenders was conducted during 2019, across six wings of HMP Dartmoor. The analysis showed that there are far more incarcerated offenders than first thought, exhibiting autistic traits. Within the pilot study carried out at HMP Dartmoor, it was found that there is a sixteen per cent probability that the offender population has autistic traits. The study concluded that the actual figure was at nineteen per cent. This survey concurs with the $1.73 < SD < 2.12$ range of early independent AQ testing of 6,934 participants conducted 2001-2014. The survey Mean and SD for the pre-set threshold appears realistic, i.e., Mean + SD = 2.24+1.78=4.02 (e.g., Score>=4). This means that within every induction, where there are on average twenty men being inducted into HMP Dartmoor, four of these would be eligible

to engage with The Support Change Project. This is much higher than anticipated and it is important to remember this is only one neurominority group.

Once support needs were identified through screening, offenders were selected to take part in The Support Change Project. Inductions into prison take place on a weekly basis so there were on average twenty to twenty-five offenders per month coming into HMP Dartmoor that were eligible according to the inclusion criteria. In order to help manage these high numbers of offenders, the researcher had several prison orderlies working on the project.

This acted as a motivational factor for the offenders, as they could see the engagement of others, and this created a level of trust. The orderlies encouraged offenders to take part in the project by outlining the expected positive outcomes. The researcher found that being employed in the prison was beneficial as the orderlies were able to 'vouch' for the researcher as someone they could trust to the new incoming offenders. This is extremely important as offenders are often in a place of mistrust and have been let down by numerous professionals in the past. Once the offenders signed up for the project they were then invited to engage in several activities.

The Effectiveness of the Strategy Profiler

All new inmates completed the strategy profiler as part of the induction process. The results of this were shared with all departments in the prison. From this sample, the offenders that selected that they self-identify as needing support in areas that would indicate autistic traits would progress to the next stage of the programme. The purpose was to identify 'support needs' from the offenders and then share this early information with relevant departments.

The strategy profiler identifies support needs in a cluster basis. It is important to consider that within the prison population individuals tend to have complex, overlapping needs and these identified needs might not be clinically robust; however, it does serve the purpose of the effectiveness of early intervention and engagement. It is known that head injury, substance misuse and trauma may produce the same cognitive effects as a person in a neurominority

group. The support needs are the same and, therefore, within The Support Change Project diagnosis was not relevant.

Focusing only on functional strengths and weaknesses can be immediately useful and affirming, without raising alarms or giving people false identities. If necessary, these can then be followed up and interpreted, but the labels of dyslexia, ADHD, autism etc., should not be part of a screening process under any circumstances. A functional strengths and weaknesses assessment can be used to determine reasonable adjustments, as the Equality Act 2010 does not explicitly mention conditions and, therefore, diagnosis is not mandatory.

That said, the results of the Dartmoor study have been very encouraging in terms of improving longer term outcomes.

Screening cannot ethically be used as a replacement for professional intervention, but it can be used to identify some functional needs within the contact of lay person support and triage for signposting to additional professional support. This has been useful in determining who to work with within the Support Change Project.

The Role of Cognitive Testing within the Prison

Once the offender was enrolled on The Support Change Project, the researcher carried out what is known as a Positive Assessment. The aims of these cognitive assessment processes are to establish strengths and weaknesses that are specific to the person, rather than based on assumptions related to a pre-existing diagnosis. The tests specifically search for, initially, cognitive and practical skills that can be applied to vocational choice to inspire and encourage engagement within the programme. It then identifies and highlights functional difficulties for which it can recommend adjustments and strategies.

The benefits of the test being focused on strengths is so that the participant can focus on what is positive about them at a time when much is not positive. Hearing this information can bring about a shift in attitude towards engagement and rehabilitation. The focus was on specific

presenting needs and identifying attributes that can be built upon to increase confidence and self-esteem, to motivate towards positive rehabilitation. These needs can be barriers and once they are addressed and support is given it enables the offenders to move past these barriers. It is worth noting that all of the above cognitive effects are measurable and there have been found to be clinically significant differences for neurominorities compared to the general population (Doyle, 2017; McLoughlin & Leather, 2013).

Within the cognitive test, score deviations were calculated from the statistical mean for each sub-test. Significance was attached by either an isolated sub-test deviation, sum of sub-tests deviations or sub-test clusters against the total sum of all the sub-test deviations. Any offender scoring below the threshold was given access to further interventions within the project.

There are many positive outcomes for an offender knowing what their person strengths and support needs are. Often, the offenders only know what is wrong but within this assessment they get to see what their neurological strengths are which is empowering and confidence boosting.

The Support Change Project

COPE: Measuring the different ways that people respond to stress. Each main section contained five sub-section questions and there were fifteen sub-sections in total. Within each sub-section a Likert value was assigned and then combined to form scores. The areas evaluated are problem solving, emotion and avoidance.

The Control Group problem solving scores were 50.33 (mean) on the first test. Cope score for the Control Group mean initially was 147.26 and this then reduced to 49.93 (mean) on the second test. The Control Group mean final score was 147.36. The researcher can infer that there was no significant change in abilities to cope in terms of managing problems, emotional regulation, and avoidance within the Control Group. However, within The Support Change Project they attended two group therapy courses and had a cognitive test as well as one-to-one

sessions. The score improved from the initial score of 138.34 to 172.88 by the end of the project. This is a significant increase.

Resilience: Increasing resilience in preparation for release was one of the main focuses of the intervention. The Control Group reported 42.5 (mean) resilience at the start of the project and by the end this reduced to 41.94 (mean). It is worth noting that this was carried out prior to the COVID-19-19 pandemic and therefore, this did not influence these scores. Within the Support Change Project, they started with a lower score of 34.62 (mean) but increased to 45.52 (mean) by the end of the project. It is significant that this group achieved a substantial increase in feelings of resilience prior to release.

WEMWBS Wellbeing: The Warwick-Edinburgh Mental Well-being Scale (Tennant, et al., 2007a) was used to evaluate feelings of mental wellbeing within the project. The questionnaire focused on subjective well-being and psychological functioning. They are worded positively and address aspects of positive mental health. The Control Group were tested at the start of the project and the (mean) was 46.06. This did not change by any significant value at the end of the project where it scored 47.38. The Support Change group scored 39.64 (mean) at the start of the project and following interventions this increased to 45.52 (mean).

This clearly shows that engaging and interacting on The Support Change Project significantly increased feelings of positive mental wellbeing.

Group Engagement Work: The offenders within the Support Change Group took part in two therapeutic based courses. The first one focusing on internal emotional development, understanding and regulation, and the second focusing on managing external environment and learning to advocate for support. The Control Group did not take part in these courses. Their scores started at (mean) 77.36 and then after six months they scored 101.6 (mean). These raised scores could be due to the fact they had completed six months of their sentence and might be nearing release or having settled into prison life. The Support Change group scored 74.65 (mean) and this increased to 100.86 (mean) at the end of the project. The inference is that

offenders attending group therapeutic sessions had increased feelings of engagement. The courses totalled seventy-two guided learning hours which is a significant time investment. For the purposes of the study the Control Group attended the course outside of the reporting period. This was to allow all offenders equal access to the courses and to avoid discrimination within the prison.

Attitudes towards reoffending: Ultimately the project seeks to change attitudes towards reoffending. Once a person has been to prison they know what the environment is like. It is less of a deterrent and they have a higher risk of reoffending. This aspect of the project is essential as it focuses on shifting this focus to what can be achieved on the outside. The researcher asks questions such as 'before all this happened, what were your dreams and hopes for the future?' and 'If you could be anything in the world what would it be?' Unfortunately, the project did not reveal any positive or negative data that could be used in this study to measure this, but the researcher has been able to provide case studies that show how the attitudes towards reoffending have changed. There has been a change within most offenders that attended the project as only two per cent have reoffended at the time of submitting this thesis. This is an unusually low statistic.

The study has tracked offenders into the community and 208 offenders have gone into education, training, and employment out of the 210 that took part in the project.

The researcher decided to include several case studies of offenders that were on the project in 2018/9 and have been released and completed their license and supporting quotes from offenders in the community, so that this study can portray the impact of this work. Project statistics show that the majority of offenders have progressed from enrolment on The Support Change Project to going into employment, training, or education. The average rate for offenders engaging on other through the gate rehabilitation programmes is sixteen per cent. Within the contract that was executed at HMP Dartmoor, we were 120 per cent to target for offenders that achieved employment. In addition to this ninety-seven per cent of offenders that

took part in the project have not re-offended in the last two years and eighty-seven per cent of those in work have sustained employment for over two years (Genius Within, 2020).

The Support Change Project in terms of effectiveness

This project was evaluated using an intervention and Control Group (Group-A & Group-B respectively). There was a clear progression route through the interventions. Offenders were screened and support needs identified within two weeks of entering a prison. This was extremely valuable data as this allowed professional decisions to be made earlier on and also alerted services such as Safer Custody to potentially vulnerable offenders coming into the prison. This was especially useful as it was found that many offenders declined to answer if they had support needs when they were booked into the prison. Self-reporting learning difficulties is not something favoured by offenders. Once the offenders were identified at induction as needing support to effectively engage, they were invited to take part in a WAIS-based Positive Assessment.

This was found to be in most cases the first positive information they had heard about themselves, and this has an impact on willingness to engage. They were more likely to engage in the group interventions when they were in a place of feeling good about themselves. Once they were in groups of likeminded people the offenders engaged and worked hard to rehabilitate themselves and look towards a more positive future. At the time of writing, it has been seen that only one offender that engaged in the project has reoffended. There is no doubt that this study has reduced reoffending and has successfully rehabilitated the offenders that have taken part in the Research Group.

Interventions

The Support Change Project delivered these interventions in a prison setting with individuals who have complex needs and are considered 'hardest to help'. The aim of the programme was to support goals towards training, education and employment through increasing coping, resilience, and emotional regulation. This was carried out through a range of interventions delivered in group and one-to-one settings. The interventions included carrying out Strategy

Profiling to identify support needs. Where needs were identified WAIS-based Positive assessments were deployed to give a better understanding of the offender's cognitive profile.

Offenders then had access to professional coaching sessions on goals and ambitions before working in small groups focusing on a positive release into the community. Ongoing emotional and career support was given through the gate beyond release.

Emotional Regulation in more detail

Creating a better understanding of emotional wellbeing and regulation had a significant impact on an offender's engagement and overall psychological wellness. Many offenders had not understood the impact of sensory experiences on wellbeing. They were able to gain an understanding that autistic people are affected by sensory sensitivity (Markram & Markram, 2010; Robertson & Baron-Cohen, 2017; University of California-Los Angeles Health Sciences, 2015, June10).

The sensory overwhelm experienced by offenders in neurominority groups provides an unfair disadvantage, which can affect outcomes if not accommodated. Once offenders were able to understand this, they became able to advocate for additional support and accommodations. Sensory overwhelm can be experienced as pain and if not managed this can lead to serious breakdown in emotional state.

These expressions and displays of sensory overwhelm can be easily mistaken for aggression, guilt, or unreliability, whereas in a non-pressured environment the individual can present completely different which can be confusing for inexperienced professionals. Engaging offenders in a programme that teaches how to manage this has been beneficial throughout the study. The Support Change Project has been equipping the offenders to learn how to look out for warning signs of overwhelm and request a break before a meltdown. Suitably trained participants can do this well and learn to regulate negative behaviours more effectively. This was evident in the coping and resilience data collection as part of The Support Change Project.

Another relevance within the study to consider is memory and attention. Most neurominorities experience a deficit in working memory, which is the brain's capacity to 'hold' information whilst thinking (Gathercole & Pickering, 2000; Swanson & Siegel, 2001). This is further impacted within a prison environment and offenders become used to existing in a reduced state which has an impact on memory and cognitive function. A lower working memory ability means that during the long, complex questioning structure favoured in police and legal interviewing, the individual might forget the beginning of the sentence by the time they get to the end. Offenders have been taught how to advocate for short and simple communication. The speed at which information is processed can be compromised for many neurominorities (Grant, 2009). This means that answers may need thinking time, hence the requirement for breaks and the provision of documents in advance. Offenders learn about processing information and can design a support package that works for them to allow them to process information more effectively.

In the autism cohort at HMP Dartmoor, long term follow up is still in progress and expected to complete this year. The study has so far demonstrated a significant decrease in intention to reoffend and a significant increase in coping, resilience and optimism compared to the Control Group. As such, there were high hopes for this cohort upon release. Within The Support Change Project, it equipped the participants to learn how to look out for warning signs of overwhelm and request a break before a meltdown.

Suitably trained participants have done this well and learnt to regulate negative behaviours more effectively. This was evident in the coping and resilience study as part of The Support Change Project.

Communication difficulties, associated with cognitive deficits found within autism, may well transpire to be the basis of the systemic discrimination of neurominority groups. This would form a basis for post doctorate research in the future. It could be transformational for the court system to understand these impacts and adjust for them, and could be a key lever in reducing the excessive, disproportionate prevalence in the prison population for those with

neurominority conditions (Snowling, 2000; Brewer & Young, 2015). Reducing incarceration and improving rehabilitation for this marginalised population would result in huge societal benefits.

Adjustments within the criminal justice system might be relevant to any neurominority, since diagnosis can be incomplete and also because contemporary neuroscience has shown that the conditions have more in common than difference (Astle & Flechter-Watson, 2020; Astle, Bathelt, CALM Team, & Holmes, 2019; Fletcher-Watson, 2022). In addition to working with offenders, the project also provided specific workshops, webinars and informal training for many of the staff in the prisons within which the researcher worked. The training was mainly focused on support staff who were engaged in training, educational and emotional social programmes. The training addressed:

1. How to tell the difference between a cognitive deficit and an attitude problem.
2. Managing sensory overwhelm based meltdowns or overload.
3. Trauma and the brain.
4. Making reasonable adjustments for neurodiversity.

The point of having specialists in the prison as embedded specialists means that staff can call on the resource for specific case work advice. As the staff remained as part of Genius Within CIC they stayed connected to ongoing training and continuing professional development to keep skills up to date. The training offered was directly targeted at, what can be considered to be, the unmet needs of the offenders in the prison. It is worth noting that prison staff themselves are likely to have a reasonably high proportion of neurominorities, typically dyslexia, as is common in similar professional applicant pools such as police and military personnel. In terms of impact, understanding the cognitive limitations and sensory overwhelm issues.

The Impact of COVID-19 on The Support Change Project

The provision within The Support Change Project has been affected by the COVID-19 pandemic negatively. When the study had completed the pilot run of the study it gained interest

among the offenders and then the pandemic took hold and interventions were immediately suspended. Being unable to work directly with groups in the prison has caused immense difficulty for the programmes. The researcher was unable to make the same level of progress within the prison groups but did, however, manage to raise the intervention session numbers available to offenders to ensure that one-to-one support was more frequent. In many cases the resources have been redirected to probation, this has been the case with The Support Change Project. It has been more practical to continue the work in the community rather than in a prison environment due to the accessibility of offenders, however, it works best in a prison environment close to release.

Conclusions and what needs to happen next: The pandemic has brought about discussions relating to the reliability of the interim data being collected when the offenders were locked in their cells for twenty-three hours a day. There can be no doubt that being able to leave their cells for additional time during their day increased their wellbeing. However, the fact remains the same, that these offenders remain positively rehabilitated in the community, the last offender leaving custody in December 2021. These rehabilitation statistics have not been achieved before and so there remains opportunities for further research in this field.

Chapter Ten Conclusion

> **Chapter Conclusion** The project has had a considerable impact on all the offenders that have taken part. The outcomes are not all measured within the data collections themselves, but the impact can be seen when looking at the case studies. This chapter will pull together all the sections explored within this study and reach a conclusion if research questions have been answered. It also identifies opportunities for further research

The Prevalence of Autism within the Criminal Justice System

The study conducted significant screening on five hundred individuals at HMP Dartmoor in 2018 and this resulted in a prevalence score of nineteen per cent of offenders scoring borderline to significant indicators of autism. The cohort of offenders that engaged in the programme have gone on to receive a specific intervention and training programme that was designed central to their support needs. These offenders to date have not reoffended. Two of these offenders were recalled due to breaking licence conditions. The project supports the move away from diagnosis and to encourage participation from offenders to positively manage their rehabilitation by becoming successful self-advocates. The Support Change Project's focus was to primarily identify support needs in a cluster basis and advocate for this support to be put in place within the prison.

Diagnosis is a psychologically defining experience, likely to trigger regret, anger, fear, and other emotions that are best handled within a safe professional relationship. This is ideally a process that can take place when the offenders have completed their sentence and have access to services that can support them through the process. Removing potential perceived negative labelling and diagnoses removed barriers of participation from offenders.

The Autistic Person Achieving Autonomy

This study has described that the identity of the autistic person is of importance, particularly where the autistic person is functioning to a level considered to be above average. The identity of the first language has been considered and maintained throughout the study period. For example, the study has made efforts to educate on a multi-level that if a person identifies as

autistic then they are simply an 'autistic person', rather than a person with autism. The study recognised and acknowledged that the person-first language (PF) movement was part of a drive to centre the human experience before the diagnosis.

The human experience has been the main focus and has been maintained effectively throughout the study.

The reduction of ableism has resulted in a marked reduction of feelings of discrimination and poor wellbeing within HMP Dartmoor. Offenders have developed, demonstrated and maintained self-advocacy and efficacy skills throughout the study phase and beyond.

It feels that by focusing on the human experience of rehabilitation the manifestation of barriers to engagement and then rehabilitation have reduced among the autistic population. Offenders were very sceptical of being diagnosed with a neurological perceived disorder in case it impacts on their sentence progression and likelihood of being released on licence. The evidence that offenders are described by their diagnoses has been redefined by focusing on the support needs those individual offenders need addressing for them to be at their best.

The Support Change Project successfully steered away from negative messages by explicitly focusing on the support needed to progress, rehabilitate, and be released. This positive approach was favoured among the offenders taking part in the study. The aims of the cognitive assessment processes to establish strengths and weaknesses specific to the person rather than based on assumptions related to pre-existing diagnosis, were invaluable among prison professionals. There is a focus on specific presenting needs and identifying attributes that can be built upon to increase confidence and self-esteem, to motivate towards positive rehabilitation. These needs could be barriers and once they were addressed, and support given, it enabled the offenders to move past them.

Furthermore, within the prison population the offenders tended to have complex, overlapping needs and not a simple diagnosis that can be determined by an algorithm. The project

specifically searched for, primarily, cognitive and practical skills that were then applied to vocational choice to inspire and encourage engagement. The project highlighted functional difficulties for which recommended adjustments and strategies which were shared prison wide.

Focusing on functional strengths and weaknesses was found to be immediately useful and affirming, without raising alarms or giving offenders false identities. The defining labels of autism have not been used as part of a screening process and this increased the position of trust between the offender and the researcher. The offenders were reassured that functional strengths and weakness assessment would be used to determine reasonable adjustments within the prison.

The Equality Act 2010 does not explicitly mention conditions, therefore, diagnosis is not mandatory and so was eliminated from the project. It was, however, important to acknowledge that screening cannot ethically be used as a replacement for professional diagnosis, but it can be used to identify functional needs and areas of support. It was also useful for identifying support clusters and this is useful when placing offenders into groups for the group interventions. The information allowed professionals to triage offenders for signposting to additional professional support.

The researcher cannot assume that published research and this evidence-based study alone informs their practice. The researcher will only know that the improvements to services and practices within the criminal justice system has informed the researcher's practice when the subsequent projects, in Lewisham and Croydon, using The Support Change model are reviewed. This will be in 2023, which is beyond the timeframe of this study. Much of the improvements in neurodiversity provision are largely based on evidence-based research within this study or contextual evidence, or evidence that is intentionally gathered from other sources.

In terms of how the researcher can apply this research to practice, they reviewed the project and gained understanding what did and did not work, and this has been reflected in the new projects using The Support Change model. By doing this, one could say that this project has informed practice, as it is now transitioning into other criminal justice projects

Future Implications and Research

If the criminal justice system can move beyond narrow definitions, such as autistic spectrum disorder, where the emphasis is on the disordered behaviours, then an offender can access and engage with a range of interventions that can bring about behaviour change, that can be measurable. In exploring ableism within the criminal justice system, the researcher was able to draw conclusions that by not differentiating for these neurominority offenders, prisons are discriminating against disabled people, either directly through pejorative terms and explicit exclusion or indirectly, through inadvertently manifesting barriers, the effect of which is to reduce disabled participation. By being inclusive, within The Support Change model, the idea of discrimination and ableism is removed.

The definition of what it is to be neurodivergent was explored. Within The Support Change Project, it was easy to determine that illness, stress, and poor coping abilities could impact on these scores. This was true of many offenders within the criminal justice system. As one might imagine, being in a prison could be described as a particularly stressful experience.

There are undoubtedly many undiagnosed and misdiagnosed neurodivergent offenders in prison today. They are in need of differentiated support in custody and through the gate into the community, so that they can learn to understand themselves better with the hope of reducing reoffending in the future.

Dissemination

The target groups for dissemination include HMPPS, Prison Governors, Prison professionals including officers, The National Autistic Society, and fellow researchers. Dissemination for Action has a strong focus on changing practice using the statistical evidence gathered.

The core focus of this investigation is to change practice, introduce differentiated learning materials for engagement and to widen the approaches used to change behaviours of offenders, with the long-term goal of reducing reoffending. To date, HMPPS have used this investigation as part of their call for evidence for a systematic review of how neurodiverse prisoners are

integrated and rehabilitated in prison. They have had full access to the work that has been carried out at HMP Dartmoor and it is hoped that it will have an ongoing operational impact in other prisons as well as HMP Dartmoor. The researcher anticipates participating in an advisory capacity on the committee reviewing neurodiversity within the prisons. The researcher has taken part in a police advisory group, looking at better supporting neurodiverse offenders encountering police professionals and is now engaging with senior members of various constabularies to gain a better understanding of engaging with neurodiverse offenders. Prisons need to commit to a universal design that supports neurodivergent people. Systemic and organisational change is essential if rehabilitation is ever going to be successful for this marginalised group of specialist thinkers.

Broad Themes to Consider
- Creating a model of intervention that fits directly into an operational prison. It needs to fit within an existing mechanism. The researcher's experience working within a prison has helped to ensure that this is the case.
- Consider implications such as cost. Prisons have their own dynamic purchasing framework, and the interventions can be selected from within this framework.
- Future funding can now be applied for within structured funding cycles. The Support Change Project is well known and can be accessed through funding bids which will then include costings for staffing and infrastructure.
- Governors have monthly meetings where the research can be presented and show prisoners how to access it on the dynamic prison purchasing framework. Research from the initial data collection was presented to the governors, and this was met with interest, and several follow up emails.
- The interventions described have had their own marketing material made and these are being disseminated as part of Genius Within CIC products.
- Identifying the range of different dissemination media to use to engage target audiences.

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Appendix

A1   Example of Positive Assessment: Used to carry out WAIS based cognitive testing at HMP Dartmoor.

Positive Assessment Report

Name: GT

Location of testing: HMP Dartmoor

Age at testing: 36

Report by: Tanya Weston

The purpose of this testing is to identify strengths. Human intelligence is made up of lots of different abilities. In life and employment, many jobs apply different skills. All people have strengths and weaknesses. Here is a description of different types of intelligence:

		Subjects	Example Jobs
Visual	Ability to make sense of what we see and describe things in pictures	Design and Technology Art Physics Biology Chemistry Drama Maths	Driving Building (plumbers, electricians, engineers, decorators) Hairdressing & Beauty Graphic design and media Medicine (nurse, doctor, physio etc) Social Work Presentation skills
Spatial	Practical skills and making things, understanding how things move and fit	Design and Technology Art Physics Biology Chemistry Geography Drama Maths	Driving Building (plumbers, electricians, engineers, decorators) Hairdressing & Beauty Graphic design and media Medicine (nurse, doctor, physio etc) Social Work Operating Machinery Fire fighter Soldier
Verbal	Communicating with words, understanding, explaining and story telling	English Literature History Geography Languages Religious Education Music Drama	Customer Service Acting and performing Counselling and social work Teaching Coaching Journalism and writing Musician Policeman, paramedic Soldier

Memory	Short term memory, and concentration	Maths English Language – spelling, reading speed, grammar	IT code writer Call centre worker
Processing Speed	Ability to learn new tasks quickly Focusing on details and accuracy	Maths English Language – spelling, reading speed, grammar	Technician Computer operator Data processor

Summary

GT displays **strengths** in:

- **explaining what things mean** shown in the vocabulary task
- **scanning visual information quickly and accurately**, shown in the symbol search task
- **working with shape and space,** as shown in the block design task
- **Spotting patterns**, as shown in the matrix reasoning task

GT displayed **weaknesses** in:

- **remembering what he has heard**, shown in the verbal memory task.

GT has a variety of strengths. His particularly high strengths in communicating and working with his hands will make him very well suited in practical and customer facing roles.

Mrs Tanya Weston

Msc Psychology, Psychometric Testing Part A and B

Background Information

School	GT is a keen learner. He told me that school did not interest him enough in order to maintain motivation. His education was described as 'staggered'.
Work history	GT has worked within a range of areas including painting and decorating and working as a landscape gardener. He likes to see an end result for his work.
Hobbies and Interests	GT is a keen reader and he enjoys walking and cycling.

Understanding the results

The next section explains the tests used, and the scores.

Standard scores are given out of 19, with most scores being between 6 and 14. People scoring in this range are competent for most job roles.

Generally speaking, if the job you are in matches your abilities you will do well in this role.

Verbal Skills

These tests measure your ability to understand, explain and describe ideas. They assess how much knowledge you have gained through your experiences in the world.

If this is a strength for you, you can do well in group discussions. You will be able to work with the public. You will be good at asking the right questions and being able to explain yourself. You might be a creative writer.

The 'Vocabulary' test measures word understanding and an ability to describe ideas.	GT's score was 13.\n\nThis is in the highly competent range.	This means that GT is keen to describe and share ideas and can do this to a high standard.\n\nHe will be able to understand and communicate using a range of vocabulary.
'Similarities' asks the individual to describe relationships and categories.	GT's score was 10.\n\nThis is in the competent range.	GT is likely to find it easy to explain complicated relationships.

Verbal skills are a strength for GT. He will therefore be good at listening and talking with others. He will be good in customer facing roles.

Visual and Spatial Skills

These tests measure visual and spatial thinking. The tests measure how well you can spot patterns in pictures. They also measure if you can see how things fit.

People who score highly here are likely to be good at practical skills, for example using tools and making things. You might also be good at problem solving and seeing the bigger picture.

The 'Matrix reasoning' test measures the ability to spot patterns in images.	GT's score was 8. This is in the competent range.	This means that GT can confidently use his visual skills in work. He can spot faults and know when things need fixing. He will also know the best way to organise things in a way that works for him.

The 'Block Design' test measures 1) visual and spatial ability 2) Motor co-ordination	GT's score was 12 This in the highly competent range.	This means that GT can move things into place and make things fit.

GT has strong visual and spatial skills. He should therefore do well in practical roles.

Processing Speed

These tests assess fine Motor skills and an ability to work at speed. If you are good at this, you have potential to be a quick reader and writer. You will probably make quick decisions and be able to process forms, spreadsheets and data entry quickly.

If Processing Speed is a weakness for you, you might find forms, spreadsheets and data entry More difficult. You might find making quick decisions on detailed information frustrating – for example finding the quickest route on a map or knowing which box to tick on a questionnaire.
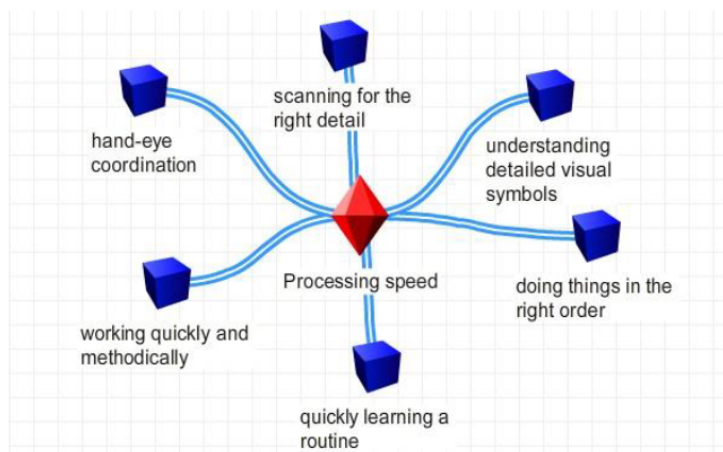
The **'Symbol Search'** test, assesses his ability to process fine details at speed.	GT's score is 8. This is in the competent range.	This means that GT has the ability to process detailed visual information.

Working Memory

Working Memory is not to be confused with short-term memory or long-term memory. It's a little bit more like the size of our attention – how many screens can you have open at one time before you start forgetting things? How many 'pegs' have you got to hang information upon before you become overwhelmed? In this test we have looked at how well you can work with visual, verbal and spatial information.

Verbal working memory	GT's score was 6 This is at the bottom of the competent range.	This means that GT may find it difficult to remember what someone has said. He might need to have a visual reminder for a task to help him be at his best. He can use mind-maps or flowcharts as well.

Career steps recommendation

Environment – where do you like to be?	Working on his own or in a small team. Manual work. Working that has movement.
Behaviour – what do you like to do?	Do things manually where he can interact with others when he chooses.
Skills – what are you good at?	Doing things practically, manually.
Values - What's important to you at work?	Make sure he does a good job. Being shown how to do something visually first.
Identity – what roles can you see yourself in?	A good worker.

Some of the steps you might see for a future role may be:

- Start a course or apprenticeship.
- Find a volunteer role to gain experience and show them your potential.
- Find any job in your chosen field.
- Continue to develop and work your way up to your ideal role.

GT's strong abilities in visual and spatial skills, and having a good eye for detail will really help him to succeed in any of his chosen fields.

GT will need to be committed to contacting different companies when looking for work and may need to accept a lower paid position in order to work his way up and gain experience.

GT may also benefit from volunteering this will give him experience, help build his CV and prove to employers that he is trustworthy and hardworking.

Genius WITHIN

Mentoring
in prison

Access to
Sociology
course

Working in
any role post
release to
demonstrate
reliability
and build
confidence

Consider
roles where
he could use
his
experiences
in prison to
mentor
younger
people
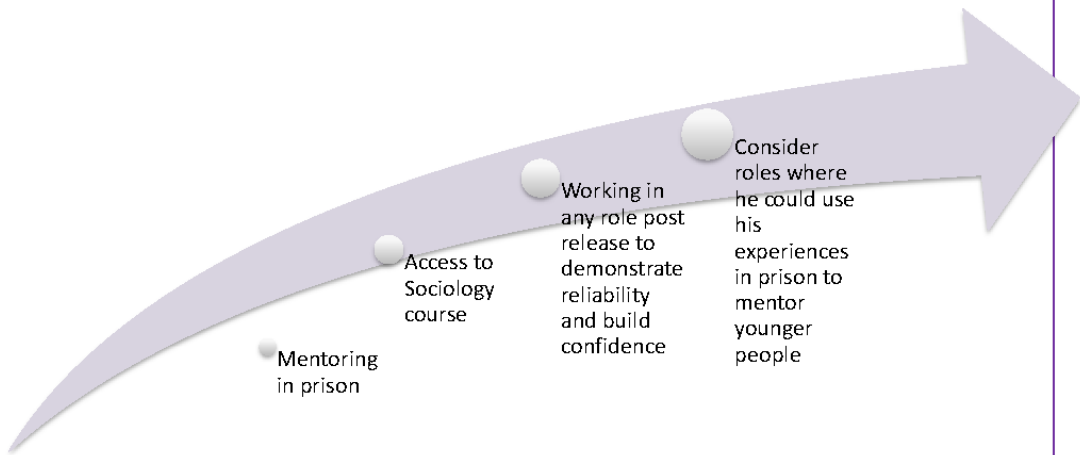
The Vacancy Pyramid

When considering his next move, Aaron needs to consider the 'vacancy pyramid', as below.

The vacancy pyramid shows the steps employers take when they need to fill a post. Employers start from the bottom, and we estimate that 70% of vacancies are never advertised.

As a result, responding to adverts is very competitive and can be hard work, particularly if you haven't yet had a chance to show your full potential in work or education.

Advertise in a
paper, online or
with job centre

Use a trusted
recruitment agency

Review CVs and individual
contacts that have been made
speculatively

Ask friends, family or current employees for
recommendations

Recruit from within: move an employee from a different
role, offer a paid post to a volunteer or intern
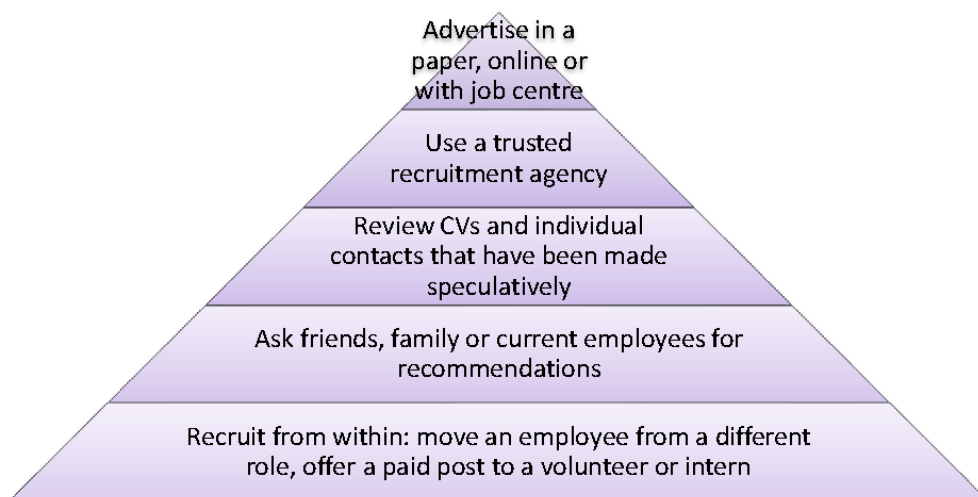
For any new role, I would advise putting together a CV and covering letter, and taking it in person to the HR team, or team leaders, or any employer. This would ensure that he was invited to apply to any vacancies. GT could also suggest a few trial hours to get a feel for the role and build relationships.

Support in the workplace

When GT finds work, he may need reasonable adjustments for the following issues:

Working Memory and Allowing time for processing	Recording or writing down instructions and 'acting them out' to help remember. Having only one instruction at a time.
	Work with a coach or go on the Memory Genius course within the prison to develop strategies.
	Using templates to remind you how to complete tasks.
	Use colour coding forms
	Practice, practice, practice! Long-term memory will be more reliable than short term.

When he is in work, GT can contact Access to Work for a workplace needs assessment. It can recommend support with payment for reasonable adjustments, where necessary.

Genius WITHIN

Appendix 1: Test results

Wechsler Adult Intelligence Scale, fourth revision (WAIS IV)

Ability	Score	Range
Verbal Skills - Similarities	10	Competent
Verbal Skills - Vocabulary	13	Highly competent
Visual and Spatial Skills - Block Design	12	Highly competent
Visual and Spatial Skills – Matrix Reasoning	8	Competent
Processing Speed - Symbols	8	Competent
Working memory – Letter Number Sequencing	6	Competent

Test performance is sometimes affected by anxiety and tiredness. These results must be viewed as examples, and not the be all and end all.

HMP DARTMOOR
THE SUPPORT CHANGE PROJECT

MULTI-QUESTIONNAIRE

This is a combination of industry-standard questionnaires to assess existing and future needs.

Please find the time to answer each question honestly and to the best of your ability.

All completed multi-questionnaire's will be individually assessed and analysed and feedback provided with measures to best support you.

PERSONAL DETAILS

Name:	
Date of Birth:	
Prison:	
Wing and Cell location	

Contact Address:	

Consent Form Signed:	
Date Consent Form Signed:	
Initial questionnaire:	
Interim Questionnaire:	
Final Questionnaire:	

COPE Questionnaire

Date:

COPE Questionnaire Key:

1 = I usually do not do this at all

2 = I usually do this a little bit

3 = I usually do this a medium amount

4 = I usually do this a lot

Please select one answer for each question:

	COPE Question	**1**	**2**	**3**	**4**
1	I try to grow as a person as a result of the experience				
2	I turn to work or other substitute activities to take my mind off things				
3	I get upset and let my emotions out				
4	I try to get advice from someone about what to do				
5	I concentrate my efforts on doing something about it				
6	I say to myself "this isn't real"				
7	I put my trust in God				
8	I laugh about the situation				
9	I admit to myself that I can't deal with it, and quit trying				
10	I restrain myself from doing anything too quickly				
11	I discuss my feelings with someone				
12	I use alcohol or drugs to make myself feel better				
13	I get used to the idea that it happened				
14	I talk to someone to find out more about the situation				
15	I keep myself from getting distracted by other thoughts or activities				
16	I daydream about things other than this				
17	I get upset, and am really aware of it				
18	I seek God's help				
19	I make a plan of action				
20	I make jokes about it				
21	I accept that this has happened and that it cannot be changed				

	COPE Question	1	2	3	4
22	I hold off doing anything about it until the situation permits				
23	I try to get emotional support from friends or relatives				
24	I just give up trying to reach my goal				
25	I take additional action to try to get rid of the problem				
26	I try to lose myself for a while by drinking alcohol or taking drugs				
27	I refuse to believe that it has happened				
28	I let my feelings out				
29	I try to see it in a different light, to make it seem more positive				
30	I talk to someone who could do something concrete about the problem				
31	I sleep more than usual				
32	I try to come up with a strategy about what to do				
33	I focus on dealing with this problem, and if necessary, let other things slide a little				
34	I get sympathy and understanding from someone				
35	I drink alcohol or take drugs, in order to think about it less				
36	I kid around about it				
37	I give up the attempt to get what I want				
38	I look for something good in what is happening				
39	I think about how I might best handle the problem				
40	I pretend that it hasn't really happened				
41	I make sure not to make matters worse by acting too soon				
42	I try hard to prevent other things from interfering with my efforts at dealing with this				
43	I go to the movies or watch TV, to think about it less				
44	I accept the reality of the fact that it happened				
45	I ask people who have had similar experiences what they did				
46	I feel a lot of emotional distress and I find myself expressing those feelings a lot				
47	I take direct action to get around the problem				
48	I try to find comfort in my religion				
49	I force myself to wait for the right time to do something				
50	I make fun of the situation				
51	I reduce the amount of effort I'm putting into solving the problem				

	COPE Question	1	2	3	4
52	I talk to someone about how I feel				
53	I use alcohol or drugs to help me get through it				
54	I learn to live with it				
55	I put aside other activities in order to concentrate on this				
56	I think hard about what steps to take				
57	I act as though it hasn't even happened				
58	I do what has to be done, one step at a time				
59	I learn something from the experience				
60	I pray more than usual				

Resilience Questionnaire

Date:

RESILIENCE Questionnaire:

1 = Strongly Disagree

2 = Disagree

3 = Neither Disagree nor Agree

4 = Agree

5 = Strongly Agree

Please select one answer for each question:

	RESILIENCE Question	**1**	**2**	**3**	**4**	**5**
1	In a difficult spot, I turn at once to what can be done to put things right					
2	I influence where I can, rather than worrying about what I can't influence					
3	I do not take criticism personally					
4	I generally manage to keep things in perspective					
5	I am calm in a crisis					
6	I'm good a finding solutions to problems					
7	I wouldn't describe myself as an anxious person					
8	I do not try to avoid conflict					
9	I try to control events than being a victim of circumstances					
10	I trust my intuition					
11	I manage my stress levels well					
12	I feel confident and secure in my position					

WEMWBS Questionnaire

Date:

WEMWBS Questionnaire:

1 = None of the time

2 = Rarely

3 = Some of the time

4 = Often

5 = All the time

Please select one answer for each question:

	Question	1	2	3	4	5
1	I've been feeling optimistic about the future					
2	I've been feeling useful					
3	I've been feeling relaxed					
4	I've been feeling interested in other people					
5	I've had energy to spare					
6	I've been dealing with problems well					
7	I've been thinking clearly					
8	I've been feeling good about myself					
9	I've been feeling close to other people					
10	I've been feeling confident					
11	I've been able to make up my own mind about things					
12	I've been feeling loved					
13	I've been interested in new things					
14	I've been feeling cheerful					

CFO3 Questionnaire Initial

Date:

CFO3 PFF Questionnaire:

1 = No Confidence

2 = Very little Confidence

3 = Not Sure

4 = Confident

5 = Extremely Confident

Please select one answer for each question:

	Question	1	2	3	4	5
1	How confident are you to not reoffend					
2	How confident are you to gain employment					
3	How confident are you to positively change					
4	Being on the project has been helpful to me					
5	I am being helped to achieve my objectives					
6	The training I attended was suitable					
7	I am satisfied with the level of engagement I've had from my Case Manager					
8	So far my expectations have been met					
9	I would recommend this project to a friend or someone in a similar situation					

10	**My biggest barrier to employment is:**	Select from below
	My previous convictions	
	My lack of relevant education/training	
	My housing situation	
	My financial situation	
	My health	
	My substance misuse dependencies	
	My relationship with my family and friends	
	Other (e.g., age, etc)	

11	The most beneficial part of CFO3 for me has been:	Select from below
	The 1-to-1 case work	

	Specialist support	
	Having a mentor	
	Improving my motivation	
	Education/Training course	
	Employment support	
	Direct financial support (items purchased for me)	

Before Course Questionnaire

Name of Client:	Name of Coach:

Can you please give yourself a score on the following topics, as you are now? Those areas marked with ** are usually relevant to clients with neuro difference such as dyslexia etc.

a talent	Very Poor							This is		Comments
Memory	1	2	3	4	5 10	6	7	8	9	
Organisation	1	2	3	4	5 10	6	7	8	9	
Time Management	1	2	3	4	5 10	6	7	8	9	
Stress Management	1	2	3	4	5 10	6	7	8	9	
Understanding Neuro-differences (understanding how your brain works)	1	2	3	4	5 10	6	7	8	9	

a talent	Very Poor								This is	Comments
Using Neuro-different strengths (knowing your strengths & how to use them)	1	2	3	4	5 10	6	7	8	9	

talent	Very Poor								This is a	Comments
Listening & taking notes	1	2	3	4	5 10	6	7	8	9	
Concentrating	1	2	3	4	5 10	6	7	8	9	
Finding Directions	1	2	3	4	5 10	6	7	8	9	
Communicating Verbally	1	2	3	4	5 10	6	7	8	9	

a talent	Very Poor							This is a talent		Comments
Numeracy	1	2	3	4	5 10	6	7	8	9	
Literacy – accuracy (spelling, punctuation, reading speed, etc.)	1	2	3	4	5 10	6	7	8	9	
Literacy – style & structure (reading comprehensions, writing style – report writing, essays, etc.)	1	2	3	4	5 10	6	7	8	9	
Motor Control (Co-ordination, balance, handwriting)	1	2	3	4	5 10	6	7	8	9	
Other …	1	2	3	4	5 10	6	7	8	9	

a talent	Very Poor							This is	Comments
Listening & taking notes	1 2 3 4 5 10				6	7	8	9	
Concentrating	1 2 3 4 5 10				6	7	8	9	
Finding Directions	1 2 3 4 5 10				6	7	8	9	
Communicating Verbally	1 2 3 4 5 10				6	7	8	9	
Numeracy	1 2 3 4 5 10				6	7	8	9	
Literacy – accuracy (spelling, punctuation, reading speed, etc.)	1 2 3 4 5 10				6	7	8	9	

a talent	Very Poor							This is	Comments
Literacy – style & structure (reading comprehensions, writing style – report writing, essays, etc.)	1	2	3	4	5 10	6	7	8	9	
Motor Control (Co-ordination, balance, handwriting)	1	2	3	4	5 10	6	7	8	9	
Other …	1	2	3	4	5 10	6	7	8	9	

A3 Strategy Profiler. This questionnaire was deployed to the offenders to identify initial support needs at the start of their engagement on The Support Change Project.

Strategy Profiler Questionnaire

Date:

Strategy Profiler Questionnaire:

1 = Yes

2 = No

Please select one answer for each question:

Category			Question	1	2
Communication	1		It is hard for me to pronounce words correctly.		
	2		Sometimes, it is hard for me to understand what someone is saying.		
	3		I find it easy to explain what I am thinking.		
	4		Do you sometimes misinterpret what someone has asked you to do or 'get the wrong end of the stick'?		
	5		Do you get stuck and lose your thread when public speaking or reading out loud?		
	6		Do you find it difficult to communicate your workflow with your supervisor?		
	7		I tend to misinterpret when speaking to others as I take things literally		
	8		I find it easier to talk to someone rather than write it down.		
	9		I find it very confusing when rules change or when people don't seem to be following them		
Memory & Communication	10		Does your thinking quickly change from one topic to another?		
	11		I find it easy to remember what someone has said to me.		
	12		When doing a new task, I often have to check what I am meant to be doing.		
	13		I find it hard to concentrate when there is lots going on around me.		
	14		I often start a task without completing the first one.		
	15		I have a good visual memory for things that have happened to me.		

Category		Question	1	2
	16	I find it hard to remember things when I am going somewhere.		
Organisation & Time Management	17	I find it easy to remember my appointments.		
	18	I am good at meeting deadlines.		
	19	I find it hard to know what to do first.		
	20	I find it hard to get tasks done.		
Written Word	21	My eyes hurt when I look at a computer for too long.		
	22	I find the words blur when I read.		
	23	I make mistakes when copying down numbers or words.		
	24	I find it easy to take notes.		
	25	I find it hard to know what to write.		
	26	I find it easy to spot mistakes in my work.		
	27	I make mistakes when filling out forms.		
	28	I find spelling easy.		
	29	When writing, my sentences do not always make sense.		
	30	I know what full stops and commas are and where to use them.		
	31	I read slowly.		
	32	I find it easy to remember what I have read.		
Numerical Skills	33	I find maths hard.		
	34	Do you need a calculator to do simple maths equations?		
	35	Do you get confused by maths symbols?		
	36	I find it hard to judge speed, distance or size		
	37	I find telling the time hard or judging how long things will take.		
Orientation & Dexterity	38	I find it easy to learn tasks where I use my hands.		
	39	I find it hard to use a computer mouse or keypad.		
	40	I often bump into things.		
	41	Other people find my handwriting easy to read.		
	42	I mix up my left and right.		
	43	I find it easy to find my way from one place to another.		
Interpersonal Skills	44	I prefer to do things with others rather than on my own		
	45	I find social situations easy		
	46	I find it difficult to make small talk with other people.		
	47	I struggle to understand other people's emotions		
	48	I suffer from sensory overwhelm – sometimes things are too loud, bright or crowded.		
	49	I feel 'on the go' all the time and restless		
	50	I frequently feel frustrated by work or colleagues		
	51	I tend to overwork and then burn out in cycles		
	52	I often feel stressed		
Creativity	53	I am good at coming up with new ideas.		

Category		Question	1	2
	54	I do tasks in a different way to others.		
	55	I am good at making pictures, diagrams or rhymes and stories to explain ideas and emotions		
	56	I am good at telling stories.		
Visual & Practical Skills	57	I am good at working out how to put something together.		
	58	I find it hard to imagine what something would look like.		
	59	I like to learn by looking at pictures or watching videos.		
	60	I am not good at building flat pack furniture or models		
	61	I am good at reading body language		
Problem Solving	62	I can predict problems before they occur		
	63	I can spot errors and inaccuracies easily		
	64	I can rise above "the way things are done around here" and find new, more straightforward ways to do or organise		
	65	I can manage complex environments or structures		

A4 Chip Literature Review analysis. This methodology was used within the literature review to determine relevant studies that can be considered for reference within the thesis.

CHIP Literature Review

The included studies are:

- Screening and Diagnostic Assessment of Neurodevelopmental disorders in a Male Prison (2015) McCarthy, Chaplin, Underwood, Forrester, Hayward, Sabet, Young, Asherson, Mills, Murphy.

- Experiences of prison inmates with autism spectrum disorders and the knowledge and understanding of the spectrum amongst prison staff: A review (2015). Allely.

- Development and implementation of autism standards for prison (2015) Allely

- Autism behind bars: A review of the research literature and discussion of key issues (2015) Robertson, McGillivrey

- Autism spectrum conditions and offending: An introduction to the special edition (2013) Chaplin, McCarthy, Underwood.

- A case control study of offenders with high functioning autistic spectrum disorders (2007). Woodbury-Smith, Clare, Holland, Kearns, Staufenbery, Watson.

- Characteristics of male autistic spectrum patients in low security: are they any different to low security patients? (2013) Haw, Radley, Cooke.

- People don't like you when you are different: exploring the prison experiences of autistic individuals (2020) Vinter, Dillion, Winder.

The studies included in the broadened criteria

- Intellectual disability in the Victorian prison system; Characteristic of prisoners with an intellectual disability (2010) Holland, Persson.

- Asperger's Disorder, Criminal responsibility, and Criminal Capability (2009) Freckleton, List.

- A systematic PRISMA review of individuals with autism in secure psychiatric care: Prevalence, treatment, risk assessment and other clinical considerations (2017). Allely.

- Risk Factors for violent offenders in Autistic Spectrum Disorder: A national study for hospitalised individuals (2009). Langstrom, Grann, Ruchkin, Sjostedt, Fazel.
- Circumscribed interests and offenders with autism spectrum disorders: a case control study (2010). Woodbury-Smith, Clare, Holland, Watson, Bambrick, Kearns, Staufenberg.

Literature Review Number: One

Title of Paper	A case-control study of offenders with high functioning autistic spectrum disorders
Date	2005
Bibliographical Details	Woodbury-Smith, M. R., Clare, I. C. H., Holland, A. J., Kearns, A., Staufenberg, E., Watson, P. (2005) 'A case-control study of offenders with high functioning autistic spectrum disorders', Journal of Forensic Psychiatry & Psychology, 16:4,747-763, DOI:10.1080/14789940500302554 https://doi.org/10.1080/14789940500302554
Abstract	Although a number of case reports have suggested that some people with autistic spectrum disorders (ASDs) commit criminal offences, and that core cognitive characteristics may be associated with this vulnerability; the possibility has not been investigated. The exploratory study described in this paper examined whether the cognitive impairments of people with ASDs are associated with their vulnerability to offending. Groups of 21 adults with ASDs and a history of offending, 23 adults with ASDs and no history of offending, and a general population group of 23 people without ASDs were compared on established measures of those aspects of cognition known to be impaired in both people with ASDs and offenders: theory of mind, executive function, and emotion recognition. Compared with their non-offending peers, the ASD offenders showed a significantly greater impairment in recognition of emotional expressions of fear, but no difference in theory of mind, executive function, and recognition of facial expressions of sadness. It is proposed that a small group of people with ASDs may be co-morbid for autism and developmental disorders of antisocial behaviour, and that this might be related to their vulnerability to criminal offending.

Context C	It is necessary to establish cognitive impairment links with offending behaviour and increased vulnerability.
How H	The benefit is that it links autism, cognitive impairment and offending behaviour.
Issues I	This study adds to our understanding by identifying the links, academically and provides a basis for further exploration.
Population P	The population used is 21 described autistic adults. It is a mixed population. They have sought no confirmation of diagnosis. Only offending behaviour. Participants have not identified been into prison.
Inclusion	Links to autism, cognitive impairment and offending behaviour.

Literature Review Number: Two

Title of Paper	Asperger's Disorder, Criminal Responsibility and Criminal Culpability
Date	2009
Bibliographical Details	Freckelton, I., List, D. (2009) 'Asperger's Disorder, Criminal Responsibility and Criminal Culpability', Psychiatry, Psychology and Law, 16:1, 16-40, DOI:10.1080/13218710902887483 https://doi.org/10.1080/13218710902887483
Abstract	Asperger's syndrome was only formally accepted into the ICD and DSM classifications of psychiatric disorders in the 1990s. It has been written about extensively in the scholarly literature for two decades, but diagnostic tools are continuing to evolve, as well as understanding of its genetic component and its brain development features. In the criminal law context, it poses difficult issues at trial and at sentencing.

	Contextualising Asperger's disorder within current knowledge about autism spectrum disorders, this article identifies relevant court decisions internationally, and particularly scrutinises selected decisions in the United Kingdom (Sultan v The Queen [2008] EWCA It argues that Asperger's disorder needs to be distinguished by the courts from other disorders, such as personality disorders and intellectual disability, and should be recognised as having the potential to affect in important, albeit subtle, ways defendants' thinking and understanding, as well as their emotional responses to situations that are, to them, traumatic. This makes Asperger's disorder relevant to a number of threshold issues in relation to criminal responsibility as well as to criminal culpability.
Context C	It is necessary as it focuses on the criminal justice journey and details emotional responses. The paper explores intentionality.
How H	The benefit is that it examines the overlap of HFA and Asperger. Many offenders have an Asperger diagnosis, and it is still widely used in the criminal justice system.
Issues I	This study adds to our understanding by giving an understanding of the criminal justice journey for people that have a spectrum disorder. The first challenge posed by Asperger's disorder in the forensic context is for it neither to be under-diagnosed nor (as appeared to happen with the diagnoses of ADD and ADHD) too readily diagnosed. A second and associated challenge is to distinguish it from (and understand its overlap with) other conditions, such as personality disorders, psychopathy, ADHD, autism, and intellectual disability, as well as anxiety and depressive disorders. A third challenge is to identify, in principle, the potential for Asperger's disorder to result in distorted or inaccurate perceptions on the part of those with the disorder. Empirically based research on the impact of Asperger's disorder upon cognitive and affective understanding and experience is necessary to enable judges, juries, and magistrates to make just and informed decisions about both criminal responsibility and culpability in relation to those with the disorder.

Population	The population used is extremely limited and from an outsider. Limitation described in accessing full experiences due to limited access to healthcare professionals.
P	
Inclusion	This highlights the importance of skilled expert assistance being given to courts from psychiatrists and clinical psychologists with not just expertise in developmental disorders but also in explaining their outcomes for defendants' capacity to respond to different scenarios.

Literature Review Number: Three

Title of Paper	Experiences of prison inmates with autism spectrum disorders and the knowledge and understanding of the spectrum amongst prison staff: a review
Date	2015
Bibliographical Details	Claire Alley
Abstract	Purpose – The purpose of this paper is to explore the research which has examined the link between autism spectrum disorders (ASDs) and offending behaviour and the impact of prison on individuals with ASDs. Studies suggest that inmates with ASDs may be at an increased risk of bullying, confrontations, exploitation, anxiety and social isolation as a result of their ASD traits such as obsessions, social naivety and impaired empathy. Design/methodology/approach – An extensive review of the literature. Findings – The review identifies a modest number of studies (n¼4) which have explored the experience of individuals with ASD in prison and highlights those inmates with ASDs face a multitude of problems when they enter prison.

Context C	It is necessary as the purpose of this paper is to explore the research which has examined the link between autism and offending behaviour and the impact of prison on autistic individuals.
How H	The benefit is the comprehensive literature review. However, the paper is not considered to be trustworthy due to the language and inferences made throughout the paper. The paper contains useful references for further research.
Issues I	This study does not add to our understanding of the subject matter as the terminology is extremely limited and dated. The paper considers limited empathy as a descriptor.
Population P	The population used is described using disordered language. No data was collected in the study.
Inclusion	This paper highlights further research is urgently needed to consider the specific problems faced by autistic offenders to identify how to make the prison environment safer and more supportive for autistic offenders and how to reduce the likelihood of reoffending.
Exclusion	Used ASD terminology throughout and does not consider language bias. Outsider language used throughout the paper.

Literature Review Number: Four

Title of Paper	Autism spectrum conditions and offending: an introduction to the special edition
Date	2013
Bibliographical Details	Eddie Chaplin, Jane McCarthy and Lisa Underwood Journal of Intellectual Disabilities and Offending Behaviour. DOI 10.1108/JIDOB-05-2013-0012 VOL. 4 NO. 1/2 2013, pp. 5-8, C Emerald Group Publishing Limited, ISSN 2050-8824 j

Abstract	The purpose of this paper is to offer an overview of the issues from studies that have tried to estimate rates of offending. The paper found that there is currently no consensus on the prevalence of people with autism spectrum conditions who offend, due to the limited evidence base. It is also difficult to generalise findings across the criminal justice system and secure services. Originality/value – This paper brings together a summary of key studies that have estimated the numbers of offenders with autism spectrum conditions over the last 30 years.
Context C	Is it necessary as this paper looks at previous published studies and states that from 2013, there are no studies in my field. This indicates that I need to focus on my search post 2013.
How H	The benefit of this paper is that it brings together a summary of key studies that have estimated the numbers of offenders with autism spectrum conditions over the last 30 years.
Issues I	This study adds to our understanding, as it looks at all studies prior to 2013 and so this is a starting point. Post and pre-2013
Population P	The population used is none. This study is a review. The researcher is an outsider.
Inclusion	This study looks at all studies prior to 2013 and so is a starting point. Post and pre-2013 This paper confirms my statement that there is scant/limited research available.

Literature Review Number: Five

Title of Paper	Screening and Diagnostic Assessment of Neurodevelopmental disorders in a Male Prison McCarthy, Chaplin, Underwood, Forrester, Hayward, Sabet, Young, Asherson, Mills, Murphy.
Date	2015
Bibliographical Details	Journal of Intellectual Disabilities and Offending behaviour Volume 6 No 2
Abstract	The purpose of this paper is to identify neurodevelopmental disorders and difficulties in a male prison. This study used standardised tools and diagnostic tools to screen ADHD and ASD and intellectual disabilities. 87 offenders screened positive for NDD and 70 met the criteria for ADHD, ASD and ND
Context C	This paper was useful because is looked at neurodiversity (referred to ND) as a whole and it did highlight a prevalence of neurodiversity, as a whole, in the prison. It was also based in a male prison.
How H	They screened the prison as a whole and then used a purposeful strategy using a gate keeper. While this is a useful strategy it did not screen enough offenders to be able to determine which offenders were neurodiverse.
Issues I	The study was primarily focused on the mental health wing and then participants were recruited by several gate keepers across four wings.
Population P	This strategy did meet the insider criteria as they had access to the wings; however, not enough of the prison were screened. Only 87 or 798 offenders were screened. The study did support the need for more focused screening of autism and to increase overall sample size in order to gauge the extent of neurodiversity in prisons.
Inclusion	This paper was included as it focuses on determining neurodiversity within prisons at any one time. Also, it was based in a male, Category C prison which is identical to my prison used for the study.

Literature Review Number: Six

Title of Paper	Development and implementation of autism standards for prison (2015) Allely
Date	2015
Bibliographical Details	Lewis, A., Pritchett, R., Hughes, C., Turner, K. The Journal Of Intellectual Disabilities and Offending Behaviour Volume 6, No 2, pp 68-80
Abstract	The purpose of this paper is to describe the experience of a Southern English Young Offenders Institution in developing and implementing standards to improve awareness of the care of prisoners with autistic spectrum disorders (ASD). It is expected that the successful implementation of the standards will reduce the level of distress and difficulty experienced by people with ASD who find themselves in custody. It will also improve the prison's ability to meet the needs of prisoners with ASD. This paper describes a clear framework which prisons can use to work systematically to work towards achieving good practice in addressing the needs of prisoners with ASD. It will enable the prisons to meet the duties imposed on them by the autism act, 2009 and the Equalities Act, 2010.
Context C	The project was necessary because it encouraged prisons to work towards the autism accreditation standards. The standards set out the levels of understanding and awareness over a 12-month period. There is nothing that suggests this has been maintained and certainly, I did not see any evidence of this in the prison where I conducted my study.
How H	The project was divided into 6 phases in a 12-month period in one setting. The phases are 1. Develop standards 2. Implement standards 3. Self-Audit 4. External Audit 5. Accreditation 6. Dissemination.
Issues I	This is likely to require an allocation of staff time and some costs, and this is where there is likely to be a limitation as prisons are under pressure to reduce costs. The framework of care would be loosely followed; however, it needs a dedicated worker for the standard to be implemented to achieve a higher level of success.
Population	This study was carried out in a whole prison context and its primary focus was to shift awareness and knowledge around young autistic

P	offenders. A screening tool was created, and this is useful for healthcare professionals to use.
Inclusion	Included on the basis that the study was working in a whole prison context to bring about systemic change.

Literature Review Number: Seven

Title of Paper	Autism behind bars: A review of the research literature and discussion of key issues (2015) Robertson, McGillivrey
Date	2015
Bibliographical Details	Robertson, C. E., McGillivrey, J. A. The Journal of Forensic Psychiatry and Psychology Issue 26 p.719-736
Abstract	Individuals with autism spectrum disorder (ASD) may experience difficulties coping at all levels of involvement with the criminal justice system. Questions remain, however, regarding the presence and type of difficulties faced by individuals with ASD and in the context of incarceration within prison settings. Despite the potential impact for community safety and concerns regarding justice, these issues have received little academic attention. The research that does exist is generally limited by poor methodology and poor sample sizes. The current paper provides a brief overview and discussion of the limited extant literature regarding the experiences of prisoners with ASD.
Context C	This review was necessary because there is very little literature available, and the review would pull together what has been published and provide a foundation for further research.
How H	This paper did not show what methodology was used to carry out the literature review. It is likely to be a systematic review or even a rapid review.
Issues I	The paper had several issues, starting with the lack of methodology. We cannot tell if the literature review is reliable and has reviewed all available sources. In conducting my own review, I found publications that this review had not used. The paper does not say which papers were excluded. It made some statements around people with ASD not

	presenting typically with comorbid conditions; however, I know this within my own experience not to be true and this leads me to infer that the papers reviewed were limited and therefore, conclusions were made based on limited and misrepresented evidence. The use of the acronym ASD is regarded as not politically correct as the D represents disordered and this is disregarded by the autistic community.
Population P	Each paper reviewed had a limited population and this was discussed and concluded within the paper. Each paper reviewed was carried out by academic researchers outside of the prison. There was no insider perspective.
Inclusion	This review was included because it supports my hypothesis that there is extraordinarily little literature available. The review pulled together what has been published and provided a foundation for further research.

Literature Review Number: Eight

Title of Paper	Characteristics of male autistic spectrum patients in low security: are they any different to low security patients? (2013) Haw, Radley, Cooke.
Date	2013
Bibliographical Details	Haw. H., Radley. J., Cooke. L. The Journal of Intellectual Disabilities and Offending Behaviour Vol 4, p.24-32
Abstract	The purpose of this paper is to describe the characteristics of adult male autistic spectrum disorder (ASD) patients admitted to low secure services and to compare them with non-ASD patients.
Context C	The review was necessary to be able to accurately compare an ASD and a no ASD patient group to see if there were noticeable findings.
How H	Case control study of admissions to two ASD units and one non ASD unit at a territory referral centre. Subjects were compared on a demographic, personal, clinical and behavioural variables.
Issues	This paper was set in a low secure hospital and so did not match my criteria of being in a prison setting.

I	
P Population	20 ASD participants and 18 non ASD participants were used in this study which is a small population size.
Inclusion	I included this study because it compared an ASD and a no ASD patient group to see if there were noticeable findings. These findings form a foundation to work from when thinking about one-to-one and group interventions that can be delivered within the prison.

Literature Review Number: Nine

Title of Paper	People don't like you when you are different: exploring the prison experiences of autistic individuals.
Date	2020
Bibliographical Details	Vinter. L. P., Dillon. G., Winder. B.
Abstract	There is little research regarding the prison experiences of individuals diagnosed with autism. Extant literature suggests that prison presents numerous challenges for autistic prisoners. This research explores the experiences of 7 autistic men in a UK prison that houses individuals who are serving sentences for sexual convictions. Participants were interviewed using semi structured interview schedules. Interview were transcribed verbatim and were analysed with an applied inducted thematic analysis.
Context **C**	The review was necessary too because it was focused on autistic offenders; however, they were all sex offenders and that is a very narrow study. The study provides insight on the lived experiences of autistic offenders.
How **H**	The participants had confirmed ASD diagnoses to take part in the study. The intellectual and disabilities nurse acted as a gate keeper for the participants to take part in the study. The interviews were conducted on a one-to-one basis. The researchers allowed time for rapport building. The researchers were able to scaffold and filter questions.

Issues I	The sample size is too limited to be able to be reliable. In addition, it is a study looking at the lived experiences of autistic offenders and for my study HMPPS require measurable data that can be used to justify future interventions within the prison system.
Population P	There were only 7 prisoners interviewed in the study. The study was a qualitative study looking at the lived experiences of offenders in prison.
Inclusion	This study was included on the basis that it was one of the very few papers that were conducted within a prison setting.

Literature Review Number: Ten

Title of Paper	Intellectual disability in the Victorian prison system; Characteristic of prisoners with an intellectual disability (2010) Holland, Persson.
Date	2010
Bibliographical Details	Psychology Crime and Law, Holland. S., Persson. P. ISSN: 1068-316X
Abstract	This research seeks to examine both the prevalence of intellectual disability among the prison population in the State of Victoria, Australia and how prisoners with an intellectual disability differ from non-intellectually disabled prisoners on factors relevant to their management and rehabilitation within prison. The results demonstrate that while prisoners with an intellectual disability are not over-represented among the Victorian prison population they do differ from non-intellectually disabled prisoners in a number of important ways. Prisoners with an intellectual disability were characterised by significant prior involvement with the criminal justice system, a high risk of re-offending, difficulties moving to minimum security while in prison and in obtaining parole. These findings indicate that prisoners with an intellectual disability are a group with complex histories and needs, who present considerable challenges to the correctional system and the broader forensic disability and disability service systems in their management and rehabilitation.

Context C	For the purpose of this study, 'prisoners with an ID' are defined as those prisoners registered with DHS as having an ID. Because the intelligence quotient and adaptive functioning of prisoners is not assessed by CV, the mean IQ of both non-ID and prisoners with an ID in the study cohort and the IQ range of these prisoners were not ascertained. Prisoners with a borderline ID also could not be identified and incorporated into the analyses. The study cohort was drawn from all sentenced male prisoners who were released from Victorian prisons between 1 July 2003 and 30 June 2006.
How H	9481 male prisoner release records were extracted from the CV Prisoner Information Management System (PIMS), relating to 7805 distinct individuals. Several 28 individuals had been released from prison more than once during the study period. The most recent release record was retained, and previous records discarded. Throughout this study, the episode of imprisonment selected for the study is referred to as the 'current episode'. Of the 7805 distinct individuals, 102 had an identified ID and made up the ID cohort (see Figure 1). A random sample of the 7703 non-ID prisoners (non-ID) was obtained using the random sample function in SPSS (approximately 3% of the total sample), providing a non-ID cohort of 244 individuals.
Issues I	The findings indicate that prisoners with an intellectual disability are a group with complex histories and needs. They present considerable challenges to the correctional system and the broader forensic disability and disability service systems in their management and rehabilitation.
Population P	A sample of prisoners with an intellectual disability (n=102) released from custody between 1 July 2003 and 30 June 2006 was compared with a random sample of non-intellectually disabled prisoners (n=244) released over the same period on a range of demographic, criminal history, offence, custody, and criminogenic risk and need variables.
Inclusion	This study was included on the basis that the findings indicate that prisoners with an intellectual disability are a group with complex histories and needs. This supported the need for further research.

Literature Review Number: Eleven

Title of Paper	A systematic PRISMA review of individuals with autism in secure psychiatric care: Prevalence, treatment, risk assessment and other clinical considerations.
Date	2017
Bibliographical Details	Allely. C. S. Journal of Criminal Psychology; Bingley Volume 8, Issue 7, p. 58-79. DOI:10.1108/JCP-06-2017-0028
Abstract	Patients with autism spectrum disorder (ASD) present with specific assessment, specific difficulties, needs and therapeutic issues and therefore, are a challenging group for forensic services.
Context C	Given the challenge that individuals with ASD present to forensic services, the suggested increase in the number of this group, within this setting and the relatively little amount of research which suggests they face several difficulties within the prison environment. The purpose of this paper is to identify and review all the studies which have been carried out investigating any aspect of ASD in relation to secure hospital settings.
How H	Seven internet-based bibliographic databases were used for the present review. No date limitations were placed on the search. Seven databases were searched in order to identify studies which investigated ASD within a secure psychiatric hospital/facility. Following Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines (Liberati *et al.*, 2009). The PRISMA statement contains a 27-item checklist and a four-phase flow diagram. The checklist consists of items which are considered key to ensuring transparent reporting in a systematic review (Moher *et al.*, 2009; Liberati *et al.*, 2009). All references contained in the papers identified as relevant from the database searches were also examined for possible inclusion in this review.

Issues I	Following a scoping search of the field, there were relatively few studies found across these areas. The paper uses language that is currently rejected such as the word 'disordered'.
Population P	The search returned 96 articles. There were five duplicates, and after these were removed, there were 91. Only, five articles found in the databases search meet the inclusion criteria of this review.
Inclusion	This paper supported my early findings that there are limited findings in the search area. Searches on Google Scholar resulted in the identification of seven articles which met the inclusion criteria of this review. Given the relatively little research in this field, this review is more inclusion than exclusion.

Literature Review Number: Twelve

Title of Paper	Risk Factors for violent offenders in autism spectrum disorder: A national study for hospitalised individuals.
Date	2009
Bibliographical Details	Langstrom, N., Grann, M., Ruchkin, V., Sjostedt, G., Fazel. S. Journal of Interpersonal Violence Volume 24 Number 8 August 2009 1358-1370 © 2009 SAGE Publications 10.1177/0886260508322195 http://jiv.sagepub.com hosted at http://online.sagepub.com
Abstract	Little is known about risk factors for violence among individuals with autism spectrum disorder (ASD). This study uses data from Swedish longitudinal registers for all 422 individuals hospitalized with autistic disorder or Asperger syndrome during 1988-2000 and compares those committing violent or sexual offenses with those who did not. Thirty-one individuals with ASD (7%) were convicted of violent nonsexual crimes and two of sexual offenses. Violent individuals with ASD are more often male and diagnosed with Asperger syndrome rather than autistic disorder. Furthermore, comorbid psychotic and substance use disorders are associated with violent offending. We conclude that violent offending in ASD is related to similar co-occurring psychopathology as previously found among violent individuals without ASD. Although this study does not answer whether ASDs are associated with increased risk

	of violent offending compared with the general population, careful risk assessment and management may be indicated for some individuals with Asperger syndrome.
Context C	Carried out in Sweden, all participants are given a unique 12-digit personal identification number that is used in national registers for health care and crime. Sweden has the largest national inpatient hospital register in the world. This register includes all individuals admitted to any general or psychiatric hospital for assessment and/or treatment.
How H	Hospital discharge diagnoses are comprehensive in terms of national coverage from 1988. The register is of high quality; for example, of the 1,421,795 discharges from hospital with psychiatric diagnoses from 1988 to 2000, a personal identification number was lacking for only 13,669 discharge episodes (1.0%).
Issues I	Any investigation of the relationship between psychiatric morbidity and offending is a methodological challenge. The study tested a series of sociodemographic risk factors and comorbid psychiatric disorders that could be associated with violent offending in individuals with ASD. It considered the disabling nature and low prevalence of ASDs, and that a minority of our sample was convicted of violent offences, these disorders are not likely to account for a large proportion of violent crimes in the society. This study cannot answer if there is an increased risk of violent offending in individuals with ASDs compared with individuals in the general population.
Population P	19% (12/62) of individuals with any psychiatric comorbidity offended violently and corresponding proportions were 18% (8/44) for comorbid schizophrenia, 33% (3/9) for personality disorder, and 71% (5/7) for substance misuse. This strongly suggests that the assessment and management of co-occurring psychopathology may be helpful to reduce violence risk in individuals with ASD.
Inclusion	This study has been included on the basis that it looks at the link between co-occurring conditions that are linked to autism.

Literature Review Number: Thirteen

Title of Paper	Circumscribed interests and offenders with autism spectrum disorders: a case control study.
Date	2010
Bibliographical Details	Woodbury-Smith. M., Clare. I., Holland,. A. J., Watson. P. C., Bambrick. M., Kearns. A., Staufenberge. E. Source: Journal of Forensic Psychiatry & Psychology
Abstract	The possibility that circumscribed interests, one of the features of the core clinical phenotype of autism spectrum disorders, may be related to offending and other behaviour, bringing individuals into contact with the criminal justice system, has not been investigated systematically. We compared the circumscribed interests of a group of 21 intellectually able 'offenders' with autism spectrum disorders with those of 23 men and women with no such history. As expected, the 'offenders' were significantly (p 5 0.05) more likely to report interests rated as having a 'violent' content. Moreover, for some (29%) participants, the 'index offence' seemed to be related to his or her interest(s); however, the nature of these relationships varied widely. We need to develop (a) an appropriate methodology to collect more detailed information about circumscribed interests, and (b) investigate the impact of treatment and support strategies informed by a more nuanced understanding of the relevance of circumscribed interests.
Context C	A semi-structured interview schedule was developed to provide a framework to review: Information about changes in the content of these interests over time. Determine the average time spent engaged in each interest as a measure of intensity. Focus, for the 'offender' group, on their interests both at the time of the 'index offence', and on their current interests. Detailed verbatim notes were taken for later analysis. For the 'offender' participants, health care records from around the time of their 'index offence' were also reviewed.
How H	All adults (aged 18 years and over) who took part in the study had given consent and met the diagnostic criteria for autism. Only those whose tested intellectual ability was not significantly impaired (defined as Full Scale IQ score of 70 or above), measured

	using the Wechsler Abbreviated Scale of Intelligence (WASI, The Psychological Corporation, 1999), were included.
Issues I	The study examined the possible relevance of self-reported circumscribed interests in the understanding of behaviour by men and women with ASDs which had resulted in them coming into contact with the criminal justice system. As expected, the 'offenders' were significantly more likely than their 'non-offending' counterparts to report 'violent' interests. Strikingly, however, for more than two-thirds (71%, n ¼ 15) of the 21 participants in the 'offending' group, no relationships between the content or the intensity of the individual's interest(s) and his or her illegal, or alleged illegal, behaviour could be identified. Moreover, among the remaining six participants, the nature of these putative relationships appeared to vary greatly. Unfortunately, the time frame of the study did not allow test–retest and inter-rater reliabilities to be examined. Individuals for whom no developmental history was available or for whom the diagnosis of an ASD was in doubt were excluded. The study had issues with collecting detailed information about circumscribed interests and systematic investigations of treatment and support strategies that reduce risk. It identified the issues but made no suggestions of solutions.
Population P	The paper compared a group of 21 intellectually able 'offenders' with autism spectrum disorders with those of 23 men and women with no such history.
Inclusion	This study was included on the basis that it was based in a prison setting. It also identified several considerations that I considered for my own study.

A5   WAIS-IV Subtest Index Score Data. 0-5 needs support 16-19 superior 8-12 normal.

ID Number	Age	[SI] Similarities	[VC] Vocabulary	[BD] Block Design	[MR] Matrix Reasoning	[SS] Symbol Search	[DS] Digit Span	Sum
1	32	19	13	9	9	5	8	63
2	32	19	13	9	9	5	8	63
3	23	19	13	9	9	5	9	64
4	32	10	15	15	17	13	18	88
5	25	16	8	12	17	7	5	65
6	25	2	4	14	15	10	8	53
7	47	7	3	13	16	16	7	62
8	29	19	11	14	13	13	11	81
9	51	19	19	10	8	11	8	75
10	30	19	18	14	11	9	3	74
11	28	11	15	9	19	6	6	66
12	27	9	7	6	7	9	10	48
13	28	11	15	9	19	6	7	67
14	34	17	11	8	9	19	10	74
15	35	3	6	10	7	11	9	46
16	35	7	3	16	19	19	6	70
17	29	6	9	14	8	15	6	58
18	31	7	9	9	9	9	10	53
19	32	19	12	19	19	19	19	107
20	32	13	13	14	13	10	10	73
21	21	10	8	8	5	8	11	50
22	26	4	6	11	7	9	6	43

23	20	3	4	6	6	7	7	33
24	41	14	14	10	10	12	8	68
25	32	13	13	14	13	10	10	73
26	26	5	9	10	8	17	5	54
27	26	8	10	9	13	6	5	51
<u>28</u>	36	10	13	12	8	8	6	57
29	21	19	3	17	18	19	5	81
30	36	17	18	9	9	6	1	60
31	42	8	17	13	11	5	10	64
32	49	4	6	9	5	4	4	32
33	21	2	8	15	14	10	8	57
34	22	4	8	7	10	12	9	50
35	22	5	8	8	11	12	7	51
36	58	3	6	13	8	12	13	55
37	43	13	3	10	7	6	9	48
38	24	13	3	10	7	6	8	47
39	36	12	4	10	5	6	7	44
40	53	9	19	13	14	5	9	69
41	41	8	5	7	9	10	6	45
42	33	10	9	8	9	12	5	53
43	22	8	9	7	8	9	10	51
44	37	10	9	11	10	7	12	59
45	29	7	9	12	11	7	9	55
46	32	19	3	8	9	7	12	58
47	42	4	7	8	7	6	5	37
48	27	11	8	7	8	12	7	53
49	31	7	8	11	10	9	8	53
50	21	9	10	12	11	9	11	62
51	22	8	9	7	8	9	10	51

52	37	10	9	11	10	7	12	59
53	29	7	9	12	11	7	9	55
54	32	19	3	8	9	7	12	58
55	42	4	7	8	7	6	5	37
56	27	11	8	7	8	12	7	53
57	31	7	8	11	10	9	8	53
58	21	9	10	12	11	9	11	62
59	24	13	3	10	7	6	8	47
60	36	12	4	10	5	6	7	44
61	53	9	19	13	14	5	9	69
62	41	8	5	7	9	10	6	45
63	33	10	9	8	9	12	5	53
64	22	8	9	7	8	9	10	51
65	37	10	9	11	10	7	12	59
66	29	7	9	12	11	7	9	55
67	32	19	3	8	9	7	12	58
68	42	4	7	8	7	6	5	37
69	27	11	8	7	8	12	7	53
70	31	7	8	11	10	9	8	53
71	21	9	10	12	11	9	11	62
72	29	19	11	14	13	13	11	81
73	51	19	19	10	8	11	8	75
74	30	19	18	14	11	9	3	74
75	28	11	15	9	19	6	6	66
76	27	9	7	6	7	9	10	48
77	28	11	15	9	19	6	7	67
78	34	17	11	8	9	19	10	74
79	35	3	6	10	7	11	9	46
80	35	7	3	16	19	19	6	70

81	29	6	9	14	8	15	6	58
82	31	7	9	9	9	9	10	53
83	32	19	12	19	19	19	19	107
84	32	13	13	14	13	10	10	73
85	21	10	8	8	5	8	11	50
86	26	4	6	11	7	9	6	43
87	20	3	4	6	6	7	7	33
88	41	14	14	10	10	12	8	68
89	32	13	13	14	13	10	10	73
90	26	5	9	10	8	17	5	54
91	26	8	10	9	13	6	5	51
92	36	10	13	12	8	8	6	57
93	21	19	3	17	18	19	5	81
94	36	17	18	9	9	6	1	60
95	42	8	17	13	11	5	10	64
96	41	14	14	10	10	12	8	68
97	32	13	13	14	13	10	10	73
98	31	7	9	9	9	9	10	53
99	32	19	12	19	19	19	19	107
100	36	6	8	11	5	9	12	51

Table 16, COPE Questionnaire Sub-Sections.

Main Section	Sub-Section	Marker Questions	Sub-Section Description
Problem-Focussed	Active Coping	5,25,47,58	The process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects. Active coping includes initiating direct action, increasing one's efforts, and trying to execute a coping attempt in stepwise fashion.
	Planning	19,32,39,56	Thinking about how to cope with a stressor. Planning involves coming up with action strategies, thinking about what steps to take and how best to handle the problem.
	Suppression of competing activities	15,33,42,55	Putting other projects aside, trying to avoid becoming distracted by other events, even letting other things slide, if necessary, in order to deal with the stressor.
	Restraint	10,22,41,49	Waiting until an appropriate opportunity to act presents itself, holding oneself back, and not acting prematurely. Although restraint is often overlooked as a potential coping strategy, it sometimes is a necessary and functional response to stress.
	Use of instrumental social support	4,14,30,45	Seeking advice, assistance, or information.
Emotion-Focussed	Use of emotional social support	11, 23, 34, 52	Getting moral support, sympathy, or understanding. It is a double-edged sword. It would seem to be functional, in many ways. That is, a person who is made insecure by a stressful transaction can be reassured by obtaining this sort of support. This strategy can, thereby, foster a return to problem-focused coping.

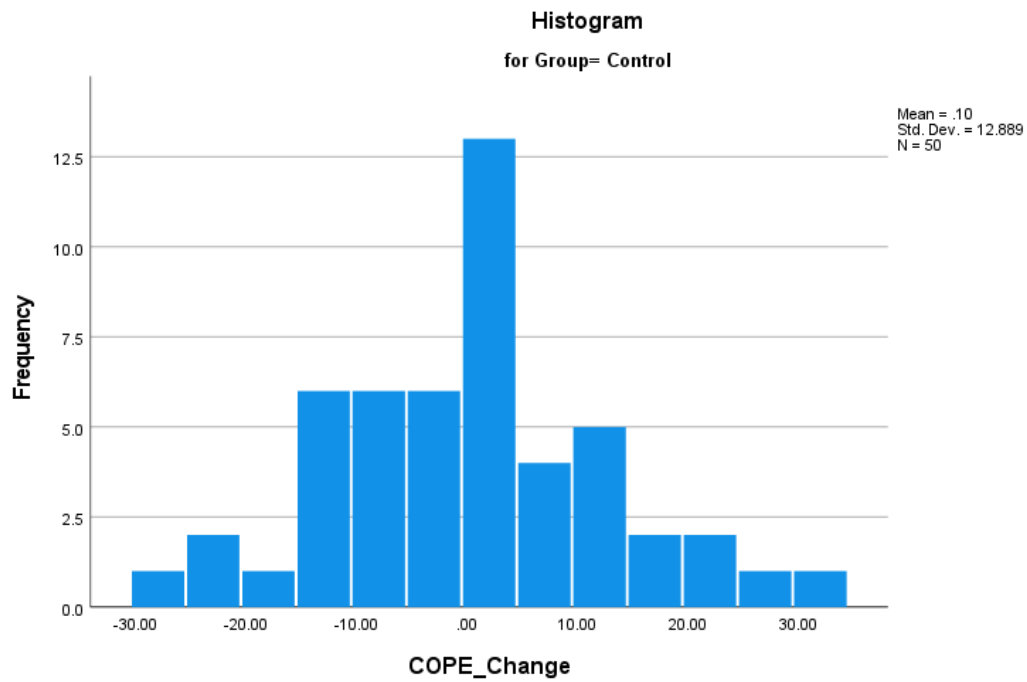|	Positive reinterpretation and growth	1, 29, 38, 59	The value of this tendency is not limited to reduction of distress, as construing a stressful transaction in positive terms should intrinsically lead the person to continue (or to resume) active, problem-focused coping actions.
	Acceptance	13, 21, 44, 54	It is arguable that acceptance is a functional coping response, in that a person who accepts the reality of a stressful situation would seem to be a person who is engaged in the attempt to deal with the situation. One might expect acceptance to be particularly important in circumstances in which the stressor is something that must be accommodated to, as opposed to circumstances in which the stressor can easily be changed.
	Denial	6, 27, 40, 57	Denial has many meanings here. It is defined as refusal to believe that the stressor exists or of trying to act as though the stressor is not real. It is often suggested that denial is useful, minimising distress and thereby, facilitating coping. Alternatively, it can be argued that denial only creates additional problems unless the stressor can profitably be ignored. That is, denying the reality of the event allows the event to become more serious, thereby, making more difficult the coping that eventually must occur. A third view is that denial is useful at early stages of a stressful transaction but impedes coping later on.
	Religious coping	7, 18, 48, 60	Religious coping is a tendency to turn to religion in times of stress. One might turn to religion when under stress for widely varying reasons: religion might serve as a source of emotional support, as a vehicle for positive

			reinterpretation and growth, or as a tactic of active coping with a stressor.
Avoidance-Focused	Focus on and venting of emotions	3, 17, 28, 46	The tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings. Such a response may sometimes be functional, for example, if a person uses a period of mourning to accommodate to the loss of a loved one and move forward. There is reason to suspect, however, that focusing on these emotions (particularly for long periods) can impede adjustment. The phenomenological salience of distress may exacerbate the distress; focusing on the distress may also distract people from active coping efforts and movement beyond the distress.
	Behavioural disengagement	9, 24, 37, 51	Reducing one's effort to deal with the stressor, even giving up the attempt to attain goals with which the stressor is interfering. Behavioural disengagement is reflected in phenomena that are also identified with terms such as helplessness. In theory, behavioural disengagement is most likely to occur when people expect poor coping outcomes.
	Mental disengagement	2, 16, 31, 43	A wide variety of activities that serve to distract the person from thinking about the behavioural dimension or goal with which the stressor is interfering. Tactics that reflect mental disengagement include using alternative activities to take one's mind off a problem (a tendency opposite to the suppression of competing activities), daydreaming, escaping through sleep, or escape by immersion in TV.

	Substance use	12, 26, 35, 53	Turning to drugs or alcohol to take your mind off the problem.
	Humour	8, 20, 36, 50	Joking about the issue.

Findings

A6   Histograms and Q-Q plots
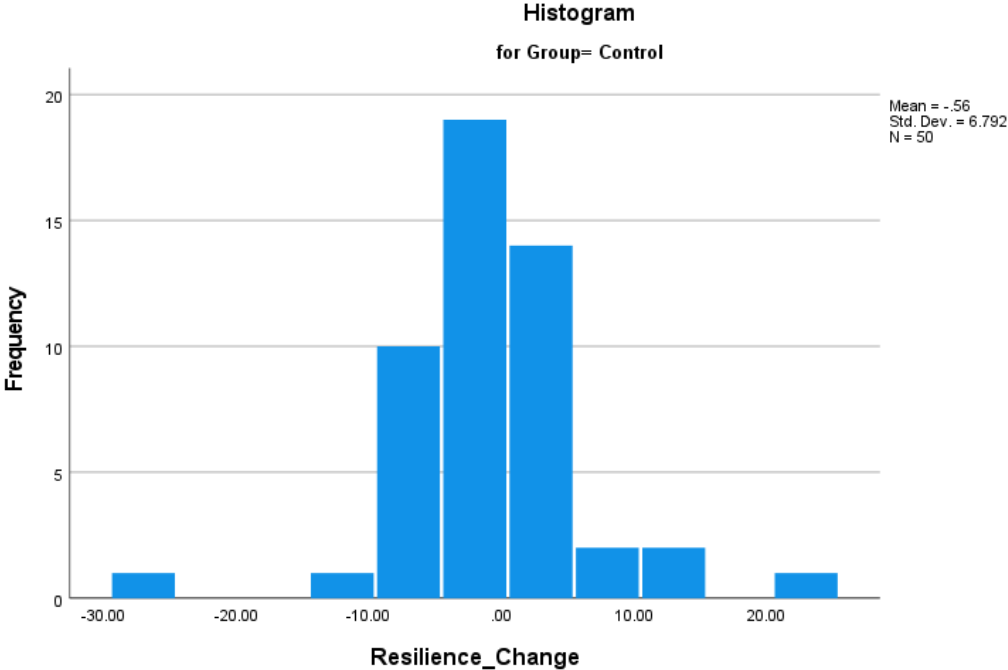
Cope Control

Histogram
for Group= Control

Mean = .10
Std. Dev. = 12.889
N = 50

Cope Research

Histogram
for Group= Research

Mean = 34.54
Std. Dev. = 31.021
N = 50

Normal Q-Q Plot of COPE_Change
for Group= Control

Normal Q-Q Plot of Resilience_Change
for Group= Research

Resilience Control

Histogram
for Group= Control

Mean = -.56
Std. Dev. = 6.792
N = 50

Resilience Research

Histogram
for Group= Research

Mean = 10.90
Std. Dev. = 11.116
N = 50

Normal Q-Q Plot of Resilience_Change
for Group= Control

Normal Q-Q Plot of Resilience_Change
for Group= Research

WEMWBS Control

Histogram

for Group= Control

Mean = 1.32
Std. Dev. = 8.824
N = 50

WEMWBS Research

Histogram

for Group= Research

Mean = 16.08
Std. Dev. = 14.577
N = 50

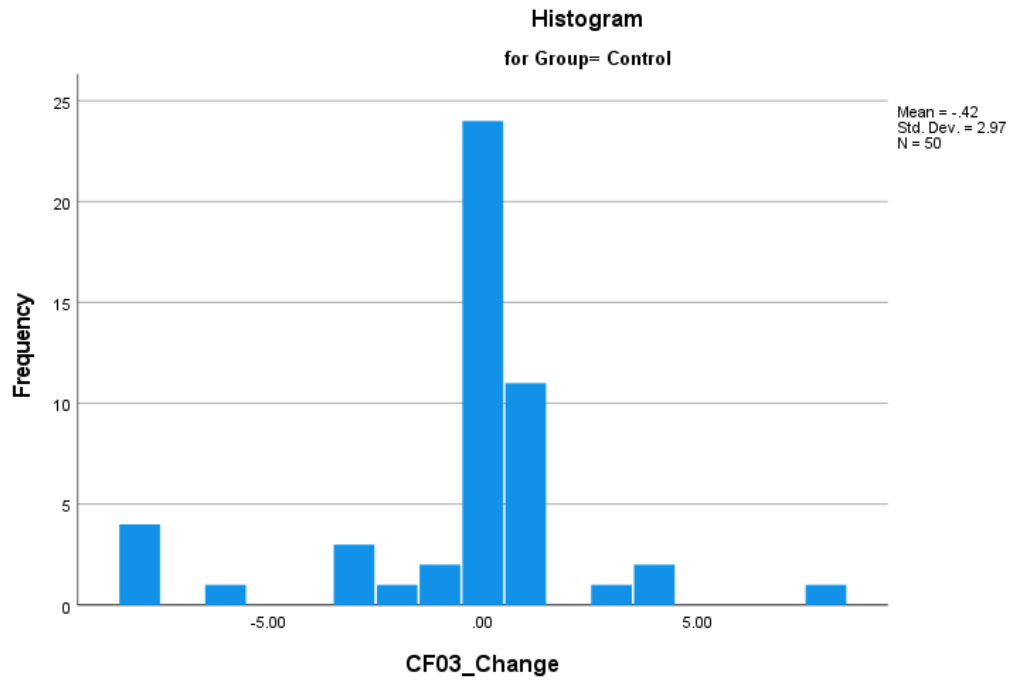Normal Q-Q Plot of WEMWBS_Change
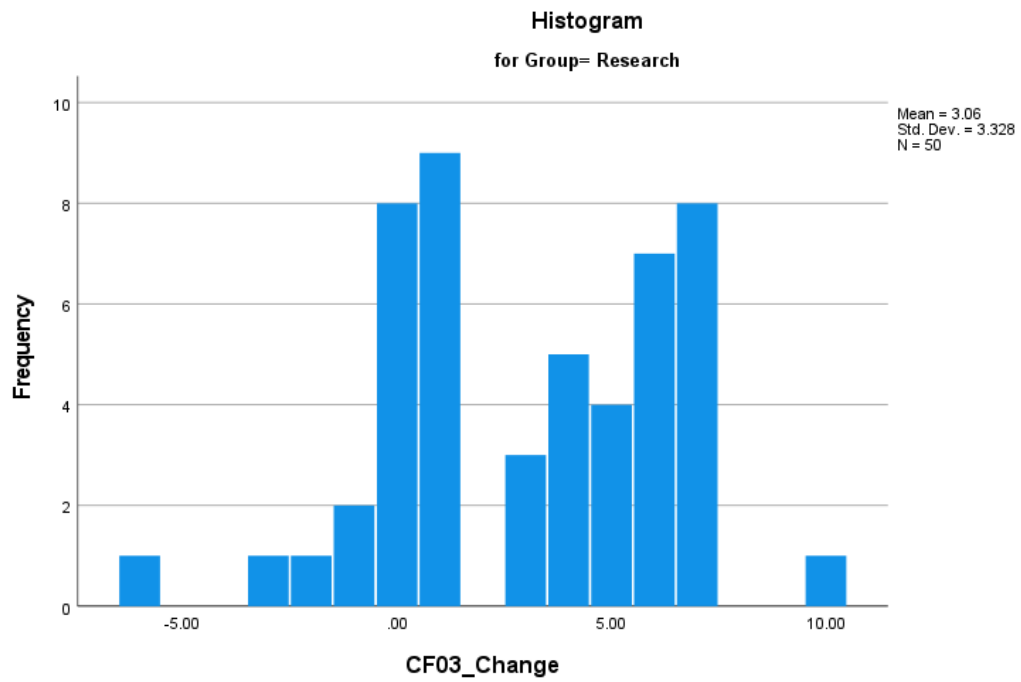
for Group= Control

Normal Q-Q Plot of WEMWBS_Change
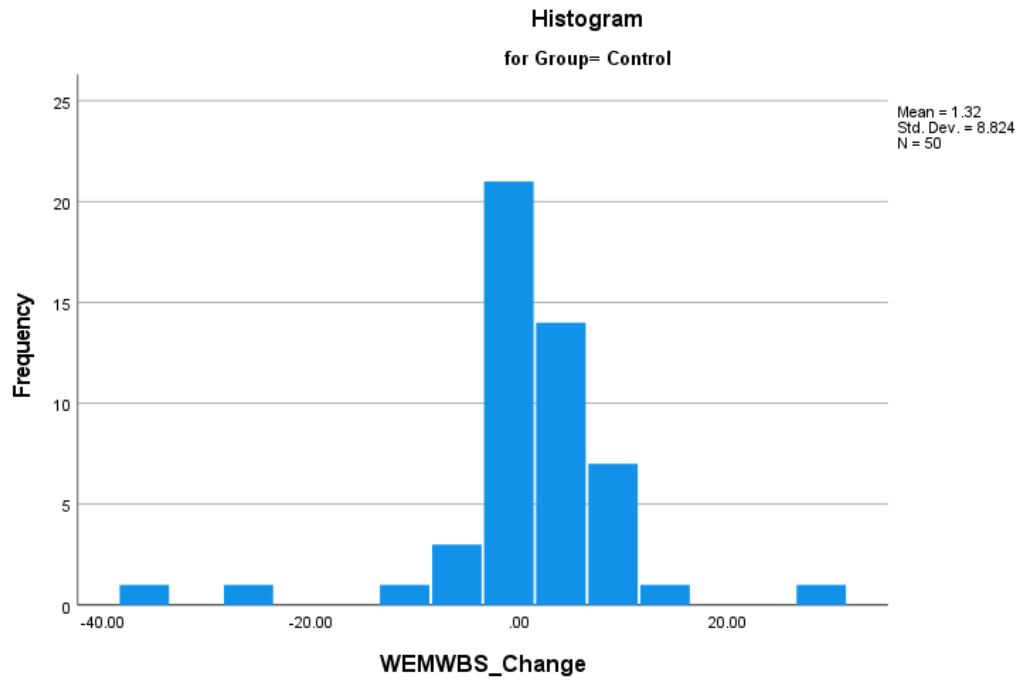
for Group= Research
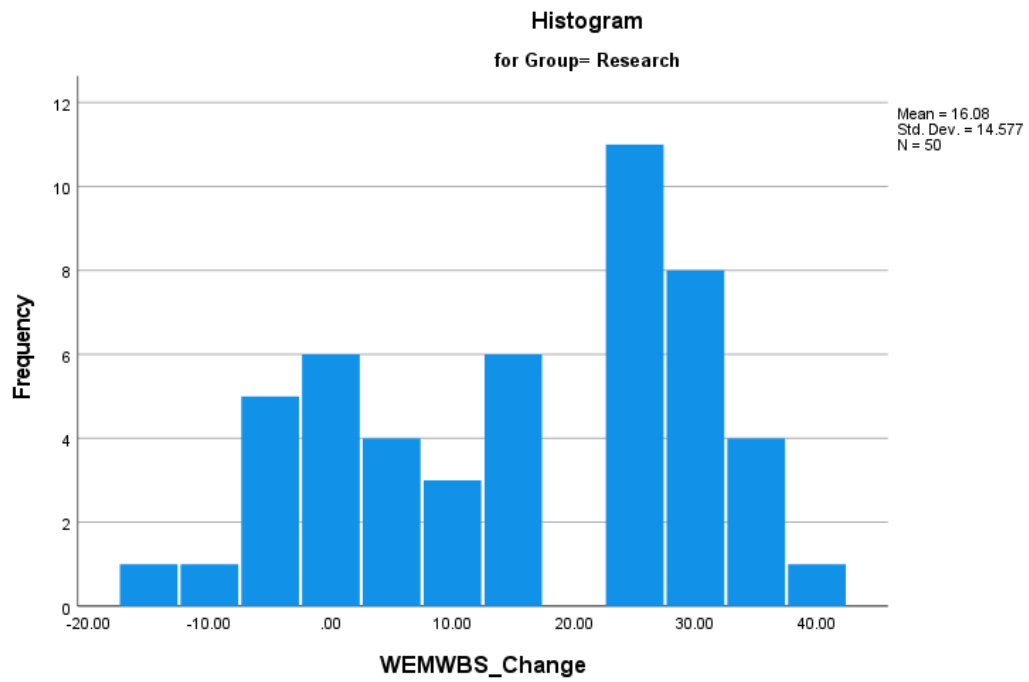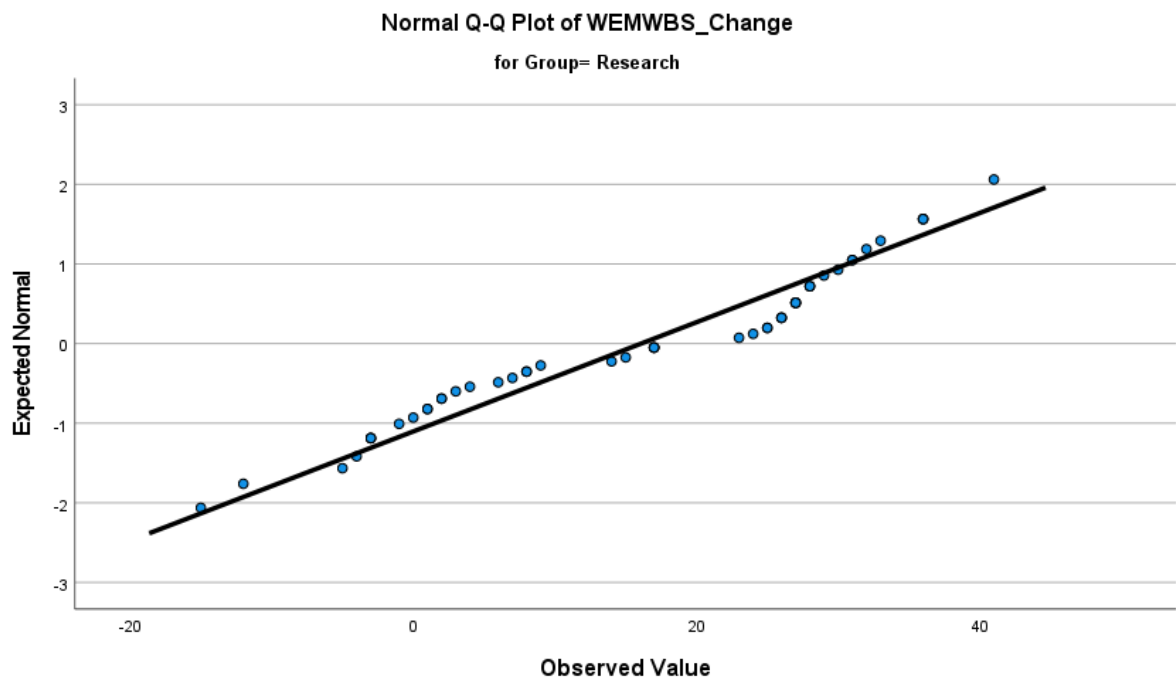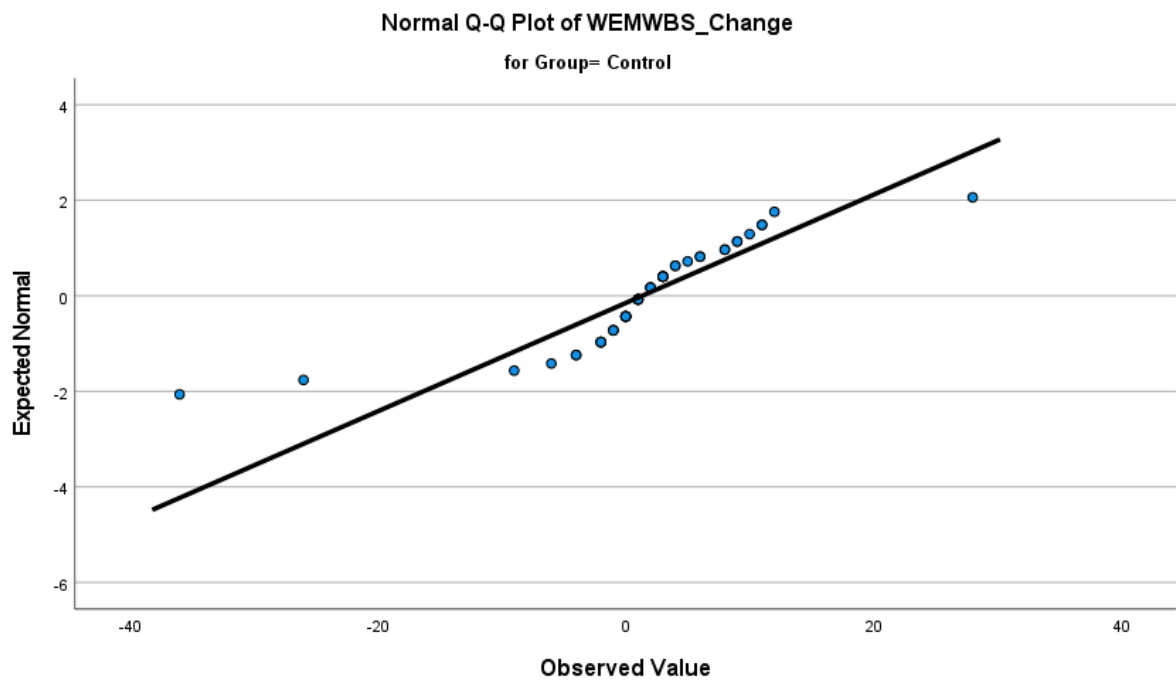
Reducing Reoffending Control

Histogram
for Group= Control

Mean = -.42
Std. Dev. = 2.97
N = 50

Reducing Reoffending Research

Histogram
for Group= Research

Mean = 3.06
Std. Dev. = 3.328
N = 50

Normal Q-Q Plot of CF03_Change

for Group= Control

Normal Q-Q Plot of CF03_Change

for Group= Research
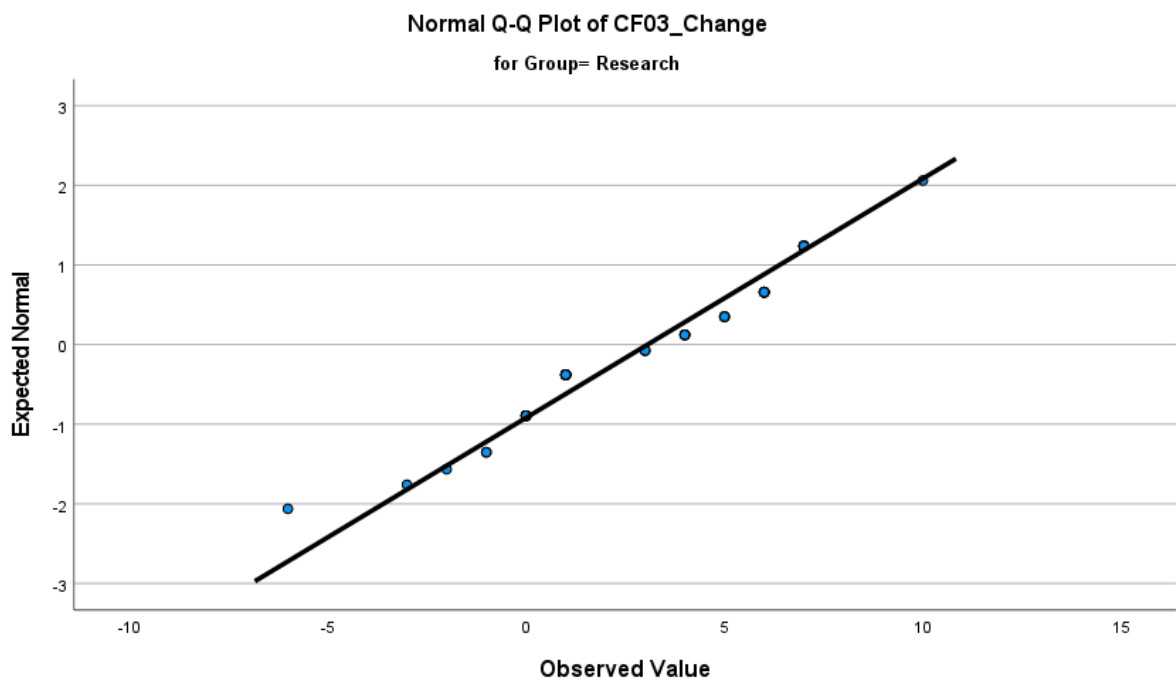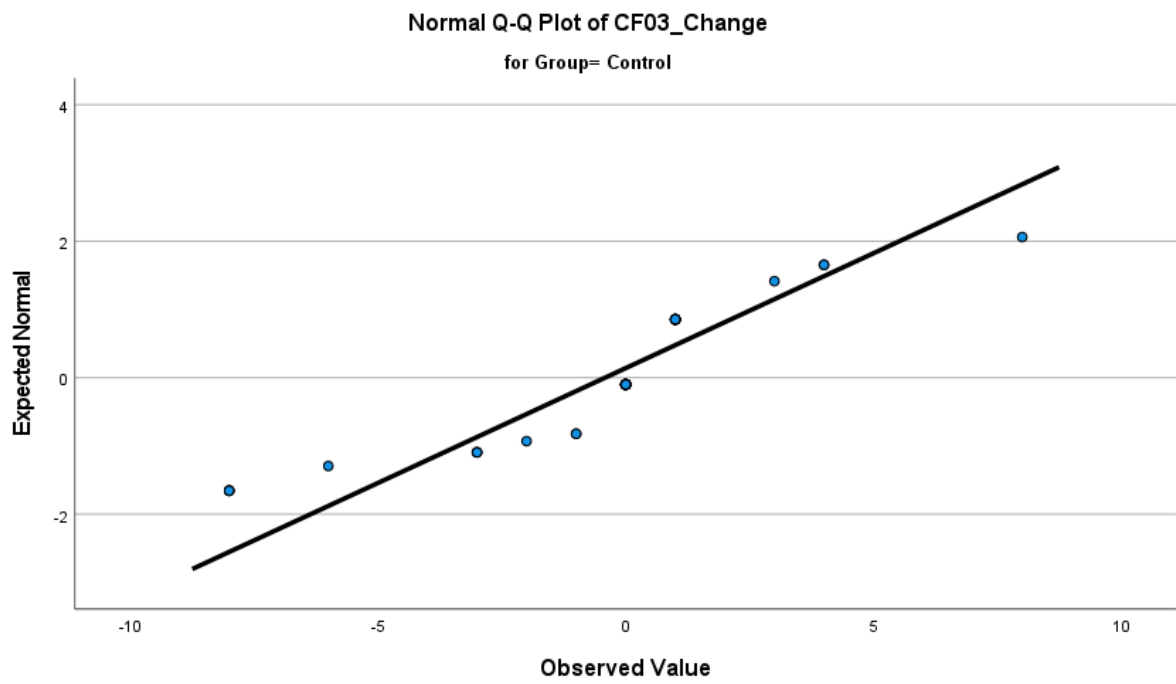
Course Before and After Scores – Research Group

Histogram
for Group= Research

Mean = 24.24
Std. Dev. = 25.871
N = 50

Normal Q-Q Plot of Course_Change
for Group= Research
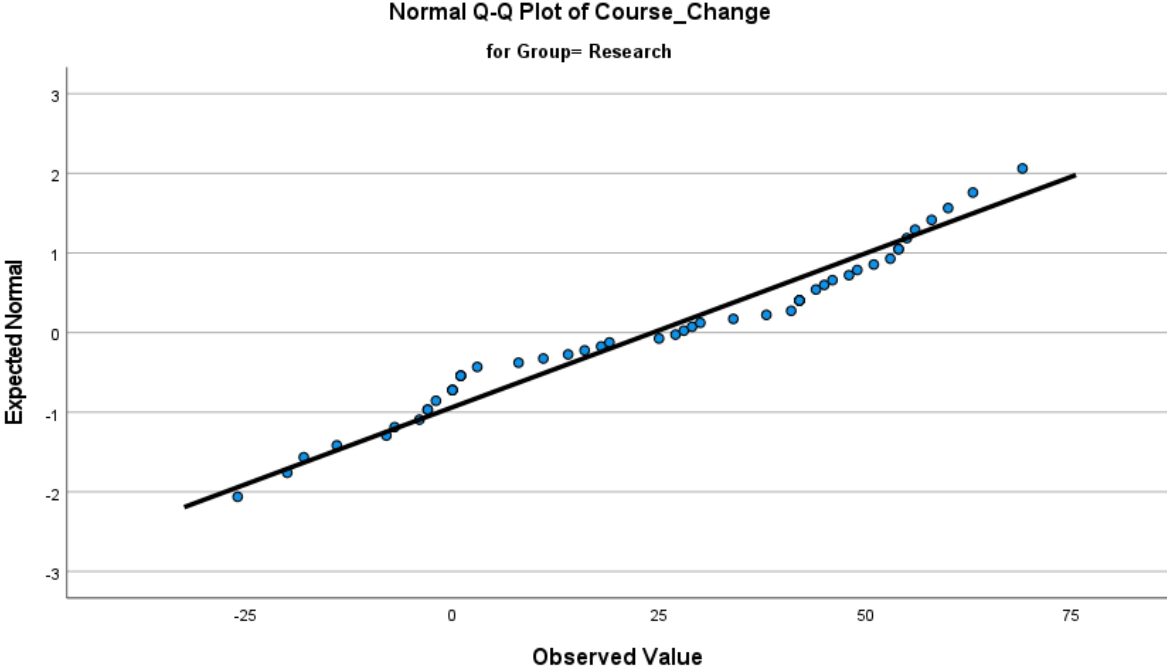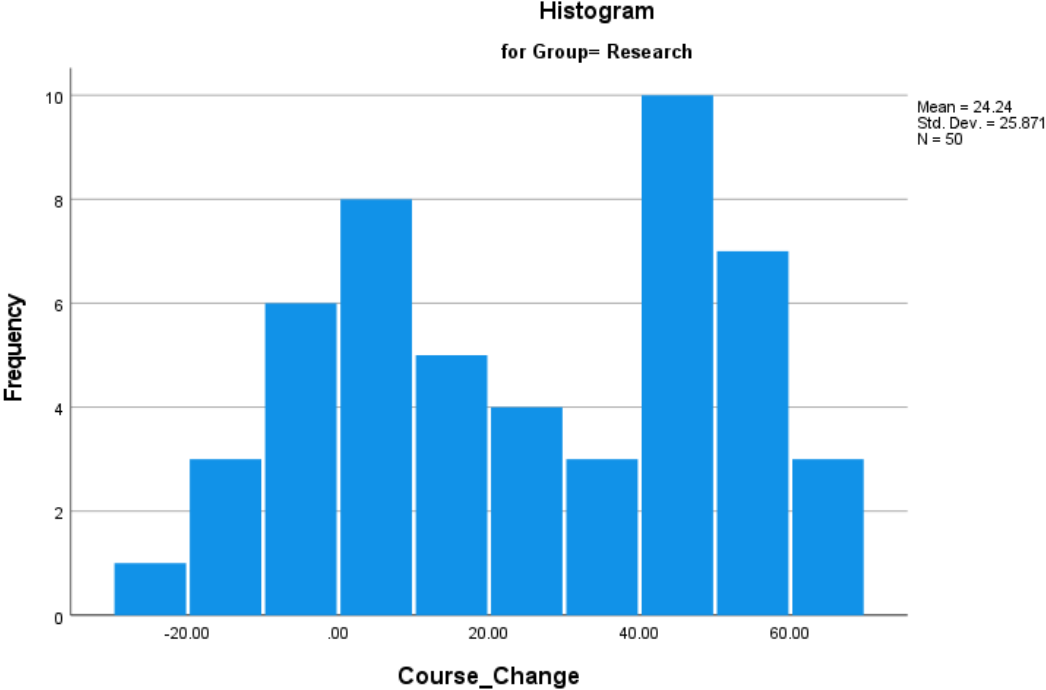
Interpersonal Scores – Control Group

Histogram
for Group= Control

Mean = .32
Std. Dev. = 1.504
N = 50
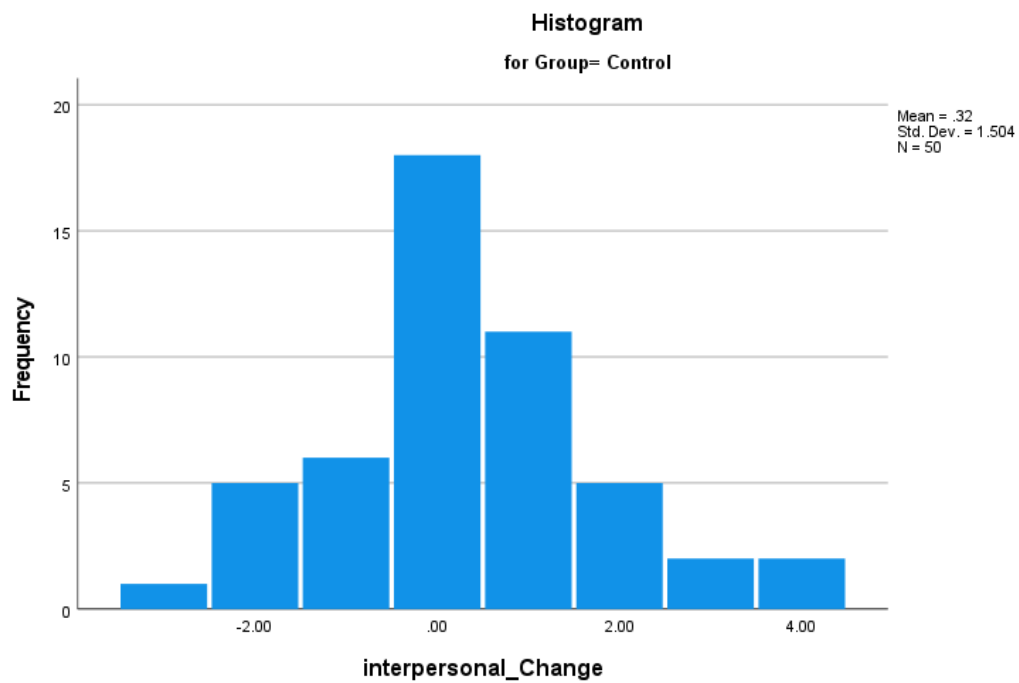
Interpersonal Skills – Research Group

Histogram
for Group= Research

Mean = -.30
Std. Dev. = 2.509
N = 50

Normal Q-Q Plot of interpersonal_Change
for Group= Control

Normal Q-Q Plot of interpersonal_Change
for Group= Research