REDUCING RECIDIVISM AMONG MEN CONVICTED OF SEXUAL OFFENCES: PROMOTING PATHWAYS TO DESISTANCE

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Abstract

This thesis examines strategies to promote pathways to desistance for men convicted of sexual offences (MCSO), emphasising the importance of completing psychological intervention to reduce the risk of recidivism and the need for improved public attitudes to support successful community reintegration upon release from custody. Chapter 1 presents a general introduction to concepts of sexual offending and the importance of upholding an evidence-based approach when working effectively with MCSO. Chapter 2 consists of a systematic review of the literature, exploring the determinants of treatment attrition from psychological, evidence-based interventions. Findings highlighted the role of criminal versatility in predicting the likelihood of treatment non-completion among MCSO. Chapter 3 presents a critique of the Attitudes Towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019), examining its reliability and validity to explore attitudes in line with Breckler's (1984) tripartite model. Chapter 4 reports the findings of an empirical research study exploring the most effective ways to improve public attitudes towards MCSO, grounded in relevant theory and empirical evidence. Findings supported the efficacy of brief intervention to improve public attitudes towards MCSO, however, no support was found for the anticipated matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999). Finally, Chapter 5 provides an overall summary of the thesis. The implications of the key findings are considered, as well as potential directions for future research.

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CHAPTER 1

General Introduction

Introduction

Prevalence of Sexual Harm in England and Wales

Sexual harm is an individual, community, societal, and global issue that holds a prominent place in contemporary discourse (Tabachnick & McCartan, 2017). Recent estimates reveal that approximately 7.9 million adults across England and Wales have experienced some form of sexual assault since the age of 16, with an estimated 1.1 million adults disclosing such experiences in the year ending March 2022 alone (Office for National Statistics [ONS], 2023). However, the rate of attrition for convictions of sexual assault is high, with only around 17% of incidents being reported to the police (ONS, 2023), potentially reflecting a distrust in the criminal justice system's (CJS) response to sexual crime (Brooks-Hays, 2019). Indeed, of the incidents recorded as sexual crime, it is estimated that just 3.6% result in a charge or court summons (Home Office, 2023a). This discrepancy between police reports and formal convictions for sexual crime has led to assertions of a "justice gap" within the CJS (Temkin & Krahé, 2008), potentially undermining public confidence in the management of sexual offending in the UK.

The latest Ministry of Justice (MoJ) figures reveal that in June 2023, approximately 13,788 individuals were incarcerated for sexual assault in England and Wales, accounting for approximately 20% of the prison population (MoJ, 2024). This population is disproportionately male, with men constituting around 98% of those serving prison sentences for sexual crimes in 2021 (MoJ, 2022). This demographic disparity has led many to view sexual offending as a male phenomenon (Wijkman et al., 2010), influencing the allocation of resources within both academic and practice-based fields, which predominantly focus upon men convicted of sexual offences (MCSO; Harrison et al., 2020).

Labelling of MCSO

The term MCSO is readily applied within the UK CJS (e.g., HM Inspectorate of Probation, 2019), reflecting a shift away from more pejorative labels such as "sex offender". This move towards the use of person-first language perhaps reflects an emerging trend towards adopting a life-course perspective to the prevention of sexual harm, whereby approaches focus on the person, rather than the offence (McCartan & Gotch, 2020; McCartan & Richards, 2021). Indeed, using the label "sex offender" ignores the heterogeneity between individuals who sexually harm, whereas employing neutral terms, such as MCSO, encourages individuals to consider the person, rather than the offence (Lowe & Willis, 2020). This is important, as research has suggested that the use of such labels can result in the conflation of the act with the individual (Willis, 2018), resulting in more punitive responses to individuals labelled as "sex offenders" compared to "people who have committed crimes of a sexual nature" (Harris & Socia, 2016).

Theories of Sexual Offending

This shift towards a life-course perspective is also evident within current theories of sexual offending, which reflect that the aetiology of sexual harm is linked to the life-course and that people may sexually offend because of several interrelated biological, psychological, and social (biopsychosocial) factors (McCartan & Gotch, 2020). This is perhaps best demonstrated within Ward and Beech's (2006) Integrated Theory of Sexual Offending (ITSO), which posits that the onset, development, and maintenance of sexual offending results from an interplay of biological, ecological niche, and neuropsychological factors (Ward & Beech, 2006).

Specifically, the theory proposes that biological vulnerabilities interact with one's social networks, cultural influences, and situational opportunities (ecological niche), to

change a person's neuropsychological functioning. This in turn leads to changes in clinical symptoms, such as cognitive distortions, poor emotional regulation, and limited social skills, which interact to increase the likelihood of sexual offending (Ward & Beech, 2006). The ITSO identifies multiple pathways through which these variables interact, leading to different types of sexual offending behaviours (Ward & Beech, 2006). Understanding these pathways and the relative contribution of each factor is crucial in identifying appropriate intervention strategies to reduce the risk of further sexual harm (Thakker & Ward, 2012; Ward & Beech, 2006).

History of Interventions for MCSO

Interventions aimed at reducing the risk of sexual recidivism should be evidence-based and address the factors underpinning the aetiology of sexual harm (Thakker & Ward, 2012). This approach is crucial, as the emotionally evocative nature of sexual offending can lead to deviations from empirically driven interventions, to instead focus on intuitively appealing factors, such as victim empathy or lack of remorse (Kirsch & Becker, 2006), which evidence has indicated are not necessarily linked to sexual harm (Hanson & Morton-Bourgon, 2005).

In the 70 years since rehabilitative efforts began, significant shifts have occurred in interventions aimed at addressing risk of sexual harm, progressing from a singular focus on sexual paraphilia, to emphasising distorted cognition and relapse prevention, and more recently, prioritising the development of personal strengths (Kirsch & Becker, 2006; Ramsay et al., 2020). As highlighted by Ramsay and colleagues (2020), these developments parallel advancements in adjacent fields of mental healthcare, situated within the broader framework of clinical-science generations - or "waves"- of Cognitive Behavioural Therapy (CBT). These

waves represent distinct sets of assumptions, methods, and therapeutic goals that organise theory, research, and clinical practice (Hayes & Hofmann, 2017).

Developed in the 1950s, first-wave interventions aimed at reducing the risk of sexual harm were predominantly behavioural in orientation and focused almost exclusively on altering sexual paraphilias through aversion therapy (Kirsch & Becker, 2006; Ramsay et al., 2020). Drawing on the work of behaviourists such as John Watson and B.F. Skinner, aversion therapy sought to change deviant sexual preferences using conditioning techniques, whereby an unpleasant stimulus was paired with deviant images or acts to create negative associations and reduce arousal. However, early reviews revealed that aversion therapy did not result in long-term changes in deviant sexual arousal (Barbaree & Seto, 1997), leading to the conclusion that behavioural intervention alone is insufficient to reduce the risk of sexual harm (Rice et al., 1991).

Throughout the 1970s and 1980s, second-wave interventions were developed to address the limitations of behaviourism, emphasising the role of distorted cognitions in the aetiology of sexual harm (Kirsch & Becker, 2006; Ramsay et al., 2020). Accordingly, interventions aimed to address sexual offending by altering the maladaptive cognitions thought to be underpinning the unwanted behaviour (Abel et al., 1992). Soon after, cognitive interventions also introduced the concept of relapse prevention, which aimed to support individuals to identify and manage the situations which place them at risk of sexual recidivism, thereby reducing the likelihood of future harm (Laws et al., 2000).

Over the years, third-wave interventions have built upon traditional cognitive-behavioural techniques by shifting the focus from *what* people think, to *how* they relate to their thoughts and emotions more broadly (Hayes & Hofmann, 2017; Ramsay et al., 2020). These interventions employ a humanistic, strengths-based approach to help individuals cultivate skills for personal growth and wellbeing, thereby altering the functional impact of

their thinking, without addressing the specific content of the maladaptive thought itself (Hayes & Hofmann, 2017; Ramsay et al., 2020). The Good Lives Model (GLM; Ward & Stewart, 2003; Ward et al., 2007) of offender rehabilitation offers a strengths-based framework that can be effectively integrated within CBT interventions to enhance an individual's protective factors and wellbeing (Kaylor & Jeglic, 2022). This approach conceptualises sexual offending as a person's flawed attempts at meeting their otherwise legitimate needs (Ward & Gannon, 2006). The GLM, therefore, aims to reduce risk through equipping individuals with the necessary tools to meet their core needs in more adaptive ways, reducing the likelihood of sexual harm (Ward & Gannon, 2006).

Current Approaches to Intervention for MCSO

Within His Majesty's Prison and Probation Service (HMPPS) in England and Wales, contemporary approaches to intervention for MCSO are largely underpinned by third-wave CBT approaches, employing a strengths-based approach to address the biopsychosocial factors empirically associated with risk of sexual harm (Ramsay et al., 2020). To ensure empirical grounding, intervention must adhere to the principles of the risk-need-responsivity model (RNR; Andrews & Bonta), which posits that for treatment to be effective it must be tailored to the individual's *risk* of offending, address relevant criminogenic *needs*, and be *responsive* to an individual's unique characteristics.

The Horizon and Kaizen programmes are accredited interventions in England and Wales aimed at reducing the risk of sexual harm among MCSO assessed as medium to very-high risk of recidivism (Völlm et al., 2019). These contemporary interventions reconceptualise traditional risk management by adopting a process-based approach to target the criminogenic needs empirically linked to sexual offending (Hayes & Hofmann, 2017; Ramsay et al., 2020). For example, rather than addressing a lack of victim empathy by simply

encouraging individuals to take responsibility for their crime, participants are offered opportunities to strengthen areas that may be blocking the empathy process, such as developing skills in perspective taking and emotional responding (Ramsay et al., 2020). This approach aims to mitigate a participant's future harm by strengthening success in key areas associated with their sexual offending behaviours.

The Efficacy of Interventions for MCSO

While these contemporary programmes are accredited by the Correctional Services Accreditation and Advice Panel (CSAAP; Ramsay et al., 2020), their precise efficacy in reducing the risk of recidivism is yet to be thoroughly evaluated (Walton et al., 2017). Nonetheless, meta-analytic evidence has consistently supported the efficacy of psychological intervention in reducing the risk of sexual and non-sexual recidivism among MCSO (Gannon et al., 2019; Hanson et al., 2002; Hanson et al., 2009; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015, 2017). In the largest and most recent meta-analysis to date, Gannon and colleagues (2019) reviewed 41,476 individuals who had engaged in offence-specific psychological intervention for sexual offending. Findings revealed that over an average follow-up period of 76.2 months, sexual recidivism was significantly lower for individuals who had engaged in treatment (9.5%) compared to those who had not (14.1%). This has led researchers to conclude that interventions employing a CBT approach, underpinned by RNR principles, are effective in reducing the risk of sexual recidivism among MCSO (Harrison et al., 2020; Tyler et al., 2021).

Furthermore, Olver et al. (2020) recently published a long-term evaluation of custodial interventions for MCSO in Canada, comparing the outcomes of participants who engaged in either a standard sex offender treatment programme (SOTP; *n*=625), the specialised Rockwood SOTP (*n*= 579), or no treatment at all (*n*= 107). While both

interventions employed CBT principles underpinned by RNR, the Rockwood Programme also incorporated a strengths-based approach. The findings revealed that over an 11-year follow-up period, recidivism rates were significantly lower for participants who had engaged in treatment, decreasing from 19.6% for untreated men, to 12.6% for standard SOTP participants, and 5.4% for those in the Rockwood Programme. This finding highlights the additional benefits of incorporating a strengths-based approach to custodial interventions, significantly improving outcomes for MCSO (Olver et al., 2020).

Treatment Non-Completion for MCSO

The efficacy of intervention is limited by high-attrition rates, with between 15 to 86% of MCSO not completing treatment (Larochelle et al., 2011). This is concerning, as research has indicated that individuals who drop-out of treatment are more likely to reoffend than those who finish the intervention (Hanson et al., 2009; Hanson et al., 2002; Lösel & Schmucker, 2005; Olver et al., 2011; Schmucker & Lösel, 2015, 2017). In fact, meta-analytic evidence has suggested that treatment non-completion (TNC) is associated with increased risk of recidivism, over and above no treatment at all (McMurran & Theodosi, 2007). As such, to promote positive outcomes, it is imperative to identify the factors underpinning TNC and adapt interventions accordingly; without this, any potential treatment gains may be nullified.

Larochelle et al. (2011) conducted a systematic literature review exploring the predictors of TNC among MCSO. Findings revealed that only anti-social personality disorder and certain diagnostic features were consistently and significantly related to TNC, with methodological and conceptual flaws in the evidence-base precluding further conclusions from being drawn. The authors made several recommendations to improve the quality of the literature, with the aim to enable cross-study comparisons to establish a clear consensus on

the predictors of TNC for MCSO. To date, no further review of the literature has taken place, impeding an informed and collective response to improve treatment outcomes for MCSO upon their release from custody.

The Impact of Public Attitudes on Outcomes for MCSO

Almost all MCSO will be released into the community (Wilson et al., 2020). Whilst evidence has suggested that those who have completed psychological intervention within custody are more likely to be successful upon their release, many barriers to effective community reintegration have been identified, which may diminish any positive treatment gains (Wakeling & Saloo, 2018).

MCSO who are released into the community are subject to stringent policies and procedures, purportedly designed to manage their risk of sexual recidivism (Wilson et al., 2020). Unfortunately, these measures are largely driven by negative public attitudes towards this population (Willis et al., 2010), shaped by sensationalist media coverage of high-profile cases (Ducat et al., 2009; Harper & Hogue, 2015b; Thakker & Durrant, 2006), evoking strong emotional reactions (Brown et al., 2008). Since the media represents the primary source of information for the public on this issue (Brown et al., 2008), the focus on rare and exceptional cases leads to overestimations of recidivism rates, perceived dangerousness, and a desire for more punitive policies (Brown et al., 2008; Levenson et al., 2007a; Shackley et al., 2014). These negative public perceptions are frequently used by politicians and policy makers to justify legislative and policy changes for MCSO (Harper & Hogue, 2015b; Willis et al., 2010; Wilson et al., 2000).

Community Risk Management for MCSO in England and Wales

Within HMPPS in England and Wales, MCSO are often subject to specific management arrangements within the community, setting them apart from other offending groups (McCartan & Gotch, 2020). For example, of the 91,040 individuals who were managed in the community under Multi-Agency Public Protection Arrangements (MAPPA) in March 2023, approximately 75% were individuals convicted of sexual offences, referred to as Category 1 offenders (MoJ, 2023). All Category 1 offenders are required to register pertinent details with the police (known as the "sex offenders register") and notify them of any changes to this information; a failure to do so is a criminal offence and may lead to further conviction (MoJ, 2023). Individuals assessed as presenting a higher risk to the public may also be placed on a Sexual Harm Prevention Order (SHPO), with 5,653 having been imposed in the year ending March 2023 alone (MoJ, 2023). All individuals placed on a SHPO are subject to registration and notification procedures, as well as any further restriction the court deems necessary to protect the public from sexual harm (Home Office, 2023b). This may include restrictions on employment, housing, internet use, and entering certain areas (Wilson et al., 2020). Breach of a SHPO is a criminal offence and is punishable by up to five years of imprisonment (MoJ, 2023).

Whilst these measures are argued to lower risk of sexual recidivism through increasing the visibility of MCSO and reducing their access to potential victims (Wilson et al., 2020), evidence has failed to demonstrate this mitigating influence (McCartan & Gotch, 2020). On the contrary, research has suggested that such measures may actually increase the risk of recidivism by disrupting effective community reintegration and creating barriers to obtaining stable employment, housing, and pro-social networks, all of which have been found to be important protective factors against future offending (Harper et al., 2017; McCartan & Gotch, 2020; McCartan & Richards, 2021; Willis et al., 2013a). This finding highlights the

need for a more nuanced approach to public protection, that balances risk management with strategies for effective community reintegration, tailored to the specific risks and needs of each individual. Without this, policies designed to protect the public, may in fact be placing their communities at greater risk of harm (McCartan et al., 2020; Willis et al., 2010).

The Importance of Community Reintegration for MCSO and the Influence of Public Attitudes

The importance of facilitating effective community reintegration is illustrated by Wakeling and Saloo (2018), who interviewed a group of MCSO who reoffended after engaging in a custodial SOTP. Their findings highlighted the detrimental impact of negative public attitudes on community reintegration for MCSO and the importance of continued support after release from custody. Many participants reported struggling to cope with life as a labelled "sex offender", experiencing intense feelings of hopelessness, isolation, lack of personal and professional support, and practical difficulties in rebuilding their lives (Wakeling & Saloo, 2018). From this, the authors concluded that custodial interventions alone are insufficient to enable lasting change in MCSO, emphasising the need for ongoing community support to manage their risk and enhance their wellbeing (Wakeling & Saloo, 2018). This idea is supported by available empirical evidence which demonstrated that interventions combining standard SOTP with preparatory community integration programmes are more effective in reducing sexual recidivism than custodial interventions alone (McKillop et al., 2022).

In its efforts to reduce recidivism, the UK CJS has increasingly relied upon support from third sector, non-profit organisations to support successful offender resettlement (House of Commons Justice Committee, 2018). Volunteers within third-sector organisations have been referred to as "mediators" between the CJS and the community, supporting the effective

reintegration of MCSO (Kerr et al., 2017). One community initiative gaining international traction is the Circles of Support and Accountability programme (CoSA; McCartan & Gotch, 2020), designed for individuals convicted of sexual offences posing a medium to high risk of sexual recidivism**,** who would otherwise have limited prosocial support upon their release from custody (Clarke et al., 2017).

CoSA aims to provide social support to MCSO by facilitating weekly meetings with a group of volunteers from the local community, aiding their integration and holding them accountable for their actions (Clarke et al., 2017). The programme employs a strengths-based approach to promote desistance, supporting "core members" (MCSO) to work towards prosocial goals and attain protective factors that decrease their likelihood of recidivism (McCartan et al., 2014). Findings from a UK evaluation study support the programme's efficacy in reducing the risk of sexual recidivism and enhancing prosocial behaviour (Bates et al., 2014).

However, public support for such progressive initiatives is often limited. For example, Richards and McCartan (2018) analysed public comments made on social media regarding the CoSA programme, wherein it was found that the vast majority of comments were written in opposition. Key reasons for criticism included a belief that government spending should prioritise victim support, a perception that MCSO could not be rehabilitated, and a misunderstanding about the premise of the programme, such as believing that this was an alternative to a prison sentence. Implementing such initiatives on a wider scale is therefore likely to encounter significant barriers if a progressive treatment approach is not embraced within the wider community (Höing et al., 2018).

Improving public attitudes towards MCSO and their management is therefore fundamental to promoting desistance within this population. As highlighted by Lowe and Willis (2019), negative attitudes towards individuals labelled as "sex offenders" results in an

unwillingness to volunteer with this population. As such, the realisation of successful and evidence-based community reintegration for MCSO must be accompanied by a change in public attitudes towards sexual crime (McCartan & Richards, 2021). This would enable policy and practice that promotes desistance, rather than perpetuates a cycle of licence breaches, relapse, and ultimately offending (McCartan & Richards, 2021).

Aims of Thesis

The overarching aim of this thesis is to explore ways to enhance the efficacy of interventions designed to reduce the risk of recidivism among MCSO and promote pathways to desistance. This is achieved by: 1) exploring the determinants of treatment attrition among MCSO engaging in psychological, evidence-based intervention designed to reduce the risk of recidivism; and 2) examining the most effective ways to improve public attitudes towards MCSO, supporting their successful community reintegration upon release from custody. The findings of this thesis have important implications within both custodial and community settings looking to improve outcomes for MCSO and reduce future victimisation.

To achieve these aims, Chapter 2 presents a systematic review of the literature, exploring the factors associated with TNC among MCSO, updating the findings of Larochelle et al. (2011). The review synthesises data from 21 studies using a narrative approach to identify key themes. Limitations within the evidence base are discussed, along with practical implications and recommendations for future research and practice.

Chapter 3 critiques the Attitudes towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019), which aims to explore attitudes towards MCSO in line with Breckler's (1984) tripartite model, highlighting the affective, behavioural, and cognitive components of attitudes. The psychometric properties of the scale are evaluated, considering its reliability, validity, and application. The ATS-21 is employed as a measure of participants' attitudes towards MCSO within Chapter 4.

The fourth chapter reports the findings of an empirical research study considering the most effective ways to improve public attitudes towards MCSO, examining support for the matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999). The ATS-21 scale is employed to evaluate changes in participants' affective, behavioural, and cognitive attitudinal domains resulting from the intervention. In line with the matching effect, it is hypothesised

that there will be greater change in a relative attitude domain (i.e., affective or cognitive) when it is matched with the salient information of a corresponding media portrayal intervention (i.e., emotive or informative). A series of analyses of variance are conducted to examine changes in participants' attitudes from pre- to post-intervention across the different media portrayals. The findings of the study, practical implications, limitations, and recommendations for future directions are considered.

The fifth and final chapter provides an overall summary of the main findings of the thesis, informing its broad aims to explore strategies to enhance the efficacy of intervention and promote desistance among MCSO. The implications of the findings are discussed along with potential directions for future research. Finally, an overall conclusion of the thesis is presented.

CHAPTER 2

A Systematic Review of the Literature:

Determinants of Attrition from Psychological, Evidence-Based Interventions for Adult Men Convicted of Sexual Offences

Abstract

Men convicted of sexual offences (MCSO) who do not complete treatment are more likely to reoffend than those who do not engage in treatment at all (McMurran & Theodosi, 2007). The present review explores the factors associated with treatment non-completion (TNC) amongst adult MCSO, updating the findings of a previous review of the literature by Larochelle and colleagues (2011). Furthermore, the present review also explores the relationship between TNC and recidivism. Studies were identified by searching electronic databases, examining reference lists, citation searching, and contacting experts. The review included 21 studies, published between 2011 and 2023, assessed in quality as fair to good. The data were synthesised narratively to identify key themes. The findings of the review suggest that TNC may be related to criminal versatility, with heterogenous MCSO more likely not to complete treatment. Furthermore, it was found that TNC is associated with general recidivism, yet not sexual recidivism. Preliminary findings support the importance of working responsively with high-risk, high-need MCSO, promoting engagement and motivation to complete treatment. The strengths and limitations of the review are discussed, and recommendations are made for future research and practice.

Introduction

Sexual offending is viewed as a public health concern (McCartan et al., 2018), with an estimated 1.1 million adults and children in the UK having experienced sexual assault in the year ending March 2022 (ONS, 2023). Sexual offences are amongst the crimes that evoke the most public concern, attracting attention from policy makers, the mass media, and the general public alike (Levenson et al., 2007a; Willis et al., 2010). However, despite the public pressure to manage sexual offending, much is still unknown about precisely how well offending behaviour treatment works to reduce recidivism. This lack of clarity is thought to be compounded by high levels of attrition amongst high-risk offenders (Day et al., 2019), with available evidence highlighting non-completion rates of up to 86% for some sex offender treatment programmes (SOTP; Larochelle et al., 2011). This is concerning, as despite disagreement regarding the exact efficacy of treatment, there is consensus amongst researchers that treatment has ameliorating effects (Hanson et al., 2009). As such, to optimise potential gains, it is essential to identify the reasons underpinning treatment non-completion (TNC), with the aim to establish appropriate measures to enhance outcomes, and ultimately reduce recidivism. These aims form the basis of the current review.

Sex Offender Treatment Programmes

Framed primarily as a matter of public protection and risk management, the need to effectively address sexual offending has emerged as an increasingly prominent issue in the UK, with reducing re-offending rates being identified as a key priority in public policy (McCartan et al., 2018). Mounting public pressure to address sexual offending cumulated into controversy in 2017 upon the publication of a Ministry of Justice (MoJ) study examining the efficacy of the Core SOTP in UK prisons (Mews et al., 2017). The findings of this study were highly contentious in both practice and academic fields, with the authors concluding that the Core

SOTP was generally associated with little or no change in sexual and general recidivism. In fact, the rate of overall sexual recidivism was found to be higher in the treated group of men convicted of sexual offences (MCSO; 10%) compared to the untreated group (8%); suggesting that engaging in treatment may do more harm than good. These findings prompted the immediate termination of the Core SOTP in UK prisons (Lösel et al., 2020; McCartan et al., 2018).

However, this study has since been criticised for employing controversial methodology (King & Nielson, 2019), with flawed matching procedures between treatment and control groups that were not theoretically driven (Lösel et al., 2020); thereby serving to potentially bias findings (Luellen et al., 2005). For example, key factos such as self-regulation, motivation to change, and sexual deviancy were excluded from the matching procedure, despite their established links to recidivism risk. Notably, sexual deviancy in particular has been identified as the strongest predictor of sexual recidivism (Hanson & Bussière, 1998). The omission of these critical factors raises concerns that the observed differences in recidivism rates between the groups may reflect baseline disparities in risk levels, rather than the efficacy of the intervention itself (Lösel et al., 2020; Mews et al., 2017). As such, researchers in the field have recommended caution when interpreting the results of this single study, instead advocating for a more nuanced approach when applying research to practice (Lösel & Schmucker, 2017; Lösel at al., 2020).

For example, in contrast to the MoJ study, meta-analytic research has consistently pointed to the positive relationship between completion of sex offender treatment and reduced rates of sexual and non-sexual recidivism (Gannon et al., 2019; Hanson et al., 2002; Hanson et al., 2009; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015, 2017). However, the strength of this relationship appears to be largely dependent on key variables, such as treatment setting, offender characteristics, and programme implementation; each of which interact to complicate

findings and preclude general conclusions being drawn regarding the precise relationship between SOTP completion and recidivism (Lösel & Schmucker, 2017; Lösel at al., 2020). Nonetheless, despite the aforementioned controversies and the cessation of the Core SOTP, the MoJ rapidly introduced new treatment programmes for MCSO: Horizon and Kaizen (McCartan & Prescott, 2017; McCartan et al., 2018). Therefore, in line with many western countries, it appears that offending behaviour programmes will remain the primary method of managing risk of sexual violence within the UK (McCartan et al., 2018).

Treatment Completion

Creating effective treatment programmes to prevent sexual recidivism is a crucial step towards the goal of decreasing the incidence of sexual violence (Grady et al., 2013). However, it is known that a high proportion of MCSO do not complete treatment (Larochelle et al., 2011), and that those who drop-out of treatment are more likely to reoffend than those who finish the intervention (Gannon et al., 2019; Hanson et al., 2009; Hanson et al., 2002; Lösel & Schmucker, 2005; Olver et al., 2011; Schmucker & Lösel, 2015, 2017). In fact, meta-analytic evidence has suggested that TNC is related to increased recidivism, over and above no treatment at all (McMurran & Theodosi, 2007). Whilst the precise mechanisms underpinning this finding remain unclear, it has been suggested that senior leadership decision-making to expel a high-risk offender from treatment may consequently exacerbate this group's existing anti-authority and antisocial attitudes (McMurran & Theodosi, 2007). Moreover, partial completion of a treatment programme may expose participants to challenging issues, without equipping them with skills to cope (McMurran & Theodosi, 2007). This places high-risk, high-need offenders in a precarious position, whereby they may lack both the motivation and necessary skills to manage their risk behaviour, thereby increasing both the likelihood of TNC and future recidivism (Olver & Wong, 2013). As such, it is essential that removal from

treatment is a last resort, with approaches to reduce sexual recidivism also focusing on strategies to minimise attrition.

Risk Need Responsivity

Traditionally conceptualised as a model for treatment efficacy, Andrews and Bonta's Risk Need Responsivity (RNR) model (Andrews et al., 1990; Andrews & Bonta, 2010), has been put forward as a means to promote treatment completion (Larochelle et al., 2011; Ward et al., 2004). Briefly, the RNR model suggests that for interventions to be effective, the intensity of the intervention should be matched to the offender's level of *risk*, focused on relevant criminogenic *needs*, and be *responsive* to the client's unique characteristics. In the context of treatment completion, it is the latter principle that holds the most value, as although principles of risk and need are essential when considering the necessary programme characteristics to reduce recidivism, responsivity is vital to ensure that the clients are able and motivated to meaningfully engage (Polaschek, 2012).

The responsivity principle is said to incorporate *general responsivity* relating to positive therapist characteristics (e.g., empathy, warmth, and respect) within the context of a cognitive behavioural model, and *specific responsivity*, which involves tailoring the intervention and delivery to the unique client features that impact upon learning (e.g., motivation, cognitive ability, culture, and personality; Andrews & Bonta, 2010). Additionally, it has been postulated that responsivity can be further divided into internal and external factors, relating to client/therapist characteristics and contextual variables respectively (Andrews & Bonta, 2010). It has been argued that adherence to the responsivity principle should mitigate the factors which may impede treatment engagement, thereby reducing TNC (Beyko & Wong, 2005).

However, while the risk and need principles have been widely applied in the criminal justice system (CJS), the responsivity principle has been somewhat overlooked (Polaschek,

2012). Furthermore, Andrews and Bonta's conceptualisation of responsivity appears to focus on what prevents treatment engagement, rather than the conditions necessary to facilitate this. As such, the RNR model has been criticised for solely considering how best to promote capacity for desistance and change, whilst neglecting the importance of motivating offenders to want to engage (Polaschek, 2012; Ward et al., 2004; Ward et al., 2011).

This criticism is addressed by strengths-based approaches to offender rehabilitation, such as the Good Lives Model (GLM; Ward & Stewart, 2003). The GLM argues that MCSO, like all human beings, are inherently motivated to achieve a universal set of human goods, with offending behaviour conceptualised as a flawed attempt at meeting their otherwise legitimate goals (Ward & Gannon, 2006). From this, the GLM promotes managing risk through equipping clients with the necessary internal and external resources to meet their goals in a safe and positive way (Ward & Gannon, 2006). This focus on approach versus avoidance goals has been argued to be inherently more engaging and motivational for clients, as they work towards enhancing their well-being, rather than simply alleviating deficits or risks (Ward et al., 2011; Willis et al., 2013b). Maximising engagement and motivation are argued to be essential when working with MCSO, as literature has suggested that low motivation is a significant barrier for affecting change with this population (Looman et al., 2005; Serran et al., 2003; Tierney & McCabe, 2002; Willis et al., 2013b). Importantly, the GLM and RNR are not contradictory approaches, rather, the RNR principles can be accommodated within a broad strengths-based approach, serving to enhance client's engagement and motivation, whilst also addressing risk (Willis et al., 2013b).

In summary, TNC has been associated with an increased risk of recidivism. Therefore, efforts to reduce recidivism should also aim to reduce attrition from treatment. Evidence has suggested that greater adherence to the RNR principles is associated with concurrent reductions in sexual recidivism (Hanson et al., 2009). However, for this positive relationship to extend to

treatment completion, greater emphasis must be placed on responsivity (Polaschek, 2012). Ward's GLM (Ward & Stewart, 2003) offers a strengths-based framework from which to apply the RNR principles, promoting clients' engagement and motivation for treatment, thereby increasing likelihood of treatment completion. The present review aims to support these efforts by identifying the factors underpinning TNC, allowing for practitioners to tailor interventions to support high-risk, high-need offenders to successfully engage with and complete treatment; thereby reducing the likelihood of reoffending.

The Current Review

Preliminary searches of the following databases were undertaken on 6th March 2022 to assess the originality of the current review: Prospero, Centre for Reviews and Dissemination, Cochrane Library, and the Campbell Collaboration. The preliminary search yielded no evidence that a systematic literature review or meta-analysis had been registered or published exploring TNC among MCSO. However, upon completing a Google search of the terms "sexual offenders" and "non-completion", three studies were identified. These included a meta-analysis by Olver et al. (2011) exploring the predictors of treatment attrition and its relationship to recidivism, and a systematic literature review (SLR) by Sturgess et al. (2016) exploring the reasons why offenders fail to attend or successfully complete treatment. However, both studies were not specific to MCSO, instead exploring treatment outcomes across a range of interventions targeting a variety of offending behaviours. The third study, however, did explore the population of interest for the present review, with Larochelle et al., (2011) having conducted an SLR on the predictors of TNC among MCSO.

Larochelle and colleagues (2011) reviewed a total of 18 studies, ranging in publication date from 1988 to 2010, wherein it was found that only anti-social personality disorder (ASPD) and certain diagnostic features (e.g., impulsivity, lying, and aggressive behaviour) were

consistently and significantly related to treatment attrition. The authors argued that the lack of consensus in this research area could be explained by conceptual and methodological disparities between studies, including poorly defined intervention types, composition of treatment groups, and reasons for TNC; as well as disparities in the variables studied, instruments utilised, and statistical analyses employed (Larochelle et al., 2011). The authors therefore recommended that future research take these factors into consideration, to increase the validity of cross-study comparisons.

With this in mind, the present review aims to clarify the findings of Larochelle et al. (2011) and examine the state of the literature approximately 13 years later, exploring whether it is yet possible to reach a consensus in this research area. As such, the review explores the factors associated with attrition from psychological, evidence-based interventions for MCSO. Furthermore, whilst the idea of responsivity was briefly discussed within Larochelle's review, this was solely in the context of stating that most included studies met general responsivity, due to being underpinned by cognitive behavioural principles. In consideration of the recent revisions to sex offender treatment and the subsequent emphasis placed on responsivity and adopting a strengths-based approach (McCartan et al., 2018), it may be that the predictors present in Larochelle's review have been successfully managed and no longer systematically impact upon TNC. The present review explores this idea, reviewing research regarding TNC amongst MCSO, with predictors being conceptualised in line with the RNR Model. The specific objectives of the review are:

1. To explore the factors associated with TNC among MCSO engaging in psychological, evidenced-based treatment.
2. To explore the relationship between TNC and recidivism.
3. To examine the state of the literature in this research field, exploring whether the limitations highlighted, and recommendations made by Larochelle et al. (2011), have

since been addressed. This secondary objective will be addressed within the discussion section of the present SLR.

Method

Scoping Search

To explore the feasibility of an updated review, a scoping exercise was conducted to examine the extent of the existing literature on TNC amongst MCSO. The search was limited to 2011 onwards, as the most recent study included in Larochelle's review was from 2010. As such, the scope of this review was to explore additional literature published since this date. The initial scoping search supported the feasibility of an updated review, with a reasonable number of hits being returned, indicating the search terms were neither too broad nor too narrow.

Sources of Literature

To identify potential studies to be included within the present review, a search of relevant databases was carried out on 29th January 2023. These included Ovid (PsychInfo; 1967-January Week 4 2023), Web of Science (Core Collection), Scopus, and ProQuest. The inclusion of these databases was informed by exploring the relevance of available databases on the present topic, and examining the sources employed in reviews on similar topics (e.g., Larochelle et al., 2011; Olver et al., 2011; Sturgess et al., 2016). The search included both published and unpublished literature, thereby reducing publication bias.

Search Strategy

Search terms were initially derived from those utilised by Larochelle et al. (2011; see Appendix A) and then expanded to capture all relevant literature. The format of the search terms regarding how they were entered into the search field and use of truncation was adapted depending on the requirements of each database (see Appendix B). Searches carried out on Web of Science, ProQuest, and Scopus employed free-text searching, whereas a combination

of both free-text and subject heading searches was utilised on Ovid (PsychInfo) to optimise the search engine's potential for retrieving relevant studies.

In addition to automated database searches, the following search strategies were employed to increase the validity of the search: 1) a search of relevant grey literature was carried out on Google, pre-initial screening, 2) citation searching was carried out on Google Scholar, utilising key studies identified from shortlisting, 3) reference lists of shortlisted studies were hand searched, 4) experts selected from shortlisted studies were contacted to request relevant unpublished work. Two out of six experts responded; however, no additional publications were acquired (see Appendix C). Finally, following the initial search and screening procedure in January 2023, additional studies were identified via automated database search alerts active from 29th January 2023 to 1st April 2024.

Search Terms

The following search terms were applied during database searches. Each term was truncated to ensure all relevant literature was captured (Appendix B).

(Factor or Predictor or Influence or Determinant or Mediator or Moderator or Facet or Characteristic)

AND

(Sex Offender or Paedophile or Rapist or Child Molester)

AND

(Treatment or Intervention or Therapy or Programme or Correction)

AND

(Attrition or Retention or Completion or Non-completion or Drop-out or Discontinue or Success or Compliance or Non-compliance or Adherence or Terminate)

First Screening

When the terms were applied to the databases, the search yielded 2,376 results (ProQuest, *n*=864; PsychInfo, *n*=499; Scopus, *n*=685, Web of Science, *n*=328). All references were imported into an EndNote library, enabling the use of the software's automated filtering and refinement features. After automatically removing duplicates (*n*=890) and studies published before 2011 (*n*=672), a total of 814 studies remained for initial screening. The abstracts of these studies were screened for relevance, removing a further 741 studies. The remaining 73 studies were sought for full-text retrieval via the University of Birmingham e-library. One study was not retrievable (see Appendix D). As such, 72 studies were examined using predetermined inclusion and exclusion criteria.

Inclusion and Exclusion Criteria

Table 1 details the inclusion and exclusion criteria for the present review, utilising a Population, Intervention, Comparator, Outcome, and Study (PICOS; McKenzie et al., 2023) framework. The PICOS framework is a structured approach, enabling researchers to establish pre-determined parameters for eligibility criteria, promoting a comprehensive, yet focused review of the available research evidence (McKenzie et al., 2023). *Population* describes the characteristics of the participants being studied, *Intervention* specifies the treatment or exposure participants are subject to, *Comparator* identifies the alternative group against which the intervention is compared, *Outcome* refers to the result the study aims to measure, and *Study* refers to the research design and study characteristics of a paper being considered for inclusion in the review (McKenzie et al., 2023).

Table 1

Inclusion and Exclusion Criteria Utilising a PICOS Framework.

PICOS	Inclusion Criteria	Exclusion Criteria
Population	Participants must be male, aged 18 years or over, and have been convicted of a sexual offence or to have committed illegal acts of sexual behaviour that would have led to prosecution if officially prosecuted. All categories of sexual offending will be included (e.g., rape, paedophilia, non-contact offending).	Female and adolescent offenders.
Intervention	Interventions must be evidence-based (e.g., in line with the Risk Need Responsivity principles) and be of a psychological nature. Interventions must utilise therapeutic measures with the aim to reduce risk of sexual (re)offending. Group and individual programmes included. There is no restriction on the setting for the intervention (e.g., includes prison-based, community, secure hospital etc.).	Interventions utilising non-psychological interventions (i.e., drug therapy).
Comparator	Treatment group is defined as individuals who have completed the entire intervention as planned. Comparison groups will include individuals who have started, yet not completed the entire programme, regardless of how close to the final session they leave. Reasons for non-completion include drop out (premature termination by the participant without discussing this with their therapist), expulsion (being barred from continuing with the intervention by the treatment team), interruption (premature termination due to leaving the setting where the intervention was held), or an integration of all the above (Larochelle et al., 2011).	Additional comparator groups, such as treatment refusers.
Outcome	Outcomes include all factors found to be related to programme attrition. Recidivism rates for sexual and/or non-sexual offending may also be reported in the studies.	Opinions from individuals not directly completing the intervention (e.g., therapists, stake holders), around treatment related factors.
Studies	Peer reviewed journals and dissertations/ theses are included. Studies utilising a quantitative, qualitative, and mixed measures design will be included. There will be no exclusions based on country of origin. Unpublished and published studies, as well as peer reviewed, and non-peer reviewed papers will be included. Studies published during and after 2011.	Non-English language studies. Review articles, opinion papers, commentaries, conference papers, book chapters, and/or editorials. Studies published pre-2011.

The rationale for the inclusion/exclusion criteria within the PICOS framework were as follows:

Participants

In their review, Larochelle et al. (2011) suggested that the lack of consensus in findings may have been related to the heterogeneity of the samples studied, including all ages and genders of individuals convicted of sexual offences. As such, it was anticipated that the inclusion of only adult MCSO would increase the homogeneity of the studied samples in this review, thereby allowing for more meaningful cross-study comparisons. Adult MCSO were selected as the target group as research examining effective interventions to reduce sexual recidivism has primarily focused upon this population (Harrison et al., 2020).

Intervention

It was anticipated that including only evidence-based, psychological interventions would allow for more meaningful cross-study comparisons. Ensuring that programmes were underpinned by psychological principles, such as the RNR (Andrews & Bonta, 2010), would reduce the heterogeneity in the quality of interventions between studies. To allow for potential examination on contextual variables, interventions were not restricted to a particular format or setting.

Comparator

Reasons for non-completion were in line with Larochelle et al. (2011) inclusion criteria, as this provided a thorough and encompassing definition of TNC, allowing for all relevant studies to be captured. Additional comparator groups, such as treatment refusers, were excluded from analysis as this was beyond the scope of the present review.

Outcome

Third party opinions regarding TNC were excluded from analysis, as the present review only considered the lived experiences of the clients engaging in treatment. Inclusion of the opinions of those not directly participating in treatment would have introduced bias, thereby not accurately reflecting the true underpinnings of TNC.

Studies

Whilst Randomised Controlled Trials (RCTs) are the gold standard of research designs, some authors have posited that this design is not appropriate for research assessing treatment efficacy for interventions with MCSO, due to the legal and ethical issues involved (Marshall & Marshall, 2007). As such, qualitative, quantitative, and mixed methods designs were included. To reduce publication bias, grey literature and non-peer reviewed studies were included in the review. As previously mentioned, studies published pre-2011 were excluded, as the present review extended upon the SLR by Larochelle et al. (2011).

Second Screening

The PICOS framework was applied to the 72 studies obtained from the initial screening. For some studies, the information relevant to the present review was not related to the primary aims of the study, therefore, only parts of the study met inclusion criteria. As such, the parts of the study that were not relevant to the review were ignored. For example, some studies explored factors underpinning treatment refusal, or the relationship between recidivism and variables other than TNC. A total of 55 studies were removed during the second screening (see Appendix E), with 17 studies remaining. Secondary search strategies were then applied to the shortlisted

studies (contact with authors, reference list checking, and citation searching), obtaining an additional two studies.

Automated Search Alerts

Following the initial search and screening procedure in January 2023, automated database search alerts were activated. The alerts were configured to run on a weekly basis from the date of the first search on 29th January 2023 until 1st April 2024. This generated email notifications identifying newly published studies matching the initial search terms. From this, 70 studies were retrieved, and their abstracts screened for relevance, resulting in 11 potentially relevant studies. These 11 studies were screened using the PICOS framework, excluding a further nine studies (see Appendix F). Two additional studies were obtained, resulting in a total of 21 studies included for quality assessment. Figure 1 shows a Prisma flow diagram, providing an overview of the search and screening procedure.

Quality Assessment

The first step was to determine the research design of each of the 21 studies by reading the abstract and method section. It was ascertained that the articles employed either a cohort or cross-sectional design. As such, to assess the studies, The Mixed Methods Appraisal Tool (MMAT; Pluye et al., 2009) was used to highlight any biases and evaluate the overall quality of the methodology (see Appendix G). Research has demonstrated that this assessment tool has good reliability (Pace et al., 2012), which was further enhanced by dual coding to examine inter-rater reliability for each of the studies. The second coder was an impartial colleague to the main researcher, with a similar level of experience of conducting SLRs.

Initially, all studies were screened using two questions relating to the clarity of the research question and whether the data collected were sufficient in addressing the stated research

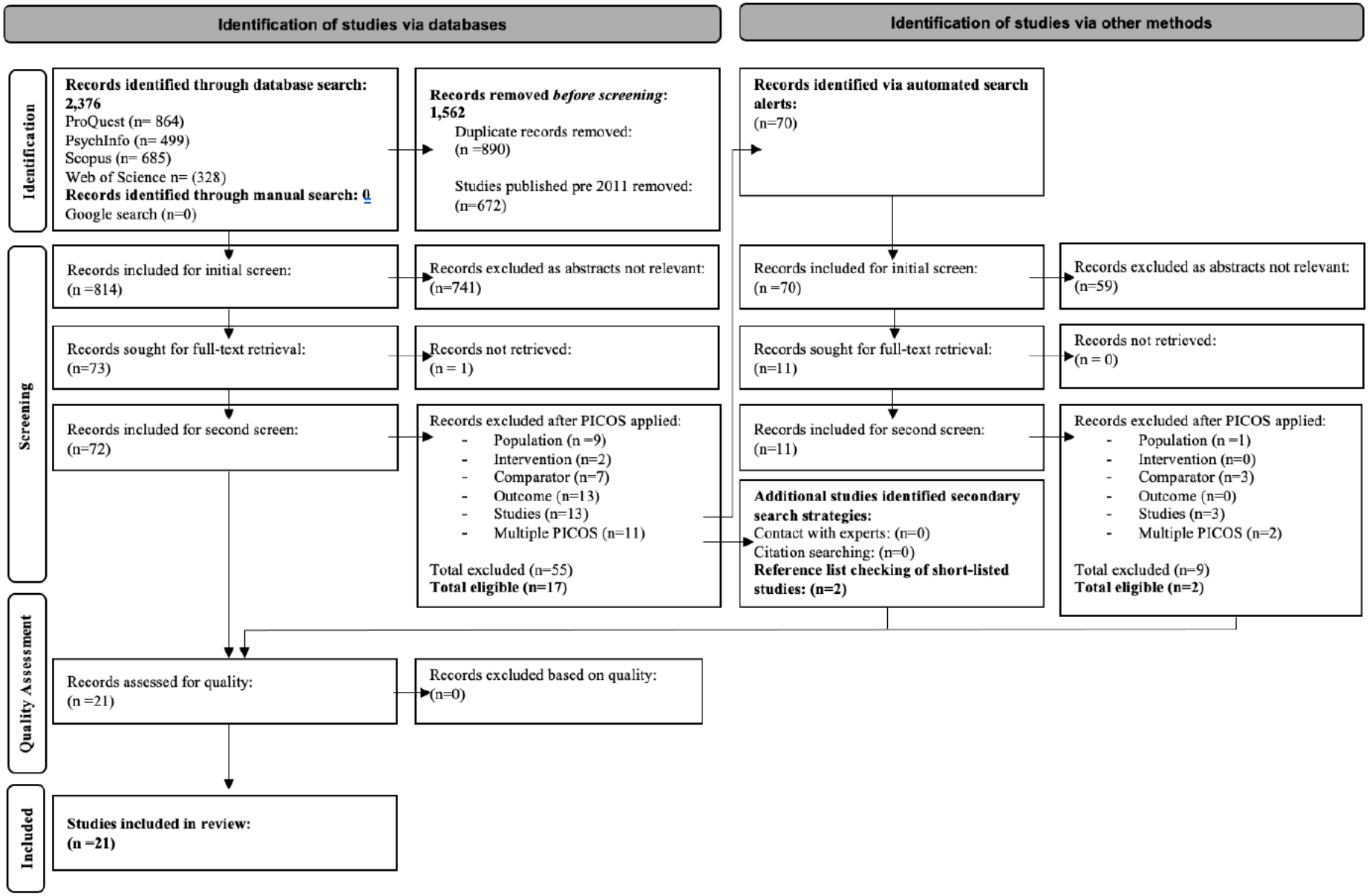
questions. As each of the 21 studies met this initial screening criteria, each study was then assessed for its methodological rigor. The MMAT user guide (Hong et al., 2018) provides an algorithm for selecting the precise study category from which to apply the methodological quality criteria. It was determined that each of the included studies employed a quantitative non-randomised approach, allowing for direct comparisons to be made.

The employed methodological quality criteria assessed studies on whether: 1) the participants were representative of the target population, 2) the measures were appropriate for both the outcome and intervention/ exposure, 3) the data were complete, 4) potential confounders were accounted for in the data analysis, and 5) the intervention was administered as intended. The user guide provides an explanation for each of the above criteria, ensuring that both coders had a thorough understanding of how to apply this criterion to the relevant study's methodology. For each of the criteria, a code of either "Yes", "No" or "Can't Tell" was provided, with each "Yes" scoring 20% and each "No" or "Can't Tell" scoring zero. Considering completeness of data, in line with the MMAT scoring guide, it was agreed by both coders that the cut off for acceptable complete data would be 80%, with values lower than this coded as "No".

Depending on the number of criteria met, the quality scores ranged from 60% (three criterion met) to 100% (all criteria met). It was agreed by both coders that a score of 80% and above would be rated as good, 60% and above as fair, and anything below 60% as poor. In accordance with the scoring guide of the MMAT, it was decided that all 21 studies, regardless of their quality assessment, would be included in the present review. There were no conflicts throughout the dual coding process (see Appendix H for scoring outcomes).

Figure 1

Prisma Flow Diagram



Results

Data Extraction

Table 2 presents details of the 21 studies included in the review (see Appendix I for a blank data extraction form), providing an overview of each study's design, methodology, key findings, strengths, limitations, and implications for future research. For ease of interpretation, findings that did not achieve statistical significance (i.e., factors found not to be related to TNC) are excluded from the present table. Instead, these findings are discussed in the relevant subsection of the Descriptive Data Synthesis.

Table 2

Details of Studies Included in the Present Review

Study Details	Design	Population	Intervention	How was the data measured and recorded	Findings	Strengths/ limitations/ bias	Implications and future research
Authors: Carl & Lösel. **Year:** 2021. **Time frame:** 2004- 2015. **Location:** Bavaria. **Quality score:** 100%.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 528 from 7 different STUs in Germany. **Age of sample:** Mean age of 44 years.	**Setting:** Prison, Therapeutic Community. **Details of treatment:** STU includes increased privileges within the prison, and an individualised treatment plan incorporating therapeutic work,	**Data collection:** Case file review. Data coded prospectively. **Comparator definitions:** TNC included drop-out and expulsion. TNC for	**Relevant statistical analysis:** Univariate (Chi-square and t-test) and Multivariate (Regression). **Factors related to TNC:** Younger age, migration background, more prior convictions,	**Strengths:** Large sample size, lengthy follow up period, controlled for potential confounding variables. **Limitations identified in**	**Implications:** Treatment termination should be a last resort. If necessary to terminate treatment, measures should be put in place to buffer the negative

Source: Database search.		**Ethnicity:** Not reported. **Offence type:** Child abuse (58%), rape (29%), both children and adult victims (9%), non-contact (5%).	employment, vocational courses, and hobbies. **Frequency and duration:** 6 hours per week. Average duration of 2 years. **Facilitators:** Not reported. **Format:** Group and individual. **Mandated/voluntary:** Voluntary. **Theoretical basis:** RNR, CBT, Psychoeducation, and RP.	interruption was coded as completion. Also compared late versus early TNC. **TNC rate:** 19%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** 38%. **Length of follow-up (if applicable):** Range from 3-15 years.	concurrent violence offence, less likely to have stranger victims, less likely to be intoxicated during index offence. **Relationship between TNC and recidivism (if applicable):** Non-completers (52% recidivism) were significantly more likely to reoffend than completers (35% recidivism). Late non-completers were most likely to reoffend. However, there was no significant between group differences for serious or sexual offences.	**paper:** Reasons for non-completion not explored. Small power on some analyses due to limited sample size (e.g., TNC and recidivism). **Bias:** TNC for interruption (e.g., administrative reasons) was defined as completers, likely inflating completion rate.	consequences of this on participants' self-esteem and self-concept. **Future research:** Examine the influence of more treatment-oriented measures of risk and responsivity on TNC. To explore the reasons for TNC, what underpins this, and how these impact recidivism.
Author: Carr. **Year:** 2011. **Time frame:** 2002-2007**.** **Location:** USA. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective, cohort design.	**Size of relevant sample:** 36. **Age of sample:** Age range between 18-80 years. **Ethnicity:** Not reported. **Offence type:** Any intra-familial victim (33%) stranger	**Setting:** Community **Details of treatment:** Not reported. **Frequency and duration:** Not reported. **Facilitators:** Counselling staff with master's degree and training in assessment and treatment of MCSO **Format:** Group	**Data collection:** Case file review. Data coded prospectively. **Comparator definitions**: TNC included drop-out and expulsion. **TNC rate:** 61% **Reasons for TNC:** Not reported.	**Relevant statistical analysis:** Univariate (Chi-square and t-test). **Factors related to TNC:** Higher overall Static-99 scores and risk categories. Younger age, no prior long-term intimate relationship, and prior conviction for non-sexual violent offence.	**Strengths:** Not reported. **Limitations identified in paper:** Lack of generalisability due to small sample size of MCSO from one treatment programme. Delivery of	**Implications:** MCSO with different risk levels might benefit from different treatment strategies. **Future research:** Replicate current study on a larger sample, involving participants from different

		victim (17%), male victim (6%), non-contact offence (11%).	**Mandated/voluntary:** Mandatory. **Theoretical basis:** CBT and RP.	**Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relationship between TNC and recidivism (if applicable):** Not reported.	treatment not standardised. **Bias:** Not reported.	programmes to expand generalisability. Explore the influence of therapist characteristics and participant demographic profiles on TNC.
Authors: Clegg et al. **Year:** 2011 **Time frame:** Not applicable. **Location:** USA. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Cross-sectional design.	**Size of relevant sample:** 156. **Age of sample:** Mean age of 41-years. **Ethnicity:** Caucasian (86%), African American (12%), Other (2%). **Offence type:** Not reported for entire sample.	**Setting:** Prison. **Details of treatment:** Treatment consists of three phases. **Frequency and duration:** Not reported. **Facilitators:** Psychologists. **Format:** Group. **Mandated/voluntary:** Voluntary. **Theoretical basis:** CBT.	**Data collection:** Archival case file review. Data coded prospectively. **Comparator definitions**: TNC included drop out and expulsion. Completers were currently compliant with second or third phase and had no history of TNC. **TNC rate:** 39%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relevant statistical analysis:** Multivariate (MANOVA and Regression). **Factors related to TNC:** Non-acceptance of a guilty plea (predictor). **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Unique contribution to literature. **Limitations identified in paper:** Use of dynamic criteria for classifying participants. **Biases:** Researcher bias reduced as the files were numbered without treatment group designation during data collection. Inter-rater reliability between researchers conducted for 25 of the cases.	**Implications:** Not reported. **Future research:** Explore TNC using adjudicated sample, considering the impact of type of plea entered. To examine the present data after a suitable follow-up period has passed, in terms of the relationship between TNC and recidivism.

Authors: Crasissati & Blundell **Year:** 2013 **Time frame:** 2000-2006 **Location:** UK. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Cohort design (unclear if prospective or retrospective).	**Size of relevant sample:** 72 **Age of sample:** Mean age of 42-years. **Ethnicity:** Not reported. **Offence type:** Rape (22%), child abuse (54%), non-contact (24%).	**Setting:** Community. **Details of treatment:** The Challenge Project is a community programme for high risk and/or mentally disordered offenders. Treatment is manualised and structured. **Frequency and duration:** 2 hours per week for approximately 15 months. **Facilitators:** Not reported. **Format:** Group (high risk) or individual (lower risk). **Mandated/voluntary:** Both mandatory (84%) and voluntary (16%). **Theoretical basis:** CBT, RP, attachment and victim empathy.	**Data collection:** Semi-structured interview corroborated by case file information. Static-99, MCMI-II, and PCL-SV data coded prospectively. Stable-2007 data coded retrospectively by researcher. **Comparator definitions:** TNC included expulsion and/or recidivism. **TNC rate:** 25%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** 44%. **Length of follow-up (if applicable):** Mean of 40 months.	**Relevant statistical analysis:** Multivariate (Regression). **Factors related to TNC:** No significant findings. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Biased sample due to inclusion criteria being based on clinical considerations, not research criteria. Short follow-up length, unlikely to capture true recidivism rate. **Biases:** Sampling bias towards more high risk and mentally disordered offenders.	**Implications:** The lack of differences between compliant and non-compliant participants may be due to a sampling bias towards higher risk and higher need participants. **Future research:** Expand upon current study with longer follow-up length and the inclusion of a control group.
Authors: DeSorcy et al. **Year:** 2016 **Time frame:** 1998-2005. **Location:** Canada. **Quality score:** 80%.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 423. **Age of sample:** Mean age of 37 years. **Ethnicity:** Aboriginal (46%), White (52%).	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Sex Offender Programme offers clinical group and individual work, as well as opportunities for education, work and life	**Data collection:** Case file review. Data coded prospectively. **Comparator definitions:** TNC included drop-out expulsion and interruption. **TNC rate:** 13%.	**Relevant statistical analysis:** Univariate (Chi-square, Kaplan-Meier Survival Analysis and Pairwise Comparisons). **Factors related to TNC:** Lower WAI total and subscale	**Strengths:** Large sample size, prospectively administered measures, and robust measurement of outcome variables. Group comparisons	**Implications:** Strong, culturally sensitive, therapeutic alliance may be protective against treatment attrition. **Future research:** Qualitative research to incorporate

Source: Database search.		**Offence type:** Rape (51%), extra-familial child molestation (21%), adult and child victims (19%), intra-familial child molestation (5%), mixed intra/ extrafamilial child molestation (2%), non-contact (1%), adult family members (0.2%), sexually motivated non-sexual offence (0.7%).	skills, and addressing interpersonal needs. **Frequency and duration:** 15-20 hours per week, for average duration of 6.5 months. **Facilitators:** MDT (nurses, psychologists, psychiatrists, social workers, and parole officers). **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT, underpinned by RNR.	**Reasons for TNC:** Poor participation and progress (57%), suspension (11%), transfer out of setting (9%), programme cancelled (9%), withdrew (7%), early-release (7%). **Recidivism rate (if reported):** 57%. **Length of follow-up (if applicable):** Mean of 10 years.	scores, Aboriginal ancestry. **Relationship between TNC and recidivism (if applicable):** Not reported.	between Aboriginal and non-Aboriginal men. **Limitations identified in paper:** Retrospective study resulted in limited opportunity for participants to give narrative accounts of their experiences. WAI did not incorporate therapist ratings. WAI only administered at one point. **Biases:** Not reported.	interviews, eliciting richer data on relationship between therapeutic alliance and TNC.
Authors: DeSorcy et al. **Year:** 2020. **Time frame:** 1994-2005. **Location:** Canada. **Quality score:** 80%.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 111. **Age of sample:** Mean age of 37 years. **Ethnicity:** White (51%), Aboriginal (47%), Black (2%).	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Sex Offender Programme offers treatment for moderate-to-high risk MCSO. Also offers opportunities for education, life and work	**Data collection:** Case file review. WAI coded prospectively; PCL-R coded retrospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption.	**Relevant statistical analysis:** Multivariate (Regression). **Factors related to TNC:** No significant findings. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Prospective administration of the WAI. Adds to limited research exploring the relationship between structural features of psychopathy and	**Implications:** Having prominent psychopathic traits does not preclude the formation of a positive therapeutic alliance or treatment completion. Prioritising the task

Source: Database search.		**Offence type:** Not reported.	skills, and addressing interpersonal needs. **Frequency and duration:** 15-20 hours per week, for average duration of 6 months. **Facilitators:** MDT (nurses, psychologists, psychiatrists, social workers, and parole officers). **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT underpinned by RNR.	**TNC rate:** 11%. **Reasons for TNC:** Poor participation and progress (50%), transfer out of setting (16%), early release (16%), withdrew (8%), suspended (8%). **Recidivism rate (if reported):** 59%. **Length of follow-up (if applicable):** Mean of 10 years.		therapeutic alliance. **Limitations identified in paper:** Small sample size resulting in underpowered analyses. WAI did not incorporate therapist ratings. WAI only administered at one point. **Biases:** Not reported.	and goal components of therapeutic alliance (rather than bond) when working with high psychopathy clients may maximise retention. **Future research:** To extend and replicate the findings in other samples and settings. Including repeated administration of the WAI to explore changes in therapeutic alliance.
Authors: Gimenez-Salinas et al. **Year:** 2023 **Time frame:** Not reported. **Location:** Spain. **Quality score:** 60% **Source:** Automated search alerts.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 172 **Age of sample:** Mean age 30 years. **Ethnicity:** Spanish (38%), North African (26.5%), South American (15.1%), East Europe (12%), other African countries (4.5%), other	**Setting:** Prison. **Details of treatment:** CBT intervention with relapse prevention targeting risk factors for reoffending (e.g., cognitive distortions, empathy towards the victim, anger control). **Frequency and duration:** Not reported. **Facilitators:** Not reported. **Format:** Not reported.	**Data collection:** Case file review. Data coded retrospectively. **Comparator definitions:** TNC included drop-out and expulsion. **TNC rate:** Not reported. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Not reported.	**Relevant statistical analysis:** Bivariate (Chi-square). **Factors related to TNC:** No significant findings. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Missing data due to incomplete information provided in prison files. **Biases:** Researcher bias reduced as inter-rater reliability between	**Implications:** There are no significant differences between lone and multiple perpetrator MCSO in terms of treatment drop-out and expulsion. The results do not support different interventions for these two groups. **Future research:** The non-significant

		European countries (2.4%), other countries (1.2%). **Offence type:** Sexual abuse (4.1%), sexual abuse with penetration (3.5%), sexual assault (23.8%), sexual assault with penetration (39.0%), and aggravated sexual assault (29.7%).	**Mandated/voluntary:** Voluntary. **Theoretical basis:** CBT and RP.	**Length of follow-up (if applicable):** Not applicable.		researchers conducted, indicating moderate level of agreement.	findings should be addressed to explore whether this is due to a similar profile between lone and multiple-perpetrator rapists.
Authors: Guston **Year:** 2023 **Time frame:** Not reported. **Location:** USA. **Quality score:** 60% **Source:** Automated search alerts.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 289 **Age of sample:** Mean age 29 years. **Ethnicity:** White (90%). **Offence type:** Not reported.	**Setting:** Community. **Details of treatment:** The Sex offender Treatment and Assessment of North Dakota is a cognitive behavioural treatment programme. **Frequency and duration:** Not reported. **Facilitators:** Not reported. **Format:** Not reported. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT.	**Data collection:** Case file review. Data coded prospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption (licence recall). **TNC rate:** 35% **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Not reported.	**Relevant statistical analysis:** Multivariate (Binominal logistic regression). **Factors related to TNC:** Overall model (Static-99, Stable-2007, URICA; predictor). Static-99 (predictor) and Stable-2007 (predictor) individually. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Categorical data for URICA limits its predictive ability. Small and unequal sample sizes in TNC subtypes limits interpretation of analysis. **Biases:** Not reported.	**Implications:** Findings suggests that clinicians can use readily available gold standard measures to predict both risk of recidivism and TNC. **Future research:** To examine TNC using item-level data from Static-99, Stable-2007, and URICA to explore their individual

				Length of follow-up (if applicable): Not reported.			predictive ability for TNC.
Authors: Howard **Year:** 2016 **Time frame:** 1998-2015. **Location:** Australia. **Quality score:** 60%. **Source:** Reference list search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 628. **Age of sample:** Mean age of 37. **Ethnicity:** Aboriginal (26%). **Offence type:** Child sex offence (57%).	**Setting:** Prison, Therapeutic Community. **Details of treatment:** CUBIT is a residential programme for moderate-to-high risk and need MCSO. Treatment areas include taking responsibility for offending behaviour, victim issues, relationships, coping skills, and self-management plans. Operational changes were made in 2005 from closed to open group format and emphasis on the use of positive therapist characteristics. **Frequency and duration:** 3 sessions per week. Duration not reported. **Facilitators:** Not reported. **Format:** Group (closed 1999-2005, open since 2005). **Mandated/voluntary:** Not reported.	**Data collection:** Case file review. Data coded prospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption. **TNC rate:** 13%. **Reasons for TNC:** Behavioural problems (expulsion; 29%), poor treatment engagement (expulsion; 29%), self-initiated drop out (23%), administrative interruption (11%), and other needs (8%). **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relevant statistical analysis:** Univariate (Chi-square) and Multivariate (Regression). **Factors related to TNC:** Younger age, higher LSI-R scores, criminal versatility, greater anti-authority attitudes (predictor). Programme iteration (pre-2005; predictor) **Relationship between TNC and recidivism (if applicable):** Not applicable.	**Strengths:** Not reported. **Limitations identified in paper:** Impact of operational changes in 2005 could be conflated by other innovations made since that time. Small sample size of TNC reduced possible analyses. Missing data for range of variables. **Biases:** Potential response bias due to some measures being reliant on self-report under scrutiny of the criminal justice system.	**Implications:** The use of open, rolling groups, may reduce TNC as this allows for use of disciplinary measures other than expulsion. The lack of significant results for individual variables suggests that adherence to RNR is demonstrated by absence of systematic predictors of TNC. **Future research:** To explore how features of therapeutic alliance are developed with offenders and how this may modify anti-authority attitudes, especially for attrition prone participants.

			Theoretical basis: CBT, RP, GLM.				
Authors: Howard et al. **Year:** 2019. **Time frame:** 1999-2015. **Location:** Australia. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 652. **Age of sample:** Range of 18-81 years. **Ethnicity:** Aboriginal (23%). **Offence type:** Child abuse (57%), rape (43%), non-contact (3%). **Recruitment method:** Participants included all admissions to the treatment programme between 1999 to 2015.	**Setting:** Prison, Therapeutic Community. **Details of treatment:** Custody-Based Intensive Treatment Programme (CUBIT) for moderate-to-high risk MCSO. Operational changes were made in 2005 from closed to open group format, clinical supervision, and emphasis on the use of positive therapist characteristics. **Frequency and duration:** Not reported. **Facilitators:** Not reported. **Format:** Group. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT, underpinned by RNR.	**Data collection:** Case file review. Not clear whether psychometric measures were coded prospectively or retrospectively. **Comparator definitions:** TNC included drop-out and expulsion. TNC for interruption or acute responsivity needs were excluded form analysis. **TNC rate:** 16%. **Reasons for TNC:** Behavioural violations (expulsion; 48%), lack of treatment gains (expulsions 48%), voluntary drop out (21%). **Recidivism rate (if reported):** 39%. **Length of follow-up (if applicable):** Mean of 4 years.	**Relevant statistical analysis:** Univariate (Chi-square and Mann-Whitney U) and Multivariate (Regression). **Factors related to TNC:** Higher LSI-R scores (predictor), younger age, more anti-social attitudes on CSS, and programme iteration (pre-2005; predictor). **Relationship between TNC and recidivism (if applicable):** As cohort attrition increased, their hazard of sexual reoffending significantly decreased.	**Strengths:** Not reported. **Limitations identified in paper:** Unclear which of the changes to CUBIT post 2005 contributed to reduced TNC. Small sample size limited analyses. Cohort attrition may reflect operational changes, rather than direct influence of retained participants. **Biases:** Not reported.	**Implications:** Treatment delivery factors can have a substantial impact on TNC. Treatment should actively engage participants, rather than simply increasing the threshold at which they are discharged. Increasing retention, without responsivity, is likely to increase rate of sexual recidivism. **Future research:** Further explore the research area.
Authors: Howard & Wei	Quantitative non-randomised.	**Size of relevant sample:** CUBIT	<u>Intervention 1:</u> **Setting:** Prison, Therapeutic Community.	**Data collection:** Case file review. Not clear whether	**Relevant statistical analysis:** Univariate (Regression).	**Strengths:** Not reported.	**Implications:** The finding that reduced TNC is attributed to

Year: 2022 **Time frame:** 1999-2021 **Location:** Australia. **Quality score:** 80% **Source:** Database search.	Retrospective cohort design.	(*n*=354), CORE (*n*=136) **Age of sample:** Mean of 43 years. **Ethnicity:** Aboriginal (19%). **Offence type:** Not reported.	**Details of treatment:** CUBIT is a residential programme for high risk and needs MCSO. **Frequency and duration:** 3 sessions per week, for 6-10 months. **Facilitators:** Not reported. **Format:** Closed group between 1999-2004, Open group from 2005 onwards. **Mandated/voluntary:** Not reported. **Theoretical basis: basis:** Not reported. <u>Intervention 2:</u> **Setting:** Prison. **Details of treatment:** CORE is an extension of CUBIT, for low-to-moderate risk and need MCSO. **Frequency and duration:** 2 sessions per week, for 4-8 months. **Facilitators:** Not reported. **Format:** Closed group. **Mandated/voluntary:** Not reported. **Theoretical basis:** Not reported.	psychometric measures were coded prospectively or retrospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption. **TNC rate:** 17%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** 41%. **Length of follow-up (if applicable):** 5 years post release.	**Factors related to TNC:** Programme iteration (pre-2005; predictor). **Relationship between TNC and recidivism (if applicable):** TNC is a significant predictor of recidivism within 2 years, marginal predictor within 5-years.	**Limitations identified in paper:** Recidivism is a distal indicator of treatment outcome that may have limited sensitivity to the variation in delivery characteristics. **Biases:** Not reported.	programme iteration, but not group format, differs from previous conclusions (Howard et al., 2019), and highlights the value of including a comparison group. Closed and open groups both viable methods of effectively engaging MCSO in treatment. **Future research:** Explore alternative mechanisms to recidivism to examine impact of group format, such as perception of group climate or therapist characteristics.

Authors: Olver & Wong. **Year:** 2011. **Time frame:** 1983-1997. **Location:** Canada. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 154. **Age of sample:** Mean age of 31 years. **Ethnicity:** White (62%), Aboriginal (36%), Other (2%). **Offence type:** Rape (49%), extra-familial child sexual abuse (16%), both adult and child victims (17%), intra-familial child sexual abuse (19%).	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Programme is a high intensity programme for moderate-to-high risk MCSO. **Frequency and duration:** Frequency not reported. Average duration of 8 months. **Facilitators:** MDT (psychologists, psychiatrists, psychiatric nurses, social workers, aboriginal elders, occupational therapists, and parole officers). **Format:** Not reported. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT, RP, in accordance with the "what works" principles.	**Data collection:** Case file review. Risk assessment data were coded retrospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption. **TNC rate:** 15%. **Reasons for TNC:** Lack of motivation (30%), disruptive behaviour (35%), voluntarily withdrawal (26%), and administrative (22%)**.** **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relevant statistical analysis:** Univariate (Chi-square, one-way ANOVA, correlations), Multivariate (Discriminant function and stepwise analysis). **Factors related to TNC:** Diagnosis of any personality disorder, ASPD, or psychopathy. Unstable employment history, and single marital status (predictor). Higher scores of VRS-SO dynamic item total and Criminality (predictor) and Treatment Responsivity subscales. Higher mean PCL-R Factor 1 and Factor 2 scores (predictors), and higher scores in the four Facets (predictors) however, only the Affective Facet was a predictor. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Modest sample size, coupled with low attrition rate, reduced power of TNC analyses. **Biases:** Not reported.	**Implications:** MCSO with high levels of psychopathy, especially in the Affective Facet, may have higher TNC due to difficulties in forming a strong therapeutic alliance. When working with this population, therapeutic alliance should focus on task and goal domains, not bond. **Future research:** Examine the relationship between different Facets of the PCL-R and TNC to sexual and violence recidivism.

Authors: Percosky et al. **Year:** 2013. **Time frame:** 2007-2011. **Location:** USA. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 34. **Age of sample:** Mean of 38 years. **Ethnicity:** Caucasian (47%), Hispanic (50%), Pacific Islander (3%). **Offence type:** Not reported.	**Setting:** Community. **Details of treatment:** Begins with an orientation group, followed by a core group. Treatment focus includes honesty about sexual offence history, pathways to sexual offending, triggers, coping skills, and safety planning. **Frequency and duration:** Orientation lasts approximately 2 months, core group lasts between 2 to 5 years, dependent on progress. Sessions progress from weekly, to bi-monthly, monthly, and quarterly, before being discharged. **Facilitators:** Two licenced, master's level therapists, and one PhD level psychologist. **Format:** Group. **Mandated/voluntary:** Mandatory**.** **Theoretical basis:** CBT and RP.	**Data collection:** Case file review. Data were coded prospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption. **TNC rate:** 59%. **Reasons for TNC:** Recall (55%) and non-compliance (45%; related to absence, failing to complete homework, or pay fees). **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relevant statistical analysis:** Univariate (Area Under the Curve). **Factors related to TNC:** Higher scores in the Borderline Features scale (predictor) and subscales Identity Problems and Negative Relationships (predictors). **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Small sample size, resulting in underpowered analyses. Limited generalisability due to participants receiving the same treatment from the same clinic. **Biases:** Not reported.	**Implications:** Even moderate BPD traits can predict TNC. Findings support recommendations to integrate components of DBT into sex offender treatment. **Future research:** Not reported.

Authors: Sewall & Olver**.** **Year:** 2018. **Time frame:** 1983-1997. **Location:** Canada. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 86. **Age of sample:** Mean age of 30 years. **Ethnicity:** Caucasian (55%), Indigenous Ancestry (44%), Other (1%). **Offence type:** Not reported.	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Programme is for moderate-to-high risk sexual violence offenders. Includes group treatment and therapeutic assignments to target criminogenic need and build prosocial skills. Additional intervention for deviant arousal if necessary. Cultural, employment, and recreational opportunities also available. **Frequency and duration:** Frequency not reported. Duration of 6-8 months. **Facilitators:** Not reported. **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT, underpinned by RNR.	**Data collection:** Case file review. Data coded retrospectively. **Comparator definitions:** TNC includes drop-out, expulsion, and interruption. **TNC rate:** Classic subtype (28%), Aggressive subtype (33%). **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Classic subtype (80%), Aggressive subtype (95%). **Length of follow-up (if applicable):** Not reported.	**Relevant statistical analysis:** Univariate (Chi-square and t-test). **Factors related to TNC:** No significant findings. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Employed well-validated measures, rated from comprehensive file information, with high level coding fidelity that was blind to outcome. **Limitations identified in paper:** Modest sample size, likely resulted in Type II errors, and reduced possible analyses. Archival nature of data collection. **Biases:** Not reported.	**Implications:** Certain PCL-R profiles may signal greater presence of responsivity issues, irrespective of subtype, which require managing to minimise TNC. **Future research:** To explore current research area, employing larger sample sizes, a measure of anxiety as a clustering variable, and prospective data.

Authors: Sewall & Olver. **Year:** 2019. **Time frame:** 1983-1997. **Location:** Canada. **Quality score:** 100%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 302. **Age of sample:** Mean age of 33 years. **Ethnicity:** Caucasian (63%). Aboriginal (35%). **Offence type:** Not reported.	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Programme primarily comprises therapeutic group work, supplemented by individual therapy. There are also employment and vocational opportunities available, as well as cultural and spiritual services provided by Elders. **Frequency and duration:** Frequency not reported, average duration of 8 months. **Facilitators:** MDT (nursing, social worker, clinical psychology, psychiatry, occupational therapy, and Indigenous Elders). **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT and RP, underpinned by RNR.	**Data collection:** Case file review. Data coded retrospectively. **Comparator definitions:** TNC included drop-out, expulsion, and interruption. **TNC rate:** 13%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** 57% for violent (including sexual) recidivism. **Length of follow-up (if applicable):** Mean of 18 years.	**Relevant statistical analysis:** Univariate (correlation, regression, and survival analysis). **Factors related to TNC:** Higher PCL-R scale scores, and Interpersonal, Lifestyle (predictor), Affective, and Anti-social Facet scores. **Relationship between TNC and recidivism (if applicable):** TNC related to significantly higher rates of violent recidivism (but not sexual recidivism), even after controlling for pre-existing risk.	**Strengths:** Used well-established and validated measures. Examined empirically supported RNR-based programme for a large sample of offenders, with objective criterion measures and a long follow-up period. **Limitations identified in paper:** The use of official convictions may underestimate rates of recidivism. Lack of a control group. **Biases:** Not reported.	**Implications:** High scores in the Lifestyle Facet would relate to TNC due to poor work ethic or compliance. **Future research:** Explore research area with quasi-experimental evaluations of psychopathic treated offenders with matched untreated controls.

Authors: Sowden & Olver. **Year:** 2017. **Time frame:** 1998-2001. **Location:** Canada. **Quality score:** 80%. **Source:** Reference list search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 185. **Age of sample:** Mean of 36 years. **Ethnicity:** Aboriginal (49%), White (43%), Other (8%). **Offence type:** Not reported.	**Setting:** Psychiatric hospital. **Details of treatment:** The Clearwater Programme is a high intensity programme for high-risk MCSO, with special treatment or responsivity needs. Included 10 modules addressing social skills, distorted thinking, aggression, stress management, sexuality, relationships, leisure, precursors to offending, and high-risk situations. **Frequency and duration:** 2 hours per day, 5 days per week, for an average duration of 7 months. **Facilitators:** MDT (social worker, psychiatric nursing and psychology). **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT, RP, Stages of Change.	**Data collection:** Case file review. Data coded retrospectively. **Comparator definitions:** TNC defined as any incomplete or unsuccessful attempt at the programme. **TNC rate:** 26%. **Reasons for TNC:** Attended all sessions but failed to complete treatment objectives (50%), discharged back to prison for various reasons (50%). **Recidivism rate (if reported):** 61%. **Length of follow-up (if applicable):** Mean of 9 years.	**Relevant statistical analysis:** Univariate (Correlations and Regression). **Factors related to TNC:** TRRG:SV subscales (predictor), higher VRS-SO dynamic scores. **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Excluded 50-60 participants who were not released at data collection, impacting upon the respective TNC rate. The design was correlational, not a controlled treatment outcome evaluation. **Biases:** Bias reduced due to blind coding of data.	**Implications:** Participants who engaged well in treatment were more likely to complete, regardless of high risk and need. This suggests that adherence to the responsivity principle can reduce attrition, irrespective of risk. **Future research:** Explore current research area on a larger sample in the Clearwater Programme.

Authors: Stevenson et al. **Year:** 2022. **Time frame:** 2014-2018. **Location:** Australia. **Quality score:** 100%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 426 (257 open format, 169 closed format) **Age of sample:** Mean age of 43 years. **Ethnicity:** Australian (73%), Indigenous Ancestry (3%). **Offence type:** Not reported.	<u>Intervention 1:</u> **Setting:** Prison **Details of treatment:** Better Lives Programme contains three intensity levels (low-moderate, moderate-high, and high) dependent on risk. Each have similar content, however, moderate-high and high utilise the same manual and have more treatment goals than the moderate-low programme. The high-risk programmes are delivered over a longer period. **Frequency and duration:** Twice weekly 3-hour sessions, for duration of 72-150 hours, dependent on intensity. **Facilitators:** Social workers and psychologists. **Format:** Group (39% open format, 61% closed format). **Mandated/voluntary:** Not reported. **Theoretical basis:** **basis:** CBT, underpinned by RNR and GLM	**Data collection:** Case file review. **Comparator definitions:** TNC included drop-out and expulsion. **TNC rate:** Prison-7%, Community-20%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** 12%. **Length of follow-up (if applicable):** Mean of 2 years.	**Relevant statistical analysis:** Univariate (Logistic regression). Multivariate (Hierarchical regression). **Factors related to TNC:** Treatment location (TNC increased in community; predictor). **Relationship between TNC and recidivism (if applicable):** TNC significantly related to risk of general recidivism, but not sexual recidivism.	**Strengths:** Not reported. **Limitations identified in paper:** Retrospective data collection reduced exploration of potential variables of interest. Treatment dosage in open programmes could not be explored due to lack of data. Short follow-up period likely did not capture true recidivism rates. Group allocation not random. **Biases:** Not reported.	**Implications:** The increase in TNC in the community is likely related to increased liberty and competing demands. **Future research:** To explore how open and closed groups may differ in terms of characteristics (e.g., engagement and group climate), whilst also ascertaining participants' experiences of this.

			Intervention 2: **Setting:** Community. **Details of Treatment:** See above. **Frequency and duration:** Weekly three-hour sessions, for a duration of 72-150 hours dependent on intensity. **Facilitators:** See above. **Format:** Group (80% open format, 20% closed format). **Mandated/voluntary:** Not reported. **Theoretical basis:** See above.				
Authors: Stück et al. **Year:** 2022. **Time frame:** 2010-2020. **Location:** Germany. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 146. **Age of sample:** Mean of 38 years. **Ethnicity:** Not reported. **Offence type:** Contact offence (91%; adult victim *n*=98, child victim *n*=46), non-contact offence (9%; adult victim *n*= 3, child victim	**Setting:** Prison, Therapeutic Community. **Details of treatment:** STU aims to reduce risk of recidivism by providing adequate resocialisation. The focus is on relationships, coping skills, social skills, and preparation for release. Therapeutic work includes offence specific and strengths-based approaches, as well as offence unspecific treatment	**Data collection:** Case file review. Unclear whether semi-structured interviews were conducted retrospectively or prospectively. **Comparator definitions:** TNC included participants who engaged in pre-testing but were transferred back to general prison ahead of schedule. Completers remained	**Relevant statistical analysis:** Univariate (Chi-square, t-test, and Regression). **Factors related to TNC:** Younger age (predictor), no secondary school diploma, single marital status, more prior convictions (predictor), higher Static-99 scores, and higher PCL-R total and subscale scores (Interpersonal Facet only predictor).	**Strengths:** Not reported. **Limitations identified in paper:** Reasons for TNC not known, TNC was assumed a negative outcome, however, there are various reasons for this which may not be indicative of treatment failure. Non-completers excluded from	**Implications:** To retain participants in treatment, practitioners must individually adjust treatment intensity and style, allowing participants to derive maximum therapeutic benefit. Participants' pre-treatment risk factors are not decisive with regards to TNC, but responsivity to

		n=10), both contact and non-contact (6%; *n*=9).	(e.g., substance abuse and trauma). **Frequency and duration:** Not reported. **Facilitators:** Not reported. **Format:** Group and individual. **Mandated/voluntary:** Mandatory. **Theoretical basis:** RNR.	in the STU for at least 1 year after initial testing or were released after at least 1 year. **TNC rate:** 19%. **Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	**Relationship between TNC and recidivism (if applicable):** Not reported.	analysis around treatment change. **Biases:** Excluding non-completers from treatment change analysis may have inflated the positive change in the assessed risk of recidivism.	these factors may be. **Future research:** To extend beyond self-efficacy and attachment as pre-treatment variables and explore whether these variables change as a result of treatment, and how this relates to risk.
Authors: Stumpf. **Year:** 2022. **Time frame:** 6 years. **Location:** USA. **Quality score:** 80%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 203. **Age of sample:** Mean age of 41 years. **Ethnicity:** European America (68%), Hispanic (15%), Multiple (7%), African American (4%), Iraqi (0.5%), American Indian (4%), Pacific Islander (0.5%). **Offence type:** Rape (21%), sodomy (14%),	**Setting:** Community. **Details of treatment:** The programme's curriculum addresses thought regulation, emotional regulation, offence-related factors, and arousal reconditioning where appropriate. **Frequency and duration:** Frequency not reported. Average duration of 1.5 years. **Facilitators:** Not reported. **Format:** Group and individual. **Mandated/voluntary:** Not reported.	**Data collection:** Case file review. Unclear whether measures were coded retrospective or prospectively. **Comparator definitions:** Completion consisted of successful treatment completion and maximum benefit. TNC included drop-out and expulsion. TNC due to interruption was excluded from analysis. **TNC rate:** 50%.	**Relevant statistical analysis:** Univariate (Regression and Bayesian Contingency Tables). **Factors related to TNC:** Less education (predictor), single marital status (predictor), higher levels of psychopathology, substance-use (predictor) and anti-social characteristics on the PAI, lower scores Impression Management subscale on PDS (predictor), higher scores on	**Strengths:** Not reported. **Limitations identified in paper:** Information was lost when categories in the predictor variables were collapsed into dichotomous variables to simplify analysis. This limited the nuanced inferences that could be made. Lack of	**Implications:** Some clients may not be amenable to treatment, resources should be prioritised for those who will gain the most benefit. However, clinicians should seek to adjust treatment where possible to meet individual needs. **Future research:** To explore the nuanced differences between completers and non-completers in terms of marital

		sexual abuse (61%), child sexual exploitation material (8%), other (harassment etc., 36%).	**Theoretical basis:** CBT, underpinned by RNR.	**Reasons for TNC:** Not reported. **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.	Stable-2007 and IORNS static risk index (predictors) scales. **Relationship between TNC and recidivism (if applicable):** Not reported.	generalisability to other samples. **Biases:** Self-report or clinician bias could have resulted in coding sources of error.	status, education, and ethnicity.
Authors: Willis & Levenson. **Year:** 2022. **Time frame:** 2007-2015. **Location:** New Zealand. **Quality score:** 60%. **Source:** Database search.	Quantitative non-randomised. Retrospective cohort design.	**Size of relevant sample:** 411. **Age of sample:** Mean age of 40 years. **Ethnicity:** European New Zealand (69%), New Zealand Māori (18%), Pacific Island (12%), and Other (8%). **Offence type:** Contact (66%), non-contact (15%), internet (29%).	**Setting:** Community. **Details of treatment:** Three community-based treatment programmes included. Treatment components were similar and included offence process work, mood management, victim empathy, and relationship skills. Typically, low-to-moderate risk MCSO. **Frequency and duration:** Not reported. **Facilitators:** Not reported. **Format:** Not reported. **Mandated/voluntary:** Not reported. **Theoretical basis:** RP.	**Data collection:** Case file review. Data coded retrospectively (subsample of 34 participants coded prospectively to compare coding). **Comparator definitions:** TNC included drop-out, expulsion, and interruption. TNC due to administrative or medical reasons excluded for analysis. **TNC rate:** 21%. **Reasons for TNC:** Lack of engagement (45%), non-attendance (29%), recidivism or breach (15%), non-compliance with rules (14%), unsatisfactory progress (9%),	**Relevant statistical analysis:** Univariate (t-test and Regression). **Factors related to TNC:** Higher scores on Static-99, Stable-2007 (predictor), and Stable-2007 and Static-99 combined. Higher ACE scores (predictor). **Relationship between TNC and recidivism (if applicable):** Not reported.	**Strengths:** Not reported. **Limitations identified in paper:** Retrospective coding was related to an underestimation of ACE scores. Sample did not include MCSO with exclusively adult victims. Limited variability in risk scores due to sample comprising low-to-moderate risk offenders. **Biases:** Not reported.	**Implications:** Trauma may represent a specific responsivity factor. Treatment should be based on RNR and the GLM and be trauma informed. **Future research:** Prospective clinical studies, or retrospective studies based on coded files where ACEs are explicitly assessed.

				completed assessment but declined treatment, (8%), mental health issues (7%), denial of offending (6%), victimisation/trauma (5%), drug and/or alcohol abuse (2%). withdrew from the agency before the assessment was completed (1%). **Recidivism rate (if reported):** Not reported. **Length of follow-up (if applicable):** Not applicable.			
Authors: Zara et al. **Year:** 2020. **Time frame:** Not applicable. **Location:** Italy. **Quality score:** 80% **Source:** Database search.	Quantitative non-randomised. Prospective, cohort design.	**Size of relevant sample:** 34. **Age of sample:** Mean age of 45 years. **Ethnicity:** Caucasian (100%). **Offence type:** Contact only (86%), contact and non-contact (11%), non-contact only (3%), intra-	**Setting:** Prison. **Details of treatment:** Motivational programme. Preliminary phase addressed emotional literacy and motivation, lasted approx. 4 weeks. Group programme addressed denial, victim empathy, recognition of the offence, and acceptance of responsibility. **Frequency and duration:** 2–3-hour	**Data collection:** Prospective measures and semi-structured interviews. **Comparator definitions:** Not reported. **TNC rate:** 56%. **Reasons for TNC:** Non-compliance (69%). **Recidivism rate (if reported):** Not reported.	**Relevant statistical analysis:** Univariate (t-test). Multivariate (Regression and Odds Ratio). **Factors related to TNC:** Lower scores on overall denial (predictor) and denial of sexual deviance and arousal (predictor). Lower pre-treatment scores on Stable-2007 overall dynamic risk,	**Strengths:** Not reported. **Limitations identified in paper:** Risk assessments not routinely completed, resulting in a lack of data and small sample size. Adherence to the risk principle of RNR is not	**Implications:** Findings suggest that differential treatment should be delivered depending on criminal diversity, with additional attention on addressing underlying antisocial thinking. Less emphasis should be placed on getting an offender

		familial (67%), extra-familial (23%), stranger (9%).	sessions. Frequency not reported. Mean duration of 15 months. **Facilitators:** Not reported. **Format:** Group and individual. **Mandated/voluntary:** Not reported. **Theoretical basis:** CBT and psychoeducation.	**Length of follow-up (if applicable):** Not applicable.	and Intimacy Deficits (predictor) subscale. Heterogenous offending (predictor). **Relationship between TNC and recidivism (if applicable):** Not applicable.	typical practice in Italy. **Biases:** Not reported.	to admit their offence. **Future research:** Further research in Italy to assist generalisability of findings.

Notes. TNC= treatment non-completion; STU= socio-therapeutic community; RNR= Risk, Need, Responsivity; CBT= Cognitive Behavioural Therapy; RP= Relapse Prevention; GLM= Good Lives Model; PCL-R= Psychopathy Checklist- Revised; MDT= Multi-disciplinary Team; WAI= Working Alliance Inventory; URICA= University of Rhode Island Change Assessment; CUBIT= Custody-Based Intensive Treatment Programme; LSI-R = Level of Service Inventory- Revised; CSS= Criminal Sentiments Scale; VRS-SO= Violence Risk Scale- Sexual Offender Version; ASPD= Anti-Social Personality Disorder; PAI= Personality Assessment Inventory; BPD= Borderline Personality Disorder; DBT= Dialectical Behavioural Therapy; TRRG:SV= Treatment Readiness, Responsivity and Gain Scale: Short Version; PDS= Paulhus Deception Scale; IORNS= Inventory of Offender Risk, Needs and Strengths; ACE Scale= Adverse Childhood Experience Scale.

Descriptive Data Synthesis

Design

The present review included 21 studies, each adopting a quantitative non-randomised approach, employing either a retrospective cohort (*n*=18), prospective cohort (*n*=1), or cross-sectional (*n*=1) design. The precise design of one cohort study was not clear from the information provided (Craissati & Blundell, 2013). Most of the studies relied on case file review to collect and code data (*n*=19), with three studies also utilising semi-structured interviews (Craissati & Blundell, 2013; Stück et al., 2022; Zara et al., 2020). Studies differed on whether they utilised retrospective data coding (*n*=9) or prospective data coding (*n*=7), with one study employing both (DeSorcy et al., 2020) and four studies not specifying this (Howard et al., 2019; Howard & Wei, 2022; Stück et al., 2022; Stumpf, 2022).

Measures

A range of measures were employed to explore the characteristics of the relevant samples, including, **risk assessments**: *Static-99* (*n*=12), *Stable-2007* (*n*=6), *Level of Service Inventory-Revised* (LSI-R; *n*=3), *Violence Risk Scale- Sexual Offence Version* (VRS-SO; *n*=3), and *Inventory of Offender Risk, Needs, and Strengths* (IORNS; *n*=1); **personality and clinical assessments**: *Psychopathy Checklist-Revised* (PCL-R; *n*=6), *Minnesota Multiphasic Personality Inventory-2* (MMPI-2; *n*=2), *Criminal Sentiments Scale* (CSS; *n*=2), *Personality Assessment Inventory* (PAI; *n*=2), *Social Self Esteem Inventory* (SSEI; *n*=1), *Treatment Readiness, Responsivity, and Gain Scale: Short Version* (TRRG:SV; *n*=1), *General Self-Efficacy Scale* (GSE; *n*=1), *Experiences in Close Relationships-Revised Scale* (ECR-R; *n*=1), *Paulhus Deception Scales* (PDS; *n*=1), *Adverse Childhood Experiences Scale* (ACE; *n*=1), *University of Rhode Island Change Assessment* (URCIA; *n*=1) and *Comprehensive Inventory*

of Denial – Sex Offender Version (CID-SO; *n*=1); **cognitive assessments**: *Revised Beta Examination–Third Edition* (Beta-III; *n*=1), *Wide Range Achievement Test–Third Edition* (WRAT-3; *n*=1). *Tests of Adult Basic Education* (TABE; *n*=1) and *Trail Making Test* (*n*=1), and an **assessment of therapeutic alliance**: *Working Alliance Inventory* (WAI; *n*=2).

Participants

The total number of participants within relevant samples across the 21 studies was 5,538, with individual samples ranging from 34 to 652 participants. The total sample comprised adult MCSO with a mean age of 38 years across 19 of the studies, two studies did not provide a mean age for their samples (Carr, 2011; Howard et al., 2019).

Geographical Location and Offence Typology

The studies ranged in location, including Canada (*n*=6), Australia (*n* =4), the United States of America (USA; *n*=5), Germany (*n*=2), the United Kingdom (UK; *n*=1), New Zealand (*n*=1), Spain (*n*=1) and Italy (*n*=1). Sexual offence typology was not always reported across studies, nor were the categories consistently assigned. As such, it was not possible to gauge the exact composition of type of sexual offending behaviour for the total sample.

Treatment Setting and Intervention

Treatment settings included standard prison wings (*n*=4), therapeutic communities within a prison (*n*=5), psychiatric hospitals (*n*=6), and community settings (*n*=7). In terms of intervention, all studies employed a Cognitive Behavioural and/or Relapse Prevention approach, underpinned by the RNR principles. Whilst Howard and Wei (2022) did not explicitly state the theoretical basis of the explored intervention, the same intervention was discussed in more detail in other included studies (i.e., Howard, 2016; Howard et al., 2019),

wherein a CBT approach was identified. As such, it was decided that the study would remain in the present review. The average duration of intervention ranged from a potential three months up to five years. However, seven studies did not report the duration of the intervention. Treatment modality primarily involved a combination of group work with supplementary individual sessions (*n*=10) or standalone group sessions (*n*=7). Four studies did not report treatment modality. Of note, 14 studies did not report whether participation was voluntary or mandatory, while four studies specified mandatory treatment and three studies included voluntary treatment.

Six of the included studies comprised samples from The Clearwater Programme (DeSorcy et al., 2016; DeSorcy et al., 2020; Olver & Wong, 2011; Sewall & Olver, 2018; Sewall & Olver, 2019; Sowden & Olver, 2017), totalling 2,522 participants, accounting for approximately 45.5% of the total population within the current review. A further three studies comprised samples from the CUBIT Programme (Howard, 2016; Howard et al., 2019; Howard & Wei, 2022), totalling 1,634 participants, accounting for approximately 29.5% of the total population. As such, approximately 75% of the total population within the current review engaged in either of the two programmes. Therefore, it is likely that the characteristics of the relative populations are over-represented within the total sample.

Defining TNC

Despite variability in the terms used to describe non-completion, such as “drop-out”, “attrition”, or “premature termination”, the majority of the studies provided clear parameters for defining TNC. In line with Larochelle et al. (2011), these definitions broadly incorporated reasons for TNC under the labels of “drop-out” (voluntary withdrawal from treatment without prior discussion with the treatment team), “expulsion” (involuntary discharge from treatment

by the therapeutic team), and “interruption” (premature termination due to the client leaving the setting where the treatment is facilitated).

Nine studies included “drop-out”, “expulsion”, and “interruption” in their definition of TNC; seven studies only included “drop-out” and “expulsion” related TNC, having excluded non-completion related to “interruption” from analysis; three studies did not specify the parameters of TNC; one study defined TNC to only include “expulsion”; and the final study defined TNC to include “drop-out” and “expulsion”, with TNC related to “interruption” coded as completion. Nine studies provided the precise reasons for TNC within their respective samples (DeSorcy et al., 2016, 2020; Howard, 2016; Howard et al., 2019; Olver & Wong, 2011; Percosky et al., 2013; Sowden & Olver, 2017; Willis & Levenson, 2022; Zara et al., 2020).

Whilst Larochelle et al. (2011) recommended that reasons for TNC should be explored separately as a function of the three distinct groups, only two studies within the present review completed such analysis (Howard, 2016; Howard et al., 2019).

Finally, Clegg et al. (2011) employed a dynamic criterion to define TNC, with completers defined as participants who were compliant with treatment at the time of data collection, rather than those who completed the entire intervention. Therefore, it is likely that this inflated the rate of completion within this study.

TNC Rate

Rates of non-completion within the relevant samples ranged from 11% (DeSorcy et al., 2011) to 59 % (Percosky et al., 2013). The average TNC rate across samples was approximately 27 %. One study did not report TNC rate (Gimenez-Salinas et al., 2023).

Reasons for TNC

To address the aims of the present review, the following section presents findings related to TNC amongst MCSO. The relationship between explored variables and TNC is discussed, highlighting consistent, as well as inconsistent, findings between the studies. As research differed in terms of whether the employed statistical analysis simply explored associations between relevant variables and TNC, or the ability of the variables to predict TNC, predictor variables are highlighted throughout. The final section explores findings regarding the relationship between TNC and recidivism.

Table 3 presents a summary of these findings, including the quality assessment scores of the relevant studies to inform critique. It is noted that conclusions regarding predictors of TNC should not be drawn from this table. Instead, findings are best understood within broader themes presented in the narrative synthesis in the discussion.

Demographic variables.

Age. Eight studies examined the relationship between age and TNC. Five studies revealed a relationship between the two variables, with each study suggesting that younger age was related to an increased likelihood of non-completion (Carl & Lösel, 2021; Carr, 2011; Howard, 2016; Howard et al., 2019; Stück et al., 2022), and one of these studies demonstrated that younger age was able to predict TNC (Stück et al., 2022). However, three studies found no association between age and TNC (Clegg et al., 2011; Olver & Wong, 2011; Stumpf, 2022).

Marital Status. Six studies examined the relationship between marital status and TNC. Four studies indicated an association between the variables, with each study suggesting that non-completers were less likely to have ever been married (Carr, 2011; Olver & Wong, 2011; Stück et al., 2022; Stumpf, 2022). Two of these studies were able to demonstrate the predictive

power of this variable (Olver & Wong, 2011; Stumpf, 2022). However, two studies were not able to demonstrate this relationship (Clegg et al., 2011; Howard et al., 2019).

Employment. Four studies examined the relationship between employment and TNC, with contradictory results. One study revealed a significant association, whereby non-completers were more likely to have an unstable employment history (Olver & Wong, 2011). However, three studies contradicted this finding, suggesting that there was no significant relationship between employment status and TNC (Stück et al., 2022; Stumpf, 2022), nor were non-completers more likely to have no professional qualifications (Carl & Lösel, 2021).

Education. Six studies examined the relationship between education and TNC, offering contradictory findings. Two studies suggested that TNC was related to having less secondary school education (Stück et al., 2022; Stumpf, 2022). However, this idea conflicts with the findings of four further studies, which found no association between TNC and level of education (Clegg et al., 2011; Howard, 2016; Howard et al., 2019; Olver & Wong, 2011), basic academic skills, educational progress, or neurological functioning (Clegg et al. (2011).

Ethnicity. Six studies examined the relationship between ethnicity and TNC. The results of the present review suggest that there is no association between ethnicity and TNC, with five studies having found no significant relationship between TNC and the ethnicity of the relevant samples (Clegg et al., 2011; Howard, 2016; Howard et al., 2019; Olver & Wong, 2011; Stumpf, 2022). The results of one study were able to demonstrate a potential relationship between Aboriginal status and TNC, as Aboriginal participants had higher rates of TNC than non-Aboriginal participants, although, this was just short of significance (p=.069; DeSorcy et al., 2016). However, when combined with a variable exploring therapeutic alliance, it was revealed

that Aboriginal men with weak therapeutic alliances had the highest rates of TNC, compared with non-Aboriginal men with high therapeutic alliance, who had the lowest rates of TNC. This is discussed further below (see Therapeutic Alliance).

Migration Background. The findings of one study suggested that migration background may be related to a likelihood of TNC (Carl & Lösel, 2021). However, this finding was only demonstrated through logistic regression analysis and not univariate analyses Chi-square and t-test. Furthermore, when entered into the logistic regression, along with five other variables, this only correctly classified eight per cent of non-completers, yet 99 % of completers. As such, it may be that migration status (along with age, prior convictions, concurrent violent offence, stranger victimisation, and intoxication during index offence), better relates to treatment completion, rather than non-completion.

Criminality and Risk variables.

Static Risk of Sexual Recidivism. Findings largely suggested that there is a limited relationship between static risk of sexual recidivism and TNC. Fourteen studies assessed this relationship, primarily comparing scores on the Static-99 actuarial risk assessment for sexual recidivism with TNC; however, the findings were mixed. Nine studies revealed no significant relationship between Static-99 scores and TNC (Carl & Lösel, 2021; Craissati & Blundell, 2013; Howard, 2016; Howard et al., 2019; Howard & Wei, 2022; Olver & Wong, 2011; Sowden & Olver, 2017; Stevenson et al., 2022; Zara et al., 2020), whereas four studies found that non-completers were more likely to have higher scores than completers (Carr, 2011; Guston, 2023; Stück et al., 2022; Willis & Levenson, 2022). Guston (2023) demonstrated the predictive ability of the Static-99 for TNC. However, when integrated into the full regression model, it appeared that the Stable-2007 (a dynamic sexual risk assessment) accounted for most

of the variance in predicting attrition. Additionally, one study demonstrated a significant predictive relationship between scores on the IORNS static risk assessment and TNC (Stumpf, 2022), however, this assessment also examines strengths and protective factors, so cannot be directly compared to Static-99 results.

Dynamic Risk of Sexual Recidivism. There were also inconsistent findings relating to the relationship between dynamic risk of sexual recidivism and TNC. Eight studies examined this relationship, exploring the relationship between scores on the Stable-2007 (*n*=6) and VRS-SO (*n*=2) actuarial risk assessments for sexual recidivism, with TNC. Five studies indicated a significant relationship between dynamic risk of sexual recidivism and TNC (Guston, 2023; Olver & Wong, 2011; Sowden & Olver, 2017; Stumpf, 2022; Willis & Levenson, 2022), each suggesting that increased risk scores were related to non-completion, with two demonstrating the ability of Stable 2007 scores to predict TNC (Guston 2023; Willis & Levenson, 2022). However, two studies found no significant relationship between scores on the Stable 2007 and TNC (Craissati & Blundell, 2013; Stück et al., 2022). Furthermore, one study by Zara et al. (2020) found conflicting findings, indicating that treatment non-completers were significantly more likely to have lower scores on the Stable-2007, compared to those who completed treatment. However, it is noted that the study had a small sample size of just 34 participants, limiting the generalisability of the findings. Nonetheless, despite a seemingly stronger relationship between dynamic risk of sexual recidivism and TNC, compared to static risk of sexual recidivism, this relationship is not robust.

Risk of General Recidivism. Two studies examined the relationship between TNC and risk of general recidivism, using the LSI-R (Howard, 2016; Howard et al., 2019). The LSI-R is a dynamic and static risk assessment, which examines the presence of criminogenic needs to

inform supervision and treatment outcomes (Howard et al., 2019). Both studies were able to demonstrate a significant relationship between LSI-R scores and TNC, with higher scores being related to TNC; Howard et al. (2019) also demonstrated the ability of high LSI-R scores to predict TNC.

Prior Sexual Offending Behaviour. The examined findings suggested that TNC is not related to prior sexual offending behaviour. Four studies explored this relationship, with each finding no significant differences between completers and non-completers regarding the number of prior convictions for sexual offences (Carl & Lösel, 2021; Carr, 2011; Clegg et al., 2011; Olver & Wong, 2011).

Prior General Offending Behaviour. Seven studies explored the relationship between TNC and prior general offending behaviour in a variety of ways, including examining the number of prior convictions for general offences (*n*=5), the presence of a concurrent violent offence with their sexual index offence (*n*=2), and/or comparing heterogenous (sexual and non-sexual offending) versus specialised (sexual only) offending behaviour (*n*=2).

Two studies demonstrated a significant association between number of prior convictions for non-sexual offences and TNC (Carl & Lösel, 2021; Stück et al., 2022), with one of the studies demonstrating the ability of the variable to predict non-completion (Stück et al., 2022). However, three studies demonstrated conflicting findings, revealing no significant relationship between the variables (Carr, 2011; Clegg et al., 2011; Olver & Wong, 2011). Perhaps more convincingly, two studies demonstrated the relationship between having a concurrent violent offence and likelihood of TNC (Carl & Lösel, 2021; Carr, 2011), as well as a further two studies demonstrating the relationship between heterogenous offending and TNC (Howard, 2016; Zara

et al., 2020). This suggests that likelihood of TNC for MCSO may be better related to prior general offending behaviour, rather than prior sexual offending behaviour.

Institutional Misconduct. Two studies examined the relationship between TNC and behaviour whilst in custody, with neither study revealing a significant association between the variables (Howard, 2016; Howard et al., 2019).

Characteristics of the Index Offence. Four studies examined the relationship between characteristics of the index sexual offence and TNC. Findings suggested that likelihood of TNC was not related to use of violence within the index offence (Carl & Lösel, 2021; Clegg et al., 2011), nor was it related to the offence typology (Gimenez-Salinas et al., 2023; Stumpf, 2022). The only significant relationship found was intoxication during index offence, with non-completers being less likely to be intoxicated compared to completers (Carl & Lösel, 2021).

Victim Characteristics. Six studies examined the relationship between victim characteristics and TNC. The majority of findings suggested that there was no significant relationship between TNC and victim age (Carl & Lösel, 2021; Clegg et al., 2011; Howard, 2016; Howard et al., 2019; Olver & Wong, 2011), gender (Carl & Lösel, 2021; Carr, 2011; Clegg et al., 2011), whether they were related to the offender (Carr, 2011), or whether victims knew their offender (Carr, 2011; Clegg et al., 2011). Only one study was able to demonstrate a relationship between TNC and stranger victimisation (Carl & Lösel, 2021).

Sentence Length. Three studies examined the relationship between sentence length and TNC, with no significant associations identified (Carl & Lösel, 2021; Olver & Wong, 2011; Stumpf, 2022).

Plea. Only one study examined the relationship between TNC and acceptance of a guilty plea, where it was found that non-completers were less likely than completers to accept a guilty plea (Clegg et al., 2011). This variable demonstrated an ability to predict TNC (Clegg et al., 2011).

Contextual variables.

External Motivation. Three studies examined the presence of external motivators to engage with treatment, and how this impacted upon completion. It was found that whilst external motivators, such as eligibility for parole, may influence likelihood of accepting treatment (Clegg et al., 2011; Howard, 2016), this did not translate into likelihood of completing treatment (Clegg et al., 2011; Howard, 2016, Howard et al., 2019). As such, no significant relationship was demonstrated between external motivation and TNC.

Programme Characteristics. Four studies explored the relationship between programme characteristics, such as group format, and TNC. Howard and colleagues (Howard, 2016; Howard et al., 2019; Howard & Wei, 2022) conducted a series of studies exploring the influence of administrative changes to the CUBIT programme in 2005 on rates of TNC. This included a change in group format from closed to open, introducing clinical supervision, and placing an emphasis on positive therapist characteristics. The results from Howard (2016) and Howard et al. (2019) suggested that these administrative changes were related to a significant reduction in TNC and were able to predict the likelihood of non-completion. Furthermore, it was found that such changes were associated with a reduction in TNC related to drop-out and expulsion, yet not interruption (Howard, 2016; Howard et al., 2019), thereby suggesting that the changes were not simply due to increasing the threshold for termination. From this, it was

concluded that group format was related to TNC, with closed groups associated with higher rates of TNC.

However, through exploring matched samples, Howard and Wei (2022) were not able to replicate these findings. Instead, it was revealed that whilst TNC may have been related to programme iteration (pre or post 2005), it was not related to group format (open versus closed). Therefore, it was suggested that the previous association found between programme iteration and TNC (Howard, 2016; Howard et al., 2019) was more likely explained by other variables related to the administrative changes (e.g., clinical supervision and emphasis on positive therapist characteristics), rather than group format. This idea is supported by the findings of Stevenson et al. (2022) who found that TNC was not related to treatment intensity nor group format.

Treatment Setting. Stevenson et al. (2022) found that TNC increased in community settings compared to custody settings. When adjusted for age at commencement of treatment, it was found that participants who commenced treatment in the community were three times more likely to not complete treatment, compared to participants who commenced treatment in a custodial setting. Treatment setting demonstrated an ability to predict likelihood of TNC.

Therapeutic Alliance. Whilst many studies pointed to the importance of the therapeutic relationship between clients and practitioners in reducing attrition, only two studies assessed this relationship, providing conflicting results. Whilst DeSorcy et al. (2016) demonstrated a significant relationship between TNC and lower scores on the WAI, this finding was not replicated by DeSorcy et al. (2020). However, it was suggested by the authors that this insignificant finding may have been related to relatively high WAI scores across the sample,

thereby reducing the relative differences between completers and non-completers (DeSorcy et al., 2020).

Personality and Clinical Characteristics.

Psychopathy. Research indicated contradictory findings regarding the relationship between psychopathy and TNC. Six studies examined the relationship using the PCL-R, with one study having employed the screening version (PCL:SV; Craissati & Blundell, 2013). Three of the studies found a significant association between PCL-R scores and TNC (Olver & Wong, 2011; Sewall & Olver, 2019; Stück et al., 2022), with higher overall scores related with TNC. Furthermore, each of the three studies demonstrated an association between higher scores on each of the four Facets of the PCL-R (Affective, Interpersonal, Lifestyle, and Anti-Social) and TNC, however, findings differed regarding which specific Facet was a unique predictor of TNC. That is, Olver and Wong (2011) found that only the Affective Facet was a predictor, whereas Sewall and Olver's (2019) findings suggested that only the Lifestyle Facet was a predictor, and Stück et al. (2022) highlighted the Interpersonal Facet as a unique predictor of TNC. As such, whilst these findings suggest that there may be an association between higher levels of psychopathy and TNC, it is less clear what precise characteristics are underpinning this.

That being said, the relationship between higher overall PCL-R scores and TNC was not corroborated across all studies, with three studies finding no significant difference in PCL-R scores between completers and non-completers (Craissati & Blundell, 2013; DeSorcy et al., 2020; Sewall & Olver, 2018). However, as previously mentioned, Craissati and Blundell (2013) only employed the PCL:SV, thereby not thoroughly examining the precise nature of the relationship. Furthermore, Sewall and Olver (2018) examined differences in TNC between classic (high scores on all four Facets) and aggressive (low scores on the Interpersonal Facet,

high scores on the remaining three Facets) subtypes of psychopathy, rather than exploring the levels of psychopathy in terms of the standard cut off employed when coding the PCL-R. As such, these findings do not suggest there is no relationship between psychopathy and TNC, rather, that there is no significant difference in non-completion between classic versus aggressive subtypes. Nonetheless, DeSorcy et al. (2020) found no significant relationship between TNC and psychopathy, with 85% of higher PCL-R scoring men successfully completing treatment.

Anti-Social Personality Disorder. Whilst only one study explored the relationship between anti-social personality disorder (ASPD) and TNC (Olver & Wong, 2011), three additional studies explored the relationship between TNC and anti-social attitudes as measured by the CSS (Howard, 2016; Howard et al., 2019) and the PAI (Stumpf, 2022). Each of these four studies demonstrated a significant association between higher levels of anti-social personality traits and TNC, with one study demonstrating the ability of anti-social attitudes to predict TNC (Howard, 2016).

Denial. Two studies investigated the relationship between denial and TNC, both indicating no association between denial of responsibility for offence and TNC (Clegg et al., 2011; Zara et al,.2020). However, Zara et al. (2020) explored denial further, utilising the CID-SO. This revealed a significant predictive relationship between denial of sexually deviant behaviours and arousal and TNC, with higher scores predicting reduced likelihood of TNC.

Mental Health. Findings suggested that there is a limited relationship between presence of mental health concerns and TNC, with six studies demonstrating no significant association between mental health history (Clegg et al., 2011; Howard, 2016; Howard et al., 2019), any

psychiatric diagnosis (Clegg et al., 2011; Olver & Wong, 2011), substance-use disorder (Olver & Wong, 2011; Stück et al., 2022), or anxiety and depression (Stumpf, 2022). However, Stumpf (2022) found a significant association between TNC and increased markers of psychopathology and substance-use (predictor), as measured on the PAI.

Treatment Readiness. Only two studies within the review explicitly examined the relationship between treatment readiness and TNC. Sowden and Olver (2017) employed the TRRG:SV as a measure of treatment readiness, exploring client variables reflecting therapeutic engagement and progress within the intervention. It was found that lower scores on the TRRG:SV predicted TNC. Guston (2023) employed the URICA, which assesses readiness by placing individuals into four stages of change: pre-contemplation, contemplation, action, and maintenance. It was found that TNC was significantly reduced for individuals in the "action" stage (participants have decided to change and are working towards specific goals) compared to the comparison group (maintenance stage). These results suggests that high levels of motivation to change may reduce likelihood of treatment attrition.

Other Personality Characteristics. There was a general lack of consensus around how personality traits, other than psychopathy, were measured. As such, due to the wide range of personality variables assessed, this likely contributed to the disparate findings. Regarding significant findings: Olver and Wong (2011) demonstrated an association between presence of any Personality Disorder and TNC; findings from Percosky et al. (2013) suggested a predictive relationship between higher scores in the Borderline features scale of the PAI, as well as subscales Identity Problems and Negative Relationships, and TNC; Stumpf (2022) found that lower scores on the Impression Management subscale of the PDS predicted likelihood of TNC. Non-significant findings included the relationships between TNC and MMPI-2 (Clegg et al.,

2011). MCMI-III (Craissati & Blundell, 2013), SSEI (Howard, 2016), and GSE (Stück et al., 2022) scale and subscale scores.

Attachment and Trauma. Three studies examined the relationship between childhood trauma and TNC, with two studies demonstrating no significant relationship between experiencing sexual (Clegg et al., 2011; Craissati & Blundell, 2013), physical, and emotional (Craissati & Blundell, 2013) abuse as a child, and TNC. However, Willis and Levenson (2022) demonstrated an association between ACE scores and TNC, with higher scores predicting an increased likelihood of non-completion. This suggests that there may be a cumulative relationship between childhood trauma and TNC, as ACE scores reflect additional traumatic experiences, which may have been captured in other studies. However, there did not appear to be a relationship between adult attachment styles and TNC (Stück et al., 2022).

The Relationship between TNC and Recidivism

Sexual Recidivism. There did not appear to be a relationship between TNC and sexual recidivism, with three studies reporting no significant difference in rates of sexual recidivism between completers and non-completers (Carl & Lösel, 2021; Sewall & Olver, 2019; Stevenson et al., 2022).

General Recidivism. There appeared to be a significant association between TNC and increased rates of non-sexual recidivism, with four studies demonstrating this relationship (Carl & Lösel, 2021; Howard & Wei, 2021; Sewall & Olver, 2019; Stevenson et al., 2022). However, this did not appear to be related to lack of treatment dosage, as Carl and Lösel (2021) found that late non-completers were the most likely to reoffend.

Table 3

Data Summary of Studies Exploring Reasons for TNC

Category	Variable	*n* studies exploring the variable	Significant relationship with TNC *n (% of total)*	Quality score 1[a] *M (SD)*	No significant relationship with TNC *n (% of total)*	Quality score 2[b] *M (SD)*
Demographic	Age	8	5 (62.5)	80 (12.65)	3 (37.5)	80 (0)
	Marital status	6	4 (66.67)	80 (0)	2 (33.33)	80 (0)
	Employment	4	1 (25)	80 (0)	3 (75)	86.67 (9.43)
	Education	6	2 (33.33)	80 (0)	4 (66.67)	75 (8.66)
	Ethnicity	6	0 (0)	-	6 (100)	76.67 (7.45)
	Migration background	1	1 (100)	100	0 (0)	-
Criminality and Risk	Static risk of sexual recidivism	14	5 (35.71)	76 (8)	9 (64.29)	80 (13.33)
	Dynamic risk of sexual recidivism	8	5 (62.5)	76 (8)	3 (37.5)	73.33 (9.43)
	Risk of general recidivism	2	2 (100)	70 (10)	0 (0)	-
	Prior sexual offending behaviour	4	0 (0)	-	4 (100)	85 (8.66)
	Prior general offending behaviour	7	5 (71.4)	80 (12.65)	2 (28.57)	80 (0)
	Institutional misconduct	2	0 (0)	-	2 (100)	70 (10)
	Characteristics of index offence	4	1 (25)	100 (0)	3 (75)	73.33 (9.43)
	Victim characteristics	6	1 (16.67)	100 (0)	5 (83.33)	76 (8)
	Sentence length	3	0 (0)	-	3 (100)	86.67 (9.43)
	Plea	1	1 (100)	80 (0)	0 (0)	-
Contextual	External motivation	3	0 (0)	-	3 (100)	73.33 (9.43)
	Programme characteristics	4	2 (50)	70 (10)	2 (50)	90 (10)
	Treatment setting	1	1 (100)	100 (0)	0 (0)	-
	Therapeutic alliance	2	1 (50)	80 (0)	1 (50)	80 (0)
Personality and Clinical	Psychopathy	6	3 (50)	86.67 (9.43)	3 (50)	73.34 (9.43)
	Anti-social personality traits	4	4 (100)	75 (8.66)	0 (0)	-
	Denial of offence	2	0 (0)	-	2 (100)	80 (0)
	Mental health	6	1 (16.67)	80 (0)	5 (83.33)	76 (8)
	Treatment readiness	2	2 (100)	80 (0)	0 (0)	-

	Other personality characteristics	7	3 (42.86)	80 (0)	4 (57.14)	70 (10)
	Attachment and trauma	4	1 (25)	60 (0)	3 (75)	73.33 (9.43)
Recidivism	Sexual Recidivism	3	0 (0)	-	3 (100)	100 (0)
	General Recidivism	4	4 (100)	95 (8.66)	0 (0)	-

Notes. Table 3 provides an overview of the findings from the 21 studies included in the review. [a] Quality score 1 refers to the mean quality assessment scores of the relevant studies which found a statistically significant relationship between the variable and TNC. [b] Quality score 2 refers to the mean quality assessment scores of the relevant studies which did not find a statistically significant relationship.

Discussion

The present review aimed to examine the current state of the literature, exploring the factors associated with TNC among MCSO engaging in psychological, evidence-based treatment, and how this may relate to recidivism. The findings of this review built upon those of Larochelle et al. (2011), who identified limitations within the evidence base precluding conclusions being drawn on reliable predictors of TNC, with only ASPD and certain diagnostic features consistently associated with treatment attrition. This idea was partially upheld in the current review, with the broad array of variables under examination largely revealing inconsistent relationships with TNC. Nonetheless, the present review identified improvement in the evidence base with some noteworthy relationships being revealed. For example, in line with Larochelle et al. (2011), findings highlighted a consistent relationship between anti-social attitudes and increased risk of TNC. Furthermore, the findings suggested that TNC may be related to criminal versatility, with heterogeneous offenders being more likely not to complete treatment. This notion that TNC may be associated with general criminality was reinforced by findings suggesting that TNC is associated with increased risk of general recidivism, but not sexual recidivism. Preliminary support was found for the importance of working responsively with high-risk, high-need sexual offenders, promoting engagement and motivation to complete treatments.

Main Findings

The key findings related to the three aims of the present review are discussed next, in line with the RNR model (Andrews & Bonta, 2010) and GLM (Ward & Gannon, 2006; Ward & Stewart, 2003; Ward et al. 2011).

Risk

The intensity of intervention should be proportionate to an individual's level of risk (Andrews & Bonta, 2010). Many studies employed consistent measures to investigate the relationship between TNC and static and dynamic measures of risk of sexual recidivism, utilising the Static-99 and Stable-2007 instruments, respectively. This enabled cross-study comparisons, indicating that while dynamic measures may offer greater insight into TNC than static measures, both types of risk assessments are unreliable predictors of TNC. On the other hand, findings indicated that risk of general recidivism may be a better predictor of TNC, with two studies revealing that higher scores on the LSI-R scale were associated with increased rates of non-completion.

This pattern of findings was reinforced when exploring the relationship between TNC and future offending behaviour. That is, it was found that whilst there were no significant differences between treatment completers and non-completers in rates of sexual reoffending, differences emerged when considering non-sexual offending behaviour. Specifically, four studies evidenced that MCSO who did not complete treatment were more likely to go on to commit general offences, compared to their peers who finished the intervention. These findings are somewhat consistent with existing meta-analytic research suggesting that TNC has a greater relationship with non-sexual versus sexual recidivism (Hanson et al., 2009; Hanson et al., 2002; Schmucker & Lösel. 2015, 2017). However, previous findings demonstrating a significant relationship between TNC and sexual recidivism (Hanson et al., 2009; Hanson et al., 2002; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015, 2017) were not reliably corroborated.

As such, the findings of the present review suggest that whilst pre- and post-treatment risk of sexual recidivism may be unable to differentiate treatment non-completers from treatment completers, risk of non-sexual recidivism might. In line with the principles of RNR, assessed risk of general recidivism could indicate both the intensity of intervention required to manage

the individual's risks (Andrews & Bonta, 2010), as well as the necessary level of support required to promote motivation and engagement. Importantly however, the findings of Carl and Lösel (2021) suggest that the relationship between TNC and future offending behaviour may not simply be related to reduced treatment dosage, as it was found that rates of general recidivism were higher for MCSO who dropped out of treatment later in the intervention. This may suggest that for MCSO with a higher pre-treatment risk in general recidivism, completing an SOTP is not sufficient for reducing their risk, thereby increasing post-treatment general reoffending behaviour. This may be due to the presence of additional criminogenic needs that are not adequately addressed within offence-specific interventions. This idea is explored within the next section.

Need

Andrews and Bonta's (2010) RNR model identifies key criminogenic needs which should be addressed through intervention to reduce recidivism. Termed the "central eight", these include: history of antisocial behaviour, antisocial attitudes, antisocial peers, antisocial personality traits, substance-use, family and marital relationships, education and employment, and leisure and recreation. Effective intervention aims to address these dynamic risk factors by equipping individuals with the necessary knowledge, skills, and resources, protective against future offending behaviour (Andrews & Bonta, 2010). Importantly, the findings of the present review suggest that these factors not only correlate with recidivism risk, but also the likelihood of TNC. For example, a range of studies highlighted a significant relationship between TNC and single marital status, indicating the protective nature of stable relationships against both treatment attrition and future criminality. This reciprocal relationship indicates that there may be dual benefit of targeting key criminogenic needs within interventions, increasing the likelihood of both treatment completion and efficacy, thereby promoting enhanced outcomes.

To maximise treatment effectiveness, interventions should address the criminogenic needs most relevant to the target population. In line with this idea, it could be argued that likelihood of TNC is increased when the offender's needs are not sufficiently addressed within the intervention (Beyko & Wong, 2005). In support of this notion, the findings of the present study suggest that MCSO who do not complete treatment may have higher levels of criminal versatility, and therefore, more complex criminogenic needs compared to their peers who finish the intervention. For example, similar to the pattern observed regarding risk, it was found that prior general offending behaviour was better able to differentiate treatment non-completers from completers, compared to prior sexual offending behaviour. Specifically, the findings indicated that treatment non-completers were more likely to have a concurrent violence offence to their sexual index offence, as well as increased heterogeneity of offending, with specialised (sexual offences only) offenders significantly more likely to complete treatment compared to their criminally versatile counterparts.

As such, the findings of the present review suggest that there may be barriers to treatment engagement for heterogenous MCSO, reducing their motivation to complete treatment. For example, in line with the "need" principle of the RNR, it may be that the sexual offence-specific intervention does not adequately address the diverse needs of heterogenous MCSO, meaning that their anti-social offending behaviour is not sufficiently modified. In turn, this may reduce the client's internal motivation to engage, due to the perceived lack of relevance of the intervention to their specific needs. Furthermore, heterogenous MCSO may not identify with the label of "sex offender", instead viewing their sexual offending behaviour as one crime within a broad criminal history (Zara et al., 2020), thereby creating additional barriers to engagement.

This idea may explain the positive relationship found between TNC and increased risk of general recidivism, pre- and post-treatment. That is, it could be argued that MCSO with diverse

criminogenic needs have an elevated baseline risk for non-sexual recidivism, which is exacerbated by poor motivation and engagement in treatment due to a lack of perceived relevance. In turn, this increases the likelihood of not completing treatment, and therefore, increases risk of non-sexual recidivism due to their anti-social risks and needs not being sufficiently addressed. This finding highlights the intricate relationship between risk and need, which should be addressed within offending behaviour interventions.

Finally, the notion that TNC is related to increased criminogenic need is supported by findings that indicate MCSO with higher levels of psychopathy and anti-social traits are less likely to complete treatment than their peers without these additional criminogenic needs. Therefore, the results of the present review corroborate the main findings of Larochelle et al. (2011), evidencing a positive relationship with anti-social traits and increased TNC. This highlights the importance of working responsively with high-risk, high-need MCSO, with additional resources assigned to promote engagement and motivation. This idea is explored within the next section.

Responsivity

The GLM highlights the importance of working responsively with MCSO to enhance motivation and engagement for treatment, thereby increasing the likelihood of treatment completion (e.g., Tierney & McCabe, 2002; Ward et al., 2004; Willis et al., 2013b). The findings of the present study indicate that whilst external motivators, such as eligibility for parole, may be enough to encourage clients to initially accept treatment, this does not extend to promoting treatment completion (Clegg et al., 2011; Howard, 2016). Indeed, research has suggested that individuals are more likely to complete treatment only when they reach the "action" stage of change, whereby they have decided to make change and are working towards specific goals (Guston, 2023). These findings support available literature highlighting the

importance of intrinsic motivation in enhancing positive treatment outcomes (McMurran & Ward, 2004). To cultivate intrinsic motivation, clients should be encouraged to internalise aspects of their external motivations to engage. This could be achieved through motivational interviewing, a person-centred therapeutic style which aims to empower change by resolving ambivalence, enhancing motivation, and reducing resistance to address problematic behaviour (Miller & Rollnick, 2013).

The importance of motivation and engagement in predicting positive treatment outcomes is further highlighted by the findings of Sowden and Olver (2017), who explored the relationship between TNC and treatment readiness. Of note, the authors demonstrated that whilst pre-treatment risk of sexual recidivism was significantly related to TNC, this baseline risk did not incrementally predict TNC over and above the treatment readiness domains. As such, it was concluded that MCSO who demonstrated constructive treatment behaviour (e.g., increased motivation, engagement, and responsivity), were more likely to complete treatment, even if they were high risk with multiple criminogenic needs. This finding highlights the importance of working responsively with MCSO, especially those who are at an increased risk of not completing treatment due to their complexities of risk and need.

The idea that responsivity can mitigate potential deleterious effects of offenders' risks and needs on likelihood of treatment completion was also explored by DeSorcy and colleagues. DeSorcy et al. (2016, 2020) examined the relationship between therapeutic alliance and TNC, with findings providing somewhat conflicting results. For example, in their first study, DeSorcy et al. (2016) demonstrated a significant relationship between therapeutic alliance and TNC, with non-completers scoring lower on the WAI scale and three subscales (Task, Bond, and Goal) than completers, yet this finding was not substantiated in their subsequent study (DeSorcy et al., 2020). Nonetheless, the authors argued that this may have been related to the later study's sample consistently reporting strong therapeutic relationships with their primary

therapists, thereby diminishing any between group differences. Of note, the authors found that the presence of a strong therapeutic relationship did not differ as a function of high (>25) versus low (<25) psychopathy (DeSorcy et al., 2020), indicating that psychopathy does not preclude MCSO from developing a positive therapeutic alliance.

This finding somewhat conflicts with previous literature suggesting that psychopathy may interfere with treatment engagement due to a breakdown in therapeutic alliance (Watson et al., 2017). However, this disparity may be explained by the emphasis placed on responsivity within the Clearwater Programme which DeSorcy and colleagues studied. That is, DeSorcy et al. (2020) emphasised the importance of adapting the delivery of the intervention to the specific needs of the individual. For example, in line with Bordin's (1979) conceptualisation of the therapeutic alliance (comprising of Task, Bond, and Goal), it is argued that the "Goal" and "Task" domains of the relationship should be prioritised when working with high psychopathy MCSO, as relevant psychopathic traits (e.g., lack of empathy and unemotional traits) may hinder the development of a connection or bond with their therapist (DeSorcy et al., 2020; Olver & Wong, 2011). As such, this demonstrates the importance of working responsively with high-risk, high-need MCSO, promoting engagement and motivation, to allow for positive treatment outcomes.

Finally, the present findings support previous research emphasising the importance of positive therapist characteristics in promoting motivation and engagement when working with MCSO (Serran & Marshall, 2010). Howard and colleagues (Howard, 2016; Howard et al., 2019; Howard & Wei, 2021) demonstrated that administrative changes associated with an increased emphasis on positive therapist characteristics and clinical supervision, were associated with reduced rates of TNC, above and beyond the effects of changes in programme format from closed to open groups.

In summary, in line with the RNR and GLM frameworks, the above findings highlight the importance of working responsively with MCSO to promote motivation and engagement with treatment. This is especially important when working with high-risk high-need MCSO, who are at an increased baseline risk of treatment non-completion. However, further research is required to explore this more thoroughly, as whilst almost every included study pointed to the importance of responsivity, this was often not explicitly examined.

Treatment Setting

The results of the present review suggest that on average TNC is more prevalent in outpatient compared to inpatient settings, with rates of approximately 39 and 21%, respectively (see Appendix J). Although the influence of extraneous variables, such as client responsivity factors and intervention types across different studies may obscure the interpretation of these findings, this trend was found to persist even under more controlled conditions. For example, Stevenson et al. (2022) reported that participants undergoing the same intervention were approximately three times more likely not to complete treatment in community settings compared to those who initiated treatment in custodial settings. The authors suggested that this may have been related to the increased liberty and competing demands experienced by clients who undertake treatment in the community (Stevenson et al., 2022). For example, individuals may be more likely to drop-out of treatment due to life events (relationship breakdown), positive reasons (finding a job or entering education), practical reasons (difficulties attending sessions), or criminal behaviour (McMurran & Theodosi, 2007). As more of these options are available to individuals in the community, this may increase both the incidence and adverse effects of TNC in the community.

However, whilst this is a viable explanation, the findings of the present study conflict with those of Larochelle et al. (2011) as well as additional meta-analytic research wherein it was

evidenced that TNC is increased in custody compared to the community (Lösel & Schmucker, 2005; Schmucker & Lösel. 2015). One potential explanation for this disparity could be related to the fact that the majority of the inpatient treatment programmes included in the present review were highly specialised and facilitated primarily in Therapeutic Communities (TCs) or psychiatric hospitals. In fact, when exploring TNC as a function of the specific inpatient setting, it was revealed that these settings had considerably lower rates of non-completion than standard prison interventions (TCs, 17%; psychiatric hospital, 18%; and prison, 34%; see Appendix J). Therefore, it could be argued that the specialised nature of the interventions promotes increased responsivity to the client's needs, who are primarily high-risk and high-need MCSO.

Strengths and Limitations of the Current Review

The present review aimed to provide an update to Larochelle et al.'s (2011) SLR exploring the factors associated with TNC among MCSO engaging in psychological, evidence-based treatment, and how this may relate to recidivism. The present review benefits from thorough search terms initially drawn from those employed by Larochelle et al. (2011), and then extended to capture all relevant research. Moreover, additional databases were included and supplementary manual searches were conducted to broaden the scope beyond the parameters of Larochelle et al.'s (2011) study.

However, the inclusion of manual searches, such as reference list searches, contacting experts, and citation searching, may have introduced bias to the present review, as these were only carried out with short-listed studies. In this, a similar bias to snowballing recruitment is introduced, with all additional studies being biased towards the research interests of the short-listed studies. Furthermore, the inclusion of studies based on reference list searching is subjective, as the relevance of these studies was decided upon based solely on their titles. Therefore, it is possible that potentially relevant studies were missed through this process.

Nonetheless, the comprehensiveness of the search was expanded through the inclusion of grey literature, such as dissertations (Carr, 2011; Stumpf, 2022) and departmental publications (Howard, 2016), reducing potential publication bias, whereby publications are considered more likely to publish significant findings.

Regarding inclusion and exclusion criteria, the present review aimed to address a major limitation identified by Larochelle et al. (2011) concerning the heterogeneity of the reviewed literature. It was anticipated that limiting the population to include only adult MCSO who engaged in psychological, evidence-based interventions, would increase the homogeneity of the data, allowing for a consensus to be reached regarding consistent predictors of TNC. Furthermore, an additional inclusion criterion relating to voluntary versus mandatory treatment was considered for the present review, due to Larochelle et al. (2011) highlighting inherent differences in motivation underpinning each type of intervention. However, this was not implemented due to preliminary inspections of the literature revealing that the nature of the interventions was often not specified. A similar barrier was encountered when considering Larochelle et al.'s (2011) recommendation to examine TNC as a function of sex offender typology, with researchers often not explicitly defining this variable. As such, whilst the present review aimed to increase the homogeneity of the studied samples, in line with the recommendations of Larochelle et al. (2011), this was not always possible.

One major limitation of the present review concerns the retrospective, casefile, design employed by most of the included studies, which can be incomplete and biased (Willis & Levenson. 2022). The reliance on archival data may have introduced information bias, as researchers were only able to explore the variables which were already available or could be scored based on existing information. As such, variables that may potentially be more relevant to TNC may have been neglected due to a lack of available information. Furthermore, employing retrospective coding introduces potential research bias, as the data is being scored

for the specific purpose of the study. Whilst some studies sought to address this bias through blind coding (e.g., Sewall & Olver, 2018), this was often not specified. These limitations associated with retrospective data analysis were highlighted by Willis and Levenson (2022), wherein the inclusion of both retrospective and prospective data coding for the same variables revealed that casefile coding often underestimated the measure being scored.

Moreover, the retrospective nature of the studies included in this review limits the ability to accurately explore the current state of SOTP and the potential benefits of responsive interventions in addressing the predictors of TNC identified by Larochelle et al. (2011). Despite encapsulating research published up to 13-years after Larochelle's review, the predominant use of archival casefile designs, dating back to 1983, may limit the representativeness of the interventions in the present review. Consequently, these interventions and the associated findings related to TNC, may not entirely reflect current practice and the latest evidence base (McCartan et al., 2018; Polaschek, 2012).

A further limitation of the present review concerns the inclusion of nine studies from just two SOTPs: The Clearwater Programme (*n*=6) and CUBIT (*n*=3). These programmes are highly specialised interventions, conducted in a psychiatric hospital and therapeutic community respectively, targeting high-risk and high-need MCSO. Therefore, it is likely that the characteristics of these MCSO were overrepresented in the present review and cannot be generalised to other populations. Positively however, the inclusion of these studies allows for cross-study comparisons to be made.

Evaluation of Current State of Evidence Base, Since Larochelle et al. (2011)

Following the limitations identified by Larochelle et al. (2011), a central aim of the present review was to examine the current state of the evidence base, approximately 13 years later.

Broadly, it is noted that whilst the present review shares some key limitations with Larochelle and colleagues, there have also been positive improvements in the quality of the literature.

Firstly, the present review shares the limitation regarding poor descriptions of the samples, with only 57% of studies (*n*=12) providing information regarding the typology of MCSO. Whilst this may be less of a concern within the present review due to the increased homogeneity of the sample, the lack of detail precludes precise cross-study comparisons.

Secondly, Larochelle et al. (2011) highlighted a limitation relating to poor descriptions of the interventions, which is somewhat evident within the present review. That is, whilst some studies provided clear descriptions of the relevant SOTP, allowing for information to be gained regarding the theoretical underpinnings and adherence to RNR, this was not consistent across studies. Larochelle et al. (2011) provided a list of details which should be specified by future researchers to allow for informed appraisals of the relevant intervention, each of which were included in the present review's data extraction form (see Table 2). However, examination of the "Intervention" column of Table 2 reveals that these details were not consistently provided across studies.

Thirdly, Larochelle et al. (2011) identified a significant limitation relating to a lack of consensus around the definition of TNC. Whilst the studies within the present review consistently provided a broad definition of TNC for the purpose of their research, there are important disparities within this. Of particular concern, Craissati and Blundell (2013) defined TNC as including expulsion and/or recidivism, however, did not provide the reasons for TNC within their sample. As such, it could be that the authors were in fact exploring recidivism and not TNC. Additionally, Clegg et al. (2011) employed a dynamic criterion to define TNC, with treatment completers being categorised as clients who were currently compliant with treatment. As such, it is likely that the rate of treatment completion was inflated within their sample, potentially skewing between group differences. Furthermore, only 47% of the studies (*n*=9)

provided the precise reasons for TNC within their samples, with the remaining studies categorising "non-completers" as a homogenous group. As the precise criteria employed by the respective treatment teams when excluding MCSO from treatment was not reported, this likely contributes to the differences in rates of TNC observed across the samples. Furthermore, in addition to there being different reasons for TNC, there are also different degrees of non-completion. Individuals may exit treatment after one session, or after completing the majority of the intervention. This impact of treatment dosage may have an influence on future behaviour, which requires further examination.

Fourthly, Larochelle et al. (2011) highlighted substantial heterogeneity in the variables considered as predictors of TNC, as well as inconsistent instruments to measure these. Whilst the studies included in the present review also identified a broad range of variables explored in relation to TNC, consistent measures were employed to examine key predictors. The utility of this is made evident by meaningful cross-study comparisons regarding variables such as risk of sexual recidivism, (Static-99 and Stable-2007), general recidivism (LSI-R), and psychopathy (PCL-R), whilst other variables, such as mental health and personality characteristics could not be explored in the same way. Additionally, whilst a broad array of potential predictors of TNC was explored within the present review, less emphasis was placed on individual predictors. This is important, as research suggests that it is the treatment characteristics that better predict TNC, rather than the individual features of the clients.

Finally, Larochelle et al. (2011) pointed to variable statistical analyses employed by researchers as a potential explanation for the disparate findings within their SLR. This limitation is also evident within the present review, with studies employing a range of Univariate, Bivariate, and Multivariate analyses to investigate TNC, resulting in confusion when interpreting the collective findings. Whilst the impact of this was alleviated by specifying when variables predicted TNC (rather than simply being associated with it), this does not

acknowledge differences in effect sizes. For example, although Carl and Lösel (2021) listed a range of variables as predictors of TNC (e.g., age, migration background, number of prior convictions, concurrent violent offence, stranger victimisation, and intoxication during index offence), the model was found to only correctly classify eight per cent of non-completers, yet 99% of completers. As such, this suggests that variables identified as risk factors for TNC may be better conceptualised as protective factors for treatment completion.

Overall, in comparison to Larochelle et al. (2011), the present review identifies some improvements in the quality of the evidence base, allowing for some meaningful cross-study comparisons to be made. However, there are still limitations that preclude reliable conclusions being drawn regarding the predictors of TNC. This should be addressed in future research.

Conclusions and Recommendations for Future Research and Practice

Taken together, the findings of the present review suggest that the most reliable predictor of TNC is criminal versatility, with results indicating that prior general offending behaviour, pre- and post-treatment risk of non-sexual recidivism, and increased antisocial traits are all related to increased rates of TNC. As such, in line with the principles of RNR and GLM, the findings suggest that MCSO are more likely not to complete treatment when the content and/or delivery of the intervention does not meet their specific needs in a responsive way. This idea supports literature regarding the importance of building motivation and engagement when working with high-risk, high-need individuals to promote positive treatment outcomes.

The present review lends some preliminary support to the idea that working responsively with MCSO can promote motivation, engagement, and treatment completion, regardless of the complexities of the client's risks and needs. However, further research is required to corroborate this finding. Specifically, whilst many studies in the present review point to the importance of addressing responsivity factors, building internal motivation, and strengthening

therapeutic alliance to minimise TNC, these concepts were only explicitly examined by four studies (DeSorcy et al., 2016; DeSorcy et al., 2020; Guston, 2023; Sowden & Olver, 2017). As such, it is recommended that future research explores how meaningful adherence to the responsivity principle may alleviate the potential negative impact of participants' risks and needs on their treatment outcomes. This is important, as theoretically, adherence to the RNR principles in a way that enhances motivation and engagement, should result in there being no reliable, systematic predictors of TNC.

In practice, meaningful adherence to the responsivity principle could be promoted through routine assessment of clients' treatment readiness prior to intervention. Such assessment would provide practitioners with important insights into key areas that need to be addressed to facilitate change, including motivation, learning needs, and mental health issues (Sowden & Olver, 2017; Stephenson et al., 2013). With these insights, interventions can be matched to the individual's specific needs, enhancing their ability to meaningfully engage and effectively address their risk behaviour. For example, in recognition of the importance of enhancing internal motivation, Marshall et al. (2008) found that MCSO who engaged in a motivational pre-treatment programme demonstrated lower recidivism rates for both sexual and non-sexual crime, compared to a matched control group who did not receive the pre-treatment programme. This idea of treatment sequencing, whereby key responsivity needs are addressed prior to commencing offence-specific work, is gaining momentum in both literature and practice. Researchers and practitioners are increasingly advocating for a staged approach to intervention, allowing for individuals to effectively engage and benefit from subsequent intervention (McKillop et al., 2022; Stephenson et al., 2013).

Importantly, in line with Beyko and Wong's (2005) assertions, the findings of this review should not be used to create an "attrition profile" on which to exclude potential participants from treatment. Rather, predictors of attrition should be utilised to design more effective

interventions to reduce both risk of non-completion and ultimately risk of recidivism. Whilst it is acknowledged that sex offender treatment is often manualised and underpinned by evidence relating to sexual offence specific risks and needs, criminogenic needs relating to non-sexual offending should not be overlooked. Clients' specific needs could be explored within individual treatment sessions, serving to enhance the relevance of treatment, and therefore, engagement and motivation. Moreover, the use of supplementary individualised therapy may support the development of a positive therapeutic alliance, further enhancing positive treatment outcomes.

A shift away from a manualised approach, towards more innovative therapies may also provide enhanced opportunities for individuals who face challenges accessing and engaging with traditional interventions. For example, the Geese Theatre Comapany employs applied threatre techniques within the UK CJS, using interactive workshops to engage participants in exploring themes such as problem-solving, coping skills, and motivation to change (Harkins et al., 2011; Stephenson & Watson, 2018). By prioritising creativity and flexibility, drama-based interventions are able to tailor their content and delivery to the participants' unique learning styles and life experiences, promoting meaningful engagement (Harkins et al., 2011; Stephenson & Watson, 2018). This tailored approach may demonstrate greater adherence to the responsivity principle compared to traditional, manualised interventions, which may be constrained by more formal, "school like" learning methods (Brierley, 2021). Future research should explore this idea, examining whether the positive psychological impacts associated with these innovative interventions (Harkins et al., 2011; Orkibi et al., 2023; Stephenson & Watson, 2018), extends to enhanced treatment completion and reduced recidivism, particularly among MCSO.

It is recommended that future research investigating the potential benefits of responsivity on treatment outcomes for MCSO adopts prospective research designs. This approach would provide an accurate reflection of the current landscape of sex offender treatment, firmly

grounded in the latest evidence base and practices, underpinned by responsivity. Employing this methodological approach will enable researchers to examine whether interventions tailored to the specific needs of high-risk, high-need offenders can effectively address identified predictors of TNC, such as antisocial traits and criminal versatility. To facilitate meaningful comparisons across studies, it is crucial that future research defines the precise reasons for TNC, provides detailed descriptions of participant samples, and thoroughly outlines the nature of the interventions being implemented. These efforts will yield more definitive conclusions regarding the exact determinants of TNC for MCSO, and whether these individual predictors can indeed be mitigated through responsive practice.

Overall, the present review successfully achieved its aim of examining the current state of the literature; exploring the factors associated with TNC among MCSO engaging in psychological evidence-based treatment and how this relates to recidivism. The findings indicate that, while there has been some improvement in the quality of the evidence base, allowing for meaningful cross-study comparisons, poor descriptors of key concepts and a lack of consistent methodological approaches preclude reliable conclusions from being drawn. Nonetheless, based on the available evidence, the findings of this review reveal a close relationship between general criminality and TNC, with criminally versatile MCSO being more likely to not complete treatment, which is turn increases the likelihood of general, but not sexual, recidivism. Further research is required to corroborate these conclusions and explore the potential mitigating influence of working responsively with high-risk, high-need offenders to improve treatment outcomes and reduce recidivism.

CHAPTER 3

Critique of a Psychometric Measure:

Attitudes Towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019)

Introduction

Attitudes are important. They shape how we perceive the world, influence our thoughts, and guide our actions (Maio & Haddock, 2012). Like most psychological constructs, attitudes are not directly observable, and therefore, can only be inferred from overt responses or indicators (Himmelfarb, 1993). Empirical research seeking to quantify attitudes can be traced back over a century, with social psychologists dedicating substantial efforts to understanding the precise psychological underpinnings of attitudes, how they influence our daily lives, and how they evolve over time (Maio & Haddock, 2012). Central to these efforts has been the work of Rensis Likert (1932), whose method of summated ratings demonstrated that attitudes can be quantifiably measured, laying the foundations for the development of the discipline (Mario & Haddock, 2012). In fact, Likert scaling remains a dominant method in psychometric testing today (Maio & Haddock, 2012), offering a systematic approach to measuring otherwise imperceptible aspects of the human condition.

One field of attitudinal research that has captured both empirical and applied attention is the measurement of attitudes towards stigmatised groups, such as men convicted of sexual offences (MCSO; Harper et al., 2017). As discussed further in Chapter 4, research in this field has identified a widespread societal view of MCSO as a homogenous group of "violent, predatory male paedophile[s]" (King & Roberts, 2017, p.72), characterised by feelings of anger and disgust (Harper & Harris, 2016), and pervasive myth acceptance (Fortney et al, 2007; Levenson et al., 2007a). Such attitudes, high in valence and strength, have been said to be more persistent, resistant to change, and more likely to guide behaviour (Krosnick & Petty, 1995). This notion is particularly important when considering the potentially profound implications of attitudinal orientations on social, clinical, and political decision-making, potentially serving to worsen outcomes for MCSO in a range of different contexts (Harper & Hicks, 2022; Harper et al., 2017; Hogue & Harper, 2019; Levenson et al., 2007b; Willis et al.,

2010, 2013). As such, the availability of a reliable and valid measure of attitudes towards MCSO is essential in developing a thorough understanding of the precise psychological underpinnings of these attitudes, allowing for consideration of how best to affect positive attitude change, and ultimately, improve outcomes for this vulnerable group.

In consideration of the above, the current review presents a critique of the psychometric properties of the Attitudes Towards Sexual Offenders Scale-21 (ATS-21; Hogue & Harper, 2019). The ATS-21 scale has been widely employed in the literature to investigate attitudes towards MCSO, providing valuable insights into the structural underpinnings of these attitudes, consistent with our current theoretical understanding. A brief overview of the historical development of the ATS-21 is presented, providing context for the scale's conceptualisation and purpose. Following this, the scale is critiqued in terms of its reliability, validity, normative samples, and ease of application and interpretation.

Historical Development of the ATS-21 Scale

To empirically measure the psychological basis of attitudes towards MCSO, it is necessary to first establish a clear conceptualisation of the construct under consideration. As established in Chapter 4, attitudes can be defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (Eagly & Chaiken, 1993, p.1), and are broadly considered to comprise affective, behavioural, and cognitive components (Breckler, 1984). Accordingly, attitudes are said to represent a thorough evaluation of a topic, distinguishing them from more knowledge-based perceptions. Conceptually, perceptions align more closely with stereotypical views, and thus, present a much narrower appraisal when compared with attitudes (Harper et al., 2017). This distinction is important when considering the development of psychometric assessments purporting to be assessing *attitudes* towards MCSO.

The Attitude Towards Sexual Offenders Scale (ATS; Hogue, 1993) was the first measure developed to explore attitudes towards MCSO. The ATS is a 36-item self-report measure, which was adapted from the Attitudes Towards Prisoners Scale (ATP; Melvin et al., 1985), by replacing the word "prisoner" with the phrase "sex offender". Respondents are asked to rate their level of agreement to broad attitudinal statements related to MCSO (e.g., "sex offenders only think about themselves") using a five-point Likert scale. The ATS has most commonly been employed to compare the attitudes of forensic professionals with varying degrees of experience of working with people who have committed sexual offences, with those who have no experience working with this group (Hogue & Harper, 2019).

The ATS has demonstrated excellent internal consistency across numerous studies (e.g., Biteus & Tuiskunen, 2017; Craig, 2005; Ferguson & Ireland, 2006; Gakhal & Brown, 2011; Higgins & Ireland, 2009; Johnson et al., 2007; Kjelsberg & Loos, 2008; Nelson et al., 2002), indicating that the scale's items are measuring a common construct. However, these findings have also drawn some criticism, with researchers interpreting the scale's high Cronbach's alpha values, ranging from .88 (Gakhal & Brown, 2011) to .96 (Higgins & Ireland, 2009) as evidence that the 36 items on the scale are correlated with only one general factor, implying that the ATS measures a single construct (Bauman, 2016; Kjelsberg et al., 2007). Consequently, it has been suggested that the length of the scale could be significantly reduced without compromising its strong psychometric properties (Bauman, 2016; Kjelsberg et al., 2007).

In response to these criticisms, Church et al. (2008) sought to develop an alternative measure to the ATS: the Community Attitudes Towards Sex Offenders Scale (CATSO; Church et al., 2008). Emphasising the need for an alternate measure, Church and his colleagues (2008) criticised the 36-item ATS scale for its cumbersome nature and adaption from an existing measure of attitudes towards general offenders, raising concerns about the

scale's sensitivity to detect the nuanced attitudes that exist towards sexual offenders. To address these concerns, Church and his colleagues constructed an 18-item scale, with four underlying factors: "Social Isolation", "Capacity to Change", "Dangerousness", and "Deviancy", designed "specifically to address perceptions and stereotypes of sex offenders" (Church et al., 2008, p. 258).

Despite these intentions to improve upon the ATS, the CATSO has been criticised for measuring perceptions rather than attitudes (Harper & Hogue, 2015a). For example, in a review of the CATSO, Harper and Hogue's (2015) face validity analysis revealed a proposed three factor structure: "Punitiveness", "Stereotype Endorsement" and "Risk Perception", which led the authors to argue that whilst the CATSO offers insights into respondents' knowledge-based judgements, affective evaluations towards sexual offenders are missed (Harper & Hogue, 2015a). As such, the authors concluded that the CATSO is not a feasible alternative to the ATS, as the scale does not capture attitudes as an evaluative judgement (Harper & Hogue, 2015a). Furthermore, it has been suggested that the CATSO's value as a measure of perceptions may also be limited by the scale's inconsistent factor structure, evidenced by studies seeking to validate the CATSO (e.g., Conley et al., 2011; Harper & Hogue, 2015a; Shackley et al., 2014; Shelton et al., 2013; Tewksbury & Mustaine, 2013) failing to replicate the same underlying structure originally identified by Church (with the exception of Tewksbury & Mustaine, 2013).

In recognition of the importance of having a tool to measure perceptions towards sexual offenders, Harper and Hogue (2015) sought to reimagine the CATSO scale. Removing all poorly-loading CATSO items, Harper and Hogue (2015) also added eight additional items considered to be a better conceptual fit with the rest of the scale. The resultant 20-item scale revealed three underlying factors: "Sentencing and Management", "Stereotype Endorsement", and "Risk Perception". Each of these factors demonstrated good levels of

internal consistency ($\alpha > .80$) with the revised scale, named the Perception of Sex Offenders Scale (PSO), having a Cronbach's alpha of .92 (Harper & Hogue, 2015a).

Whilst the development of the PSO appeared successful in constructing a reliable and valid measure of *perceptions* towards sexual offenders, concerns regarding the length and structure of the Hogue's (1993) ATS scale remained. As such, to address these concerns and develop a robust measure of *attitudes,* Hogue and Harper (2019) sought to revalidate Hogue's (1993) original ATS, with the aim to develop a shorter and more theoretically driven version of the scale, the ATS-21.

Overview of the Scale

The Attitude Towards Sexual Offenders-21 Scale (Hogue & Harper, 2019) is the revised version of Hogue's (1993) original ATS scale. As previously mentioned, the aim of developing the ATS-21 was to create a shorter version of the 36-item ATS scale, that is theoretically based, and more user friendly. Furthermore, acknowledging that the ATS was initially validated in a sample of forensic professionals, and given that a substantial body of subsequent research has predominantly focused on attitudes within these groups, Hogue and Harper (2019) set out to validate the ATS-21 in both forensic professional and community samples. To do this, the authors first sought to examine the underlying factor structure of the original ATS scale in a sample of the UK general public (*N*= 188, 62.8% female). Principal component analysis revealed 21 items that loaded equally onto three factors: "Trust", "Intent", and "Social Distance", thereby, creating the new 21-item version of the ATS. Next, the initial factor structure was supported through confirmatory analysis in a larger independent community sample (*N*= 335, 57.3% female), as well as Hogue's (1993) original ATS sample (*N*=170, 17.1% female). From this, the authors were able to evidence the consistency of the three-factor structure of the ATS-21 across samples (community and forensic professionals) and timepoints (1993 and time of testing).

The ATS-21 consists of 21 items from the original 36-item scale, measured on a 5-point Likert scale with 1 = "Strongly Disagree" and 5 = "Strongly Agree". After rating their level of agreement with each of the 21 items, respondents are asked to indicate what type of sexual offender they were thinking of whilst responding, no prompts or choices are provided. However, unlike the CATSO and the PSO whereby the items do not indicate the subject's gender, the ATS-21 employs male pronouns, suggesting the scale specifically measures attitudes towards MCSO. The ATS-21 comprises three subscales: "Trust", "Intent" and "Social Distance", with each factor containing seven items. Items in the "Trust" factor

represent affect-based judgements about sexual offending (e.g., “it is not wise to trust a sex offender too far”); “Intent” factor items pertain to cognitive, stereotypical beliefs about MCSO (e.g., “trying to rehabilitate sex offenders is a waste of time and money”), and the “Social Distance” items relate to behavioural manifestations of viewpoints about this group (e.g., “sex offenders need affection and praise just like anybody else”). From this, Hogue and Harper (2019) asserted that the ATS-21 presents a comprehensive examination of all three components of Breckler’s (1984) tripartite model of attitudes, thereby providing a theoretically robust measure of attitudes towards MCSO.

A manual on how to administer the ATS-21 is not available. However, scoring guidelines are provided. The ATS-21 is scored in the same manner as the full 36-item scale. The guidelines state that whilst scored on a 5-point Likert scale, each item has a functional item scoring range of 0-4. As such, it is necessary to subtract a total of one from the score of each item, resulting in a total scoring range of 0-84 for the full scale, and 0-28 for each subscale. Eleven items of the scale are reverse scored. In practice, scorers are instructed to reverse score the 11 items, summate a total score for all the items, and then remove a constant of 21 to reveal the final score (Hogue & Harper, 2019). Higher scores on the ATS-21 indicate more positive attitudes towards MCSO. A rationale for this scoring method has not been provided. However, it could be assumed that the original ATS scale, and thus the ATS-21, adopted the same scoring method as the ATP (Melvin et al., 1985), allowing Hogue (1993) in his initial validation study for the ATS to compare scores between the two measures.

To overcome previous inconsistencies in the scoring of the Hogue’s (1993) ATS scale, Hogue and Harper (2019) provided a blank SPSS spreadsheet inputted with the correct scoring procedure. In doing so, the authors aimed to promote accurate comparisons of scores between samples recruited by different researchers, facilitating accurate interpretations of the data, and therefore, a consistent body of work (Hogue & Harper, 2019).

Psychometric Properties of the Scale

In their revalidation of the ATS, Hogue and Harper (2019) asserted that the ATS-21 provides a comprehensive measure of attitudes towards MCSO. By measuring attitudes in line with Breckler's (1984) tripartite model, the authors argued that the conceptual clarity and theoretical validity of the ATS-21 sets it apart from other scales in the research area (Hogue & Harper, 2019). However, it is important that support for this claim is objectively examined. Furthermore, as Hogue and Harper (2019) suggested expanding the use of the ATS to include community samples, as well as forensic professionals, it is important to quantitively assess whether the ATS-21 is a reliable and valid measure for these populations. Kline (2015) contended that for a psychometric test to be considered robust, it should be reliable, valid, discriminate, and have appropriate norms for the target population.

Reliability

The reliability of a measurement refers to the extent to which the instrument produces consistent scores over repeated observations (Himmelfarb, 1993). In the context of attitudinal research, reliability has two important elements. First, internal consistency examines whether the individual items on the measurement are assessing the same psychological construct. Items that are assessing the same construct should be positively correlated (Mario & Haddock, 2012). When reporting internal consistency, a Cronbach alpha (α) value greater that .70 is considered acceptable (Field, 2013). Second, test-retest reliability refers to the consistency in scores across time. A reliable attitude measure should produce consistent scores across repeated testing, in the absence of true attitude change (Mario & Haddock, 2012).

Internal Consistency

In a UK community sample (*N*=188, 62.8% female), Harper and Hogue (2019) reported a Cronbach alpha coefficient of .91 for the overall ATS-21 scale, demonstrating excellent levels of internal consistency between the scale's items. The internal consistency of the subscales was also high ("Trust" α= .80, "Intent" α= .84, "Social Distance" α= .79). Each factor was highly correlated with both the complete ATS-21 measure ($r > .85$) and the other factors ($r > .59$), though did not meet the threshold for collinearity. This suggests that the three factors of the ATS-21 are conceptually related, yet empirically distinct concepts (Hogue & Harper, 2019).

Hogue and Harper (2019) were able to confirm this three-factor structure in a large independent community sample (*N*= 335, 57.3% female), as well as Hogue's (1993) original validation sample of forensic professionals (*N*=170, 17.1% female). From this, the authors proposed that the ATS-21 can be reliably used in community and professional samples in both a unidimensional way to obtain a global assessment of generalised attitudes, as well as using the three-factor model, which presents a more theoretically valid approach to understanding the psychological basis of attitudes towards MCSO (Hogue & Harper, 2019). However, it should be noted that aside from this initial revalidation study (Hogue & Harper, 2019), support for the internal consistency of the ATS-21 and its proposed three-factor structure has not yet been examined. As such, further independent research is required to confirm the internal consistency of this measure.

Nonetheless, whilst there is limited research available corroborating the internal consistency of the novel ATS-21 and its three-factor structure, existing research does support the excellent levels of internal consistency for Hogue's (1993) ATS scale. For example, the ATS has demonstrated excellent levels of internal consistency amongst forensic professional samples in the UK, with Cronbach alpha coefficients ranging from .86 (Craig, 2005) to .96

(Higgins & Ireland, 2009). The ATS has also demonstrated excellent internal consistency in forensic professional, community, and student samples outside of the UK, with Cronbach alpha coefficients ranging from .91 to .94 in Norway (Kjeslberg & Loos, 2008) and .89 in Sweden (Biteus & Tuikunen, 2017). These findings are important, as they illustrate that the ATS-21 possessed robust psychometric properties from the outset, providing a strong foundation for refining the model to enhance its theoretical basis and factor structure.

Test-Retest Reliability

In terms of test-retest reliability, the 36-item ATS demonstrated strong reliability after two weeks (r= .82; Ferguson & Ireland, 2006) amongst a sample of non-psychology students (n= 49) and forensic professionals (n=90). Furthermore, Hogue and Harper (2019) also offered preliminary support for the test-retest reliability of the ATS-21 in a small UK community sample (N=59, 84.7% female). They found that over a two-week period, scores across the scale and subscales were highly correlated in all conditions (r > .70), indicating excellent levels of temporal stability for the ATS-21 (Hogue & Harper, 2019).

Validity

The validity of a measure refers to the extent to which the tool measures what it claims to be measuring (Himmelfarb, 1993).

Content Validity

Content validity refers to the extent to which a measure represents all facets of the given psychological construct and is typically determined by examining the quality of the academic understanding of the construct under investigation **(**Himmelfarb, 1993). A key aim in Hogue and Harper's (2019) revalidation of the ATS-21 was to strengthen the scale's

theoretical underpinnings, and thus, enhance its content validity. Principal component analysis and subsequent confirmatory analysis of the ATS-36 revealed three factors: “Trust”, “Intent”, and “Social Distance”. The authors argued that these factors were grounded in Breckler’s (1984) tripartite model of attitudes, relating “Trust” with “Affect”, “Social Distance” with “Behaviour”, and “Intent” with “Cognition”. From this, the authors asserted that the ATS-21 is theoretically anchored in empirical research, reflecting the current academic understanding of attitudes as an evaluative judgement (Hogue & Harper, 2019).

However, it is of note that the proposed three-factor structure of the ATS-21 accounted for just 45.65% of the variance in Hogue’s (1993) ATS scores (Hogue & Harper, 2019). It has been suggested that principal components analysis should ideally account for between 70 to 80 per cent of the variance, while a range of 50 to 60 per cent is considered acceptable within social research (Pett et al., 2003). As over half of the variance remains unexplained, it appears that there are other factors that must be considered to fully understand the psychological underpinnings of attitudes towards MCSO. From this, it could be argued that as the items in the ATS-21 are derived from existing measures (the ATS, and thus, the ATP), which were not generated based on Breckler’s (1984) ABC model, the scale may not fully capture the precise nuances of attitudes in line with this theoretical construct. Indeed, this critique has frequently been attached with the ATS (e.g., Church et al., 2008), and thus, by extension, perhaps the ATS-21.

Construct Validity

Construct validity refers to the extent to which a measure accurately assesses the psychological construct it purports to measure (Himmelfarb, 1993). That is, either on the basis of relevant theory or more general assumptions about attitudes, a valid measure of the underlying construct should enter into certain relationships (convergent validity) and not into

other relationships (discriminant validity; Himmelfarb, 1993). To establish convergent validity, the ATS-21 should demonstrate significant correlations with different scales measuring a similar construct.

In their revalidation study of the ATS-21, Hogue and Harper (2019) revealed a statistically significant correlation between test scores of the original ATS scale and the ATS-21. This strong relationship was present across the whole sample (r= .98) as well as subgroups of forensic professionals (r > .95). The authors concluded that the ATS-21 is a valid alternative to the initial ATS scale, with the additional benefit of it being shorter and more theoretically sound (Hogue & Harper, 2019).

In a subsequent study, the authors aimed to further establish the ATS-21's convergent validity by examining its relationship with the PSO (Hogue & Harper, 2019). Findings revealed a moderate-to-high relationship between the scales (r= -.60), identifying the most robust subscale correlations between the PSO and the "Intent" (r= -.67) and "Social Distance" (r= -.59) factors. Notably, the correlation between the PSO and the "Trust" subscale was comparatively weaker (r= -.42). The authors proposed that these findings provide additional support for the ATS-21's enhanced capacity to offer a comprehensive evaluation of attitudes. That is, whilst the PSO captures stereotypical, knowledge-based perceptions about sexual offenders, the ATS-21 uniquely encompasses affect-based attitudes (Hogue & Harper, 2019). However, the relatively small sample size (N= 59) of the study necessitates caution when interpreting these findings. Indeed, using a much larger sample of 400 members of the British public, Harper and Hogue (2015) were unable to replicate these nuanced findings. Specifically, the authors evidenced much stronger correlations between the PSO and the ATS-21 scale (r= - .84) and subscales (r > -.77), suggesting that perhaps the ATS-21 is not as distinct as initially anticipated. On the other hand, the strong, yet imperfect,

relationship between the PSO and ATS-21 suggests that the ATS-21 and PSO measure are related, yet not equivalent, constructs.

Criterion Validity

Criterion validity refers to the extent of which scores on the measuring instrument are correlated with some external criterion or standard and includes concurrent and predictive validity (Himmelfarb, 1993). This can be ascertained by examining the test score's sensitivity to expected developmental, demographic, or other differences in samples. Concurrent validity is when scores on the measuring instrument and scores on the external criterion are obtained at the same time, whereas predictive validity is when scores on the criterion are obtained at a subsequent point in time (Himmelfarb, 1993).

Concurrent Validity. Both the original ATS and the ATS-21 have robustly and consistently captured expected theoretical differences in attitudes towards MCSO across various populations. The most reported influence on attitudinal orientations has been experience of working with MCSO (Harper et al., 2017). For example, in his original ATS paper, Hogue (1993) found that prison officers expressed the least positive attitudes towards MCSO, followed by prison officers not involved in treatment, prison officers involved in treatment, probation officers, and then forensic psychologists. From this, it was suggested that as therapeutic experiences with MCSO increases, so do positive attitudes towards this population. This finding has been replicated across samples, with researchers consistently supporting the association between increased exposure to MCSO within the workplace (especially in therapeutic contexts) and more positive attitudes towards this population, as measured by the ATS scales (e.g., Blagden et al., 2016; Ferguson & Ireland, 2006; Gakhal &

Brown, 2011; Harper & Hicks, 2022; Kjelsberg & Loos, 2008; Nelson et al., 2002; Sanghara & Wilson, 2006).

One possible explanation for these findings is that individuals with more therapeutic experience of working with MCSO do not rely on media proliferated stereotypes about this group when making judgements. This idea is supported by Biteus and Tuiskunen (2017), who found that when asked to consider their attitudes towards MCSO, participants expressed more negative attitudes on the ATS-21 when they received no supplementary information about the offence type, compared with participants who read a fictional vignette describing a rape or sexual harassment. This finding supports Tversky and Kahneman's (1974) representative heuristic (see Chapter 4), suggesting that in the absence of contextual information, participants rely on their pre-existing stereotypical beliefs about MCSO to form their attitudes about this group (Biteus & Tuiskunen, 2017; Harper & Bartels, 2016).

Accordingly, the ability of the ATS-21 to consistently capture the significant relationship between therapeutic experiences with MCSO and attitudes towards this population demonstrates the scale's robust criterion validity. Importantly, this relationship is supported by relevant theory in the field.

Predictive Validity. Harper and Hicks (2022) investigated the predictive validity of the ATS-21 for clinical risk judgements in fictional sexual offence scenarios. Participants were 341 students and 186 forensic professionals. In line with the aforementioned findings, forensic professionals expressed more positive attitudes towards MCSO compared to the student sample. However, the significant influence of attitudes on risk judgements remained consistent across participant groups. That is, it was found that regardless of professional status, the more negative the participant's attitudes towards MCSO, the higher the estimated level of risk. This is significant, as it suggests that even forensic professionals are not

immune from the impact of their attitudes on clinical decision-making. This provides support for the ability of the ATS-21 to predict an outcome relevant to the construct measured and provides meaningful insights that could shape clinical practice in this area.

Normative Samples

For a test to be useful, it needs to have "reference" or "normative" samples. Normative samples provide a range of scores from the population that is being examined, thereby informing future researchers what they should expect when investigating the construct with similar populations, allowing them to interpret meaning from their data.

In the initial validation study for the original ATS scale, Hogue (1993) provided normative data for a sample of 170 individuals recruited from a variety of locations in the British criminal justice system. This sample comprised police officers (*n*= 33), prison officers with (*n*= 50) and without (*n*= 21) responsibility for treatment, probation officers (*n*= 11), forensic psychologists (*n*= 21), and MCSO (*n*= 28). Six participants did not provide this grouping information. This normative data has been used as a reference for a substantial amount of research employing the ATS to explore differences in attitudes between forensic professionals and community samples (Harper & Hogue, 2017). However, this data is now 30 years old. Given the growing emphasis placed on rehabilitative culture and relevant training within UK prisons (Mann et al., 2018), questions may arise regarding the current relevancy of the normative sample. This is particularly relevant as such initiatives have the potential to positively influence the attitudes of forensic professionals (Simon & Arnaut, 2011; as cited in Harper et al., 2017).

In recognition of the fact that the ATS has primarily been employed in forensic professional samples, Hogue and Harper (2019) provided normative data from a UK community sample in their revalidation of the ATS. The authors recruited 188 participants

from a small British city, comprising 72 males and 116 females. Whilst the authors did not provide a mean age of the sample, they reported an acceptable age split which captured a wide demographic (under 35 years n= 91; 35 years or older n= 97).

Additionally, the authors rescored the original Hogue (1993) sample data against the new ATS-21 scale and subscales, establishing a strong correlation between both forms of the ATS across the original total sample (r= .98) as well as the subgroups (r> .95). From this, Hogue and Harper (2019) provided normative data for forensic professionals against the ATS-21, whilst also establishing a robust relationship between both forms of the scale. This enables a direct comparison of ATS-21 scores with findings from previous literature that used the 36-item ATS. Nonetheless, in consideration of concerns regarding the recency of the normative sample for the original ATS, it would have been prudent to also recruit a new sample of forensic professionals and present updated normative data for this group. Furthermore, there remains an absence of normative data for other important groups, such as individuals with different levels of educational attainment, whereby research suggests this may account for important distinctions in individuals' attitudes towards MCSO (Ferguson & Ireland, 2006; Gakhal & Brown, 2011; Harper & Hicks, 2022; Kjelsberg & Loos, 2008). Future research should aim to attain normative data for these groups, allowing for meaningful comparisons to be made between studies.

Application and Interpretation

The usefulness of a test also depends on how it is administered and interpreted. Hogue and Harper (2019) emphasised the challenges that arise when researchers use inconsistent scoring methods to measure attitudes towards MCSO. In a systematic review of the literature exploring measures of attitudes towards MCSO, Hogue (2015) revealed that 33% of the then available research had failed to correctly calculate the score according to the scale

instructions. This included failing to remove the constant of 36 from the total score (Ferguson & Ireland, 2006; Johnson et al., 2007; Nelson et al., 2002; Sanghara & Wilson, 2006) and ambiguity around reverse scoring items (Kleban & Jeglic, 2012; Nelson et al., 2002). Such inconsistencies will limit the ability for researchers to compare scores across samples. Whilst Hogue and Harper (2019) aimed to rectify this issue by providing a blank SPSS spreadsheet inputted with the correct scoring, this is not readily accessible in a manual. As such, there is no guarantee that future researchers will routinely refer to this when scoring the ATS-21.

Hogue and Harper (2019) also advised against researchers employing the ATS-21 as an outcome measure, highlighting its primary purpose as a universal assessment of attitudes which should be relatively stable over time. Instead, the authors suggested that the ATS-21 and PSO should be used together, with the ATS-21 measuring baseline attitudes and the PSO measuring the impact of experimental manipulation. This way, Hogue and Harper (2019) asserted that the PSO would indicate the cognitive and behavioural implications of the intervention, whilst the inclusion of ATS-21 scores as a covariate, would ensure that differences in PSO scores are due to the manipulation, rather than variances in baseline attitudes. Whilst there is clear value in this approach, it does neglect any investigation into changes in affect-based attitudes, which research has suggested has a powerful influence on overall attitudes (Edwards, 1990).

Finally, perhaps the most significant consideration when employing any self-report measure such as the ATS-21 is impression management (Maio & Haddock, 2012). This issue may be particularly prevalent when examining responses towards sensitive issues, whereby individuals' responses might not reflect their own opinions, but a desire to present themselves in a prosocial manner (Harper et al., 2017). Positively however, Hogue and Harper (2019) provided evidence suggesting that ATS-21 scores are not impacted by social desirability, with no difference in scores having been found between assessments completed online or in

the presence of a researcher. This finding was reinforced by the authors examining the relationship between scores on the ATS-21 and the Social Desirability Scale (Reynolds, 1982), with no significant relationship having been identified (all *r*s= .05, *p*s= .662). It is worth noting, however, that what constitutes prosocial responding may vary across cultural and social norms, potentially shaping how participants interpret and engage with the self-report items.

Conclusion

Identifying a reliable and valid measure of attitudes towards MCSO is crucial for understanding their precise psychological underpinnings, informing interventions to improve attitudes towards this vulnerable group. The Attitude Towards Sexual Offenders-21 Scale is the revalidated version of Hogue's (1993) ATS scale. In their revalidation study, Hogue and Harper (2019) sought to establish the ATS-21 as a reliable and valid measure for attitudes toward MCSO, addressing criticisms of the original scale's cumbersome nature and lack of theoretical basis (Church et al., 2008). Grounding the scale in Breckler's (1984) ABC model of attitudes, Hogue and Harper established a three-factor model of the ATS-21, conceptualising attitudes as an evaluative judgement and setting the scale apart from existing measures which focus on perceptions of sexual offenders (e.g., the CATSO and PSO). In turn, this unique contribution of the ATS-21 allows for important insights into generalised attitudes towards MCSO, in both forensic professional and community samples. However, it should be noted that the proposed three-factor structure of the ATS-21 accounts for just 45.65% of the variance in Hogue's (1993) ATS scores, highlighting the need for further research which seeks to confirm this factor structure and explore additional variables which might account for the unexplained variance in ATS scores. Indeed, in their initial validation study, Hogue and Harper (2019) emphasise the importance of independent replications of their research, with the aim to mitigate potential researcher bias and confirm the scale's robust psychometric properties. Third-party validation would enhance confidence in the ATS-21 and deepen our understanding of the psychological underpinnings of attitudes towards this population, ultimately supporting more targeted interventions to ameliorate negative attitudes and improve outcomes for this vulnerable population.

CHAPTER 4

Empirical Research Report

Attitudes Towards Men Convicted of Sexual Offences: The Impact of Emotive and Informative Media Portrayals

Abstract

Negative public attitudes towards men convicted of sexual offences (MCSO) can disrupt their effective community reintegration and block opportunities for desistance from sexual harm. The present study explores effective strategies to enhance public attitudes towards this population, underpinned by relevant theory and empirical research. The Attitudes Towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019) was employed to examine the impact of intervention on overall attitudes and their affective, behavioural, and cognitive domains. Participants were randomly assigned to one of four media portrayal interventions: affective (n = 96), cognitive (n = 89), combined (n = 82), or control (n = 83). Those in the three experimental groups were exposed to written and auditory information designed to improve their attitudes towards MCSO, with salient details manipulated to target a specific attitude domain. In line with Edward's (1990) matching effect principle, it was hypothesised that there would be a greater change in a relative attitude domain (i.e., affective or cognitive) when it was matched with the salient information of a corresponding media portrayal (i.e., emotive or informative). A series of one-way analyses of variance compared changes in participants' ATS-21 scale and subscale scores from pre- to post intervention, across the different groups. Contrary to the hypotheses, no support was found for the matching effect. However, significant improvement in overall attitude scores was observed across experimental conditions, indicating that emotive and/or informative media portrayals are effective in enhancing public attitudes towards MCSO. These findings demonstrate the potential of brief interventions to enhance attitudes towards MCSO over a short period. This has important implications for garnering public support for progressive initiatives, enabling successful community reintegration and ultimately reducing recidivism among MCSO.

Introduction

Attitudes towards men convicted of sexual offences (MCSO) are heavily influenced by biased and stigmatised media portrayals, serving to perpetuate widespread misperceptions and stigma around this population (Ducat et al., 2009; Thakker & Durrant, 2006). This is a concern, as evidence has highlighted the impact public attitudes can have on outcomes for MCSO, reducing opportunities for community reintegration (Clark, 2007; Levenson et al., 2007b; Petrunik & Deutchmann, 2008), and ultimately increasing the likelihood of future recidivism (Harper et al., 2017; Willis et al., 2010, 2013). As such, in order to improve outcomes for MCSO and reduce future victimisation, it is essential to improve public attitudes towards this group. Previous efforts to enhance attitudes towards MCSO may have been limited by a lack of understanding of the structural underpinnings of these attitudes (Harper et al., 2017), hindering the development of effective, tailored interventions (Willis et al., 2013a). The present research aims to address these concerns by employing a theoretically driven approach to attitude change, exploring the relative impact of emotive and informative media portrayals on the distinct components of public attitudes towards this population.

ABC Model of Attitudes

Attitudes can be defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (Eagly & Chaiken, 1993, p.1), and are typically considered to comprise three distinct components: affect (the visceral emotional response to an attitude stimulus), behaviour (the overt reaction when confronted with an attitude object), and cognition (the beliefs and perceptions that a person holds about the given entity under consideration; Breckler, 1984; Eagly & Chaiken, 1993). Research evaluating this multicomponent model (Eagly & Chaiken, 1993) has demonstrated that whilst

the three components of attitudes are conceptually related, they are empirically distinct, and each exert a separate influence on attitude formation (Breckler, 1984).

Literature in the field has primarily focused on how affective and cognitive information may predict attitudes, with Breckler and colleagues (Breckler 1984; Breckler & Berman, 1991; Breckler & Wiggins, 1991) having demonstrated the predictive power of both categories on later attitude formation. Whilst there appear to be individual differences in the relative contribution of each domain on subsequent attitudes (Huskinson & Haddock, 2004), research has suggested that this distinction is not dichotomous, and that attitudes largely comprise both affective and cognitive elements (Edwards, 1990). From this basis, affective and cognitive attitudinal domains are said to subsequently influence an individual's behaviour towards a given object (Crites et al., 1994; Malinen et al., 2013), creating a feedback loop for future attitudes. That is, in line with Bem's (1972) self-perception theory, it has been posited that when a person does not have access to their opinions about a given object, they infer their attitudes through consideration of their previous actions. As such, repeated exposure to attitudinal stimuli, activating the behavioural feedback loop, may result in attitudes becoming more engrained, and thus, requiring progressively less effort for retrieval (Edwards, 1990; Maio & Haddock, 2010).

Understanding the structural basis of an attitude has important implications when considering attitude formation and change (Edwards, 1990). However, it has been suggested that many researchers do not thoroughly consider each component when studying attitudes, instead, primarily exploring perceptions (Harper et al., 2017). In line with Breckler's ABC model (1984), attitudes are said to represent a thorough evaluation of a topic, setting them apart from more knowledge-based perceptions. Conceptually, perceptions are more comparable to stereotypical views, and thus offer a much narrower assessment of a topic or entity (Harper et al., 2017).

When conceptualised as an evaluative judgement, an attitude can vary in two important ways: valence, the affective quality of the attitude object, and strength, the persistence of an attitude over time and its resistance to change. Both valence and strength are argued to play an important role in understanding how one's attitudes can impact how they process information and their subsequent behaviour (Maio & Haddock, 2010), with attitudes high in valance and strength being more persistent, resistant to change, and more likely to guide behaviour (Krosnick & Petty, 1995). This idea is especially important when considering attitudes towards potentially contentious topics which may evoke extreme attitudinal responses.

Public Attitudes Towards MCSO

One societal group that has traditionally been characterised by strong negative attitudes are MCSO (Harper & Harris, 2016). Researchers utilising Breckler's (1984) conceptualisation to examine public attitudes towards this marginalised group have highlighted pervasive stigma (Harper et al., 2018), characterised by feelings of anger and disgust (Harper & Harris, 2016), fuelled by widespread myth acceptance (Fortney et al., 2007; Levenson et al., 2007a) and stereotypical beliefs (Salerno et al., 2010). These stereotypes are commonly centred around MCSO representing a homogenous group of immoral sexual deviants, typically personified as a "violent, predatory male paedophile" (Kings & Roberts, 2017, p.72). These views have largely been disseminated through sensationalist media reporting that focuses on exceptional cases (Ducat et al., 2009; Thakker & Durrant, 2006), typically involving stranger-perpetrated offences with child victims (Harper & Hogue, 2015b). Such reporting is in stark contrast with empirical data which documents that most sexual offences are perpetrated by someone known to the victim (ONS, 2018). Nonetheless, as the media represents the primary medium through which the public

acquires information regarding sexual offending (Brown et al., 2008), inflammatory reporting has a significant influence on shaping public opinion and reinforcing negative stereotypes (Harper & Hogue, 2015b; Willis et al., 2010).

Public attitude towards MCSO is of great importance as research has highlighted the influence that attitudes may have on shaping public policy (Willis et al., 2010). For example, punitive attitudes surrounding MCSO have been linked with a range of disadvantages for this group upon their release from custody. These include registration and notification procedures which serve to restrict access to stable accommodation (Clark, 2007), create difficulties in securing employment (Levenson et al., 2007b), and alienate individuals from their communities (Petrunik & Deutchmann, 2008). Whilst the public may be unsympathetic to these difficulties, evidence indicates that effective community reintegration, characterised by access to stable housing, employment opportunities, and pro-social networks are all important aspects in reducing reoffending (Harper et al., 2017; Willis et al., 2010, 2013). As such, policies designed to protect the public may in fact be placing their communities at greater risk by blocking opportunities that otherwise promote desistance (Willis et al., 2010).

Psychological Underpinnings of Attitudes Towards MCSO

The significant influence of public attitude on shaping policy, and consequently, the effectiveness of community risk management for sexual recidivism, highlights the importance of understanding the psychological underpinnings of these attitudes. Gaining this insight would allow for consideration on how best to effect attitude change (Edwards, 1990). In support of earlier assertions around the cognitive underpinnings of attitudes and the widespread nature of stereotypical beliefs, evidence has suggested that attitudes may be biased by the activation of a "sexual offender schema" (Harper & Bartels, 2016). Category-schemas, such as those held about MCSO, influence individuals' judgements of a person,

especially when the subject is viewed as being typical of that category (Harper & Bartels, 2016). That is, in line with Tversky and Kahneman's (1974) representative heuristic, if an individual holds the stereotypical belief that a sexual offender is a "violent, predatory male paedophile" (Kings & Roberts, 2017, p.72), when that individual is required to pass judgement on MCSO, they will compare this subject with a stereotypical image held in memory. If the subject is judged as being representative of that stereotype, they are likely to be judged more punitively (Fiske et al., 1987; Harper & Bartels, 2016; Salerno et al., 2010).

Importantly, research has indicated that category-schemas and emotionally charged stereotypical beliefs can be activated simply through the language employed and labels attributed when discussing perpetrators of sexual crime (Harris & Socia, 2016). For example, Harris and Socia (2016) found that participants advocated for more punitive punishments for sexual offences, when people were described as "sex offenders" compared to when they were described as "people who have committed crimes of a sexual nature". This finding supports King and Roberts's (2017) contention that there is something inherent in the "sexual offender" label that influences individuals' behaviour and elicits more punitive responses. This is especially important when considering Harper and Hogue's (2015) findings regarding the stereotypical labels and emotionally laden language frequently attributed to MCSO within British media. It has been argued that such reporting serves to activate and bias both cognitive and affective components of attitudes, and thus, perpetuates lay people's stigmatised attitudes and behaviours towards this group (Harper & Hogue, 2015b; Harper et al., 2017).

Familiarity with MCSO

Importantly, research indicates that the activation of the sexual offender schema may be mediated by a person's beliefs around their ability to change. For example, Harper and

colleagues (Harper & Bartels, 2016; Harper et al., 2017) demonstrated how increased endorsement of such beliefs were associated with less negative attitudes towards MCSO and more rehabilitative responses, regardless of whether the offender matched the stereotypical presentation of a child abuser.

This notion is reinforced by findings indicating that familiarity with MCSO in a professional capacity is associated with more positive attitudes towards this group, especially for those working in a direct and therapeutic role (Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999). This finding has been robustly reported within the literature (Harper et al., 2017), with researchers consistently reporting that police officers hold the most punitive attitudes towards MCSO, whilst therapeutic practitioners, such as psychologists, hold the most rehabilitative attitudes (Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999). Whilst the precise psychological processes responsible for these improved attitudes have not been robustly examined, research has suggested that this may be related to the dispelling of myths and stereotypes about sexual offenders (Harper et al., 2017; Kleban & Jeglic, 2012). As such, interventions which aim to replicate this process by challenging stereotypical beliefs around MCSO, may be an effective way of improving attitudes and behaviours towards this group.

Changing Attitudes Towards MCSO

Research examining the most effective ways of challenging stereotypical beliefs around MCSO has generally found that brief psychoeducational programmes may be ineffective in eliciting attitudinal change (Willis et al., 2010). Willis and colleagues (2013) suggested that this may be due to the failure to consider the multifaceted nature of attitudes, with the majority of studies solely targeting cognitive beliefs. This idea is supported by research carried out by Craig (2005), who found that whilst imparting knowledge through

intensive workplace training was effective in increasing participants' knowledge and confidence in working with MCSO, it was not enough to improve attitudes towards this group. As such, this suggests that the aforementioned relationship between increased therapeutic contact and improved attitudes towards MCSO may be related to more positive feelings towards the group, emphasising the potential combined effect of affect and cognition in attitude formation and change. Therefore, efforts to improve attitudes towards MCSO must also target the affective attitudinal domain.

Moral disengagement theory (Bandura et al., 1996) may offer an explanation for the positive impact of therapeutic contact with MCSO on attitudes towards this population. The theory describes various mechanisms through which people rationalise their punitive attitudes to reduce subsequent emotional or cognitive distress. One such mechanism is dehumanisation, whereby the subjects of punitive attitudes are linguistically and euphemistically stripped of their human qualities (Bandura et al., 1996). When applied to MCSO, Viki et al. (2012) found that dehumanisation was associated with support for their social exclusion and severe punishments, including acts of violence. Therefore, when considering dehumanised stereotypes perpetuated by the mass media, with headlines such as "beast" and "monster" readily assigned to MCSO (Harper & Hogue, 2015b), it is perhaps unsurprising that individuals without personal experience of MCSO hold more stigmatised attitudes, compared to those with personal experience, who have developed a humanised perception of this population.

Encouragingly, evidence suggests that presenting humanised information about stigmatised societal groups may be successful in improving individuals' affective attitudes towards these populations. For example, Walkington et al. (2020) found that participants who read a narrative account of an offender were more likely to respond empathetically towards this group compared to those who read a non-narrative account. The authors suggested that

individuals' empathetic responses were mediated by the degree to which participants felt transported- or *immersed*- by the portrayal. This idea has been extended to sexual offending populations, with Harper et al. (2018) suggesting that presenting a humanised portrayal of MCSO, designed to elicit empathy through narrative reporting, effectively altered attitudes towards this population, over and above presenting fact-based knowledge.

The importance of targeting affect based attitudes was reinforced by a study conducted by Malinen et al. (2013), who examined whether the provision of accurate information regarding sexual recidivism may be effective in eliciting positive attitudinal change. Through examining attitudes in line with Breckler's (1984) ABC model, it was found that whilst an informative media portrayal was successful in influencing cognitive and behavioural components of attitudes, the affective component of attitudes remained unchanged. The authors concluded that while it may be possible to influence the public's attitudes towards MCSO through accurate media portrayals, intentional efforts to target emotional responses to sexual crime may be required to achieve long lasting attitude change.

The Matching Effect of Persuasion

These findings support the "matching effect" of persuasion, which posits that greater attitudinal change is likely if the content of the appeal (i.e., emotive vs. informative) is matched with the structural properties of an attitude (i.e., affective vs cognitive; Edwards, 1990; Fabrigar & Petty, 1999; Huskinson & Haddock, 2004). That is, persuasive messages are more likely to be effective if the audience detects a match between the nature of an appeal and the basis of their attitude (Edwards, 1990; Fabrigar & Petty, 1999; Huskinson & Haddock, 2004). Fabrigar and Petty (1999) resolved the methodological flaws of previous research (e.g., Edwards, 1990; Millar & Millar, 1990), providing robust support for the

matching effect. This finding has been consistently reinforced in the literature, with more recent research exploring factors which may moderate this relationship.

For example, Ryffel et al. (2014) and Clarkson et al. (2011) have suggested that attitude certainty acts as a moderator to the matching effect. Ryffel et al. (2014) demonstrated that attitudes held with high certainty (whether affective or cognitive) are more persistent and resistant to change than those held with low certainty. Moreover, it was highlighted how the effectiveness of media appeals to change attitudes depends on the interplay between an attitudinal base (affective or cognitive) and its certainty. For high certainty attitudes, emotive appeals were more persuasive for affect-based attitudes, whereas rational appeals were equally successful in changing both types of attitudes. This idea that attitude certainty amplifies the matching effect is further supported by Clarkson et al. (2011) who demonstrated that attitudes held with high (versus low) certainty were more open to the matching effect, whereas attitudes held with low (versus high) certainty were more open to mismatching.

Whilst most research in this area has focused upon affective and cognitive attitudinal domains, available literature suggests that the matching effect also influences persuasion for behaviour-based attitudes. Research has indicated that the strength of the relationship between an individual's attitude and their behavioural intentions is moderated by the matching effect of persuasion (Crites et al., 1994; Malinen et al., 2013; Pearson et al., 2011).

In support of this idea, Pearson et al. (2011) demonstrated the cumulative influence of matching for affective *and* cognitive domains on subsequent attitude change in all three attitude components (affect, behaviour, and cognition). Their study found that individuals who experienced this matching not only showed positive changes in their attitudes, but also expressed a greater willingness to adjust their future behaviour in support of orangutan conservation. Malinen et al. (2013) extended this idea to stigmatised populations, indicating that behavioural attitudinal domains are influenced by both affective and cognitive

components of attitudes. As such, the matching effect of persuasion offers a robust theoretical foundation for research efforts aimed at identifying the most effective ways to improve attitudes towards MCSO.

Aims of the present study

In consideration of the aforementioned research, the present study aimed to examine support for the matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999), by exploring the impact of emotive and informative media portrayals on public attitudes towards MCSO, as conceptualised by Breckler's (1984) ABC Model. The Attitudes Towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019) was used to examine changes in participants' overall attitudes towards MCSO and their affective (Trust subscale), behavioural (Social Distance subscale) and cognitive (Intent subscale) underpinnings.

Whilst the majority of extant research in this area has explored the matching effect concerning novel stimuli, whereby the attitudinal basis (e.g., affective or cognitive) was artificially created (e.g., Edwards, 1990; Fabrigar & Petty, 1999; Ryffel et al., 2014), evidence has suggested that attitudes which are established organically usually comprise each attitudinal domain (Edwards, 1990). This includes attitudes towards MCSO (Malinen et al., 2013). As such, when attempting to manipulate participants' existing attitudes towards this population, it was posited that the emotive appeal would target the affective component of a participant's attitude, whilst the informative portrayal would target the cognitive component. Whilst the behavioural component of attitudes was not specifically targeted within the present study, research has suggested the behavioural domain is influenced by both cognitive and affective attitudes (Crites et al., 1994; Malinen et al., 2013; Pearson et al., 2011).

With this in mind, the present study builds upon previous research conducted by Malinen et al. (2013) by targeting *both* affective and cognitive-based attitudes through the

provision of emotive and informative media portrayals. Furthermore, the present research extends Malinen et al.'s (2013) study by exploring attitudes within a sample of the general population. Malinen and colleagues (2013) used a student sample as a measure of the general public's attitudes, which is potentially problematic, as research has suggested that higher educational attainment is associated with less negative attitudes towards MCSO (Willis et al., 2013a). Furthermore, the authors suggested that students may have been more receptive to the experimental manipulation, as they were less likely to be directly involved in employing or renting a house to a released MCSO (Malinen et al., 2013). As such, to obtain a more accurate representation of the public's attitudes, the present study used a representative sample of the general public.

Hypotheses

In line with the matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999), it was hypothesised that there would be a greater change in attitude scores on a given subscale of the ATS-21 (i.e., Trust or Intent), when it was matched with a corresponding media portrayal (i.e., affective or cognitive), compared to a mismatched portrayal or control. From this, and in line with research highlighting the cumulative influence of affective and cognitive information on behavioural attitudes, it was hypothesised that the combined effects of the affective and cognitive media portrayals (i.e., matching for affect *and* cognition) would influence all three attitudinal domains (Trust, Intent, and Social Distance subscales), resulting in the greatest overall attitudinal change. This was measured using the Social Distance subscale and overall ATS-21 scale scores. Finally, it was hypothesised that for participants in the experimental groups (and not the control), overall attitudes towards MCSO would improve from pre- to post-measure, irrespective of the specific condition (i.e., type of media portrayal).

Methodology

Research Design

The present study employed a quantitative, between-subjects design. First, informed by previous research indicating that student status (Willis et al., 2013a), training (Harper et al., 201; Lea et al., 1999)**,** and work experience with MCSO **(**Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999) may improve attitudes towards MCSO, preliminary data analysis was conducted to examine between-group differences (see Preliminary Data Analysis).

Next, to examine changes in public attitudes towards MCSO from pre- to post-intervention, "attitude change" variables were calculated by subtracting pre-intervention scores from post-intervention scores on the ATS-21 scale and its subscales (Trust, Intent, and Social Distance). Positive values on the "attitude change" variable indicate improved attitudes, while negative values indicate worsened attitudes. The larger the value, the greater the attitude change.

Thereafter, a series of one-way analyses of variance (ANOVAs) were conducted to examine differences in the mean "attitude change" scores for the ATS-21 and its subscales, between the four media portrayal conditions (affective, cognitive, combined, and control). Paired-samples t-tests were conducted to explore overall change in mean ATS-21 scores from pre- to post-intervention for participants in the experimental conditions versus the control. All statistical analyses were conducted using SPSS version 28 (IBM Corp, 2023). Table 4 summarises the planned statistical analyses for hypothesis testing.

Table 4

Summary of Statistical Analyses for Hypothesis Testing

Hypothesis	Statistical Test	IV	IV Levels	DV	Measurement
1	One-way ANOVA	Media Portrayal	Between-subjects (affective, cognitive, combined, control)	Trust Attitude Change	Change in affective attitudes towards MCSO
2	One-way ANOVA	Media Portrayal	Between-subjects (affective, cognitive, combined, control)	Intent Attitude Change	Change in cognitive attitudes towards MCSO
3	One-way ANOVA	Media Portrayal	Between-subjects (affective, cognitive, combined, control)	Social Distance Attitude Change	Change in behavioural attitudes towards MCSO
4	One-way ANOVA	Media Portrayal	Between-subjects (affective, cognitive, combined, control)	ATS-21 Attitude Change	Change in overall attitudes towards MCSO
5	Paired-samples t-test	Time	Within-subjects (pre- and post-measure)	ATS-21 scores	Overall attitudes towards MCSO

Note. IV= independent variable; DV= dependent variable; ATS-21= Attitudes Towards Sexual Offenders Scale-21 (Hogue & Harper, 2019).

Participants

A G*Power analysis was conducted to determine the required sample size for the study (Faul et al., 2007). When selecting a one-way ANOVA with four groups, a medium effect size (*f*=.25), an alpha level of .05, and power of .95, a minimum of 280 participants was required to ensure sufficient power (see Appendix K).

To ensure the study sample was representative of the population, a volunteer sample of participants aged 18 years or older was recruited from the general public. Initially, the sample comprised 353 participants. After testing for the parametric assumptions of each statistical analysis, outliers were identified and removed from their respective datasets. Specifically, three outliers were excluded from the ANOVA, and one outlier was excluded from the paired samples t-test. No outliers were identified in the preliminary independent samples t-tests. This approach was taken to maintain the integrity of the statistical analyses, upholding the parametric assumptions of each test and ensuring methodological rigour. Descriptive statistics for the participant samples of each statistical test are provided in Table 5.

Table 5

Descriptive Statistics for Participant Samples

	Independent Samples T-Test	ANOVA	Paired Samples T-Test
Participants	353	350	352
Gender (%)	235 females (66.6%) 107 males (30.3%) 11 other (3.1%)	234 females (66.9%) 105 males (30%) 11 other (3.1%)	235 females (66.8%) 106 males (30.1%) 11 other (3.1%)
Age range (*M, SD*)	18 to 84 years (*M* = 36.94, *SD* = 15.81)	18 to 84 years (*M* = 36.82, *SD* = 15.79)	18 to 84 years (*M* = 36.94, *SD* = 15.83)
Student	50 (14.2%)	50 (14.3%)	50 (14.2%)
Work experience with MCSO (%)	45 (12.7%)	45 (12.9%)	45 (12.8%)
Training and/or education (%)	21 (5.9%)	21 (6%)	21 (6%)
Media Portrayal Condition	Affective (*n* = 96) Cognitive (*n* = 90) Combined (*n* = 83) Control (*n* = 84)	Affective (*n* = 96) Cognitive (*n* = 89) Combined (*n* = 82) Control (*n* = 83)	Affective (*n* = 96) Cognitive (*n* = 89) Combined (*n* = 83) Control (*n* = 84)

Note. ANOVA= Analysis of variance; *M*= Mean; *SD*= Standard deviation; Training and/or education= Received formal training and/or education on working effectively with MCSO.

Materials

Attitude Towards Sex Offenders- 21 Scale (ATS-21; Hogue & Harper, 2019)

The ATS-21 (Hogue & Harper, 2019; see Appendix L) was chosen to examine participants' attitudes towards MCSO pre- and post-media portrayal intervention. The ATS-21 is a 21-item scale containing statements about MCSO, which divide equally into three seven-item subscales: "Trust" (affective attitude component), "Intent" (cognitive attitude component) and "Social Distance" (behavioural attitude component). Participants are asked to rate their level of agreement with each statement on a 5-point Likert scale, with 1 = strongly disagree, and 5 = strongly agree. Eleven items on the scale are reverse coded. The full range of possible scores for the ATS-21 scale is 0-84, with a potential score of 0-28 for each subscale. Higher scores are indicative of more positive attitudes. This scale demonstrates excellent levels of internal consistency ($\alpha = .94$; Hogue & Harper, 2019).

The ATS-21 scale provides a comprehensive measure of each of the three attitude domains proposed by Breckler (1984). As such, through data analysis of total scores for the scale, as well as subscale scores (Trust, Intent, and Social Distance), it was possible to examine the impact of the independent variable (media portrayal intervention) on overall attitudes, as well as each attitude component (affective via Trust, cognitive via Intent, and behavioural via Social Distance). The order of the items on the scale were intentionally altered from pre- to post-measure to prevent responses being memorised (Jhangiani et al., 2019).

Media Portrayal Intervention

Attitudes towards MCSO were manipulated via written vignettes and brief audio clips. These mediums were selected as evidence has suggested that whilst written material is sufficient to alter attitudes (Kleban & Jeglic, 2012), information presented through audio can

increase the saliency, and therefore, persuasiveness of appeals (Chaiken & Eagly, 1983). The written vignettes presented fictional newspaper articles, detailing the recent release of a MCSO from prison into the community. Each of the four vignettes (affective, cognitive, combined, and control) contained broadly the same message, however, key details were manipulated to target the affective and/or cognitive components of attitudes. This experimental manipulation was designed to improve participants' attitudes towards MCSO, providing details related to low re-offending rates, engagement with sex offender treatment programmes (SOTPs), and remorse for the crime.

Informed by available literature, the "affective" media portrayal condition (see Appendix M) aimed to manipulate the affective component of attitudes by evoking participants' emotions. Research has suggested that affective attitudes can be activated through writing style (Ryffel et al., 2014), as such the affective vignette included superlatives and direct speech. Instructions were provided to encourage participants to access their emotions whilst reading (see Appendix M). An image of a man behind prison bars was included to further elicit participants' emotions. Furthermore, in line with the aforementioned research around the saliency of audio clips and the positive impact of narrative humanisation on affective attitudes (Harper et al., 2018; Walkington et al., 2020), the affective condition included a 1 minute 59 second audio clip wherein a MCSO discussed his experience of engaging in a SOTP in a UK prison. This clip was sourced from the BBC podcast, "Inside the Sex Offenders' Prison", presented by Rex Bloomstein (2015).

The "cognitive" media portrayal condition (see Appendix N) aimed to manipulate the cognitive component of attitudes by including factual information around sexual offending, designed to influence participants' stereotypical beliefs about this population. As research has suggested that sexual offender schemas are influenced by rational arguments (Ryffel et al., 2014) and beliefs around ability to change (Harper & Bartels, 2016), a statistic was included

around reoffending rates for sexual offending within the UK. A graphical image comparing recidivism rates across different crimes in the UK was included to reinforce this rational argument. To further enhance this messaging, a 2 minute 17 second audio clip was included wherein experts in the field comment on research evidence related to the factors underpinning sexual offending and the efficacy of SOTPs. This clip was sourced from the BBC podcast, "Analysing the Child Sex Offender", presented by Susie Orbach who interviews experts Anthony Beech and Jackie Craissati (Orbach, 2012).

The "combined" media portrayal condition aimed to manipulate both the affective and cognitive components of attitudes, by employing the strategies used in both experimental conditions. Participants were provided with written vignettes (see Appendix O) and audio clips which combined the information provided in both the "affective" and "cognitive" conditions. The instructions employed in the "affective" condition were also used for the "combined" condition and provided to participants prior to reading the written vignette.

The "control" media portrayal employed no additional strategy designed to target specific components of participants' attitudes towards MCSO. Instead, participants were provided with a written vignette that included only essential information about the recent release of a MCSO, without the additional details provided in the experimental conditions (see Appendix P). After reading, participants listened to a 2 minute 25 second audio clip from the BBC podcast "Gardener's World", featuring gardening experts Kate Bradbury and Hugh Warwick (Bradbury, 2022). This clip served as a neutral stimulus to expose participants to audio information without influencing their attitudes towards MCSO. This approach aimed to ensure that any observed differences between experimental and control conditions could not be attributed to varying exposure to engaging stimuli.

The University of Birmingham has an Educational Recording Agency (ERA) licence which permits the use of media broadcasts for educational purposes. Permission to use the clips was confirmed by the BBC Enquiries Team.

Digit Symbol Substitution Task (McLeod et al., 1982).

To prevent practice effects between the pre- and post-measures of the ATS-21 scale, participants completed a filler task after the media portrayal intervention and before completing the post-intervention measure of the ATS-21 scale. This comprised the Digit Symbol Substitution Task (McLeod et al., 1982). Participants were first shown nine abstract symbols paired with corresponding numbers. Later, individual symbols were displayed at random, and participants were asked to select a number corresponding with the symbol. Participants were not required to memorise the match, as this was displayed at all times.

Procedure

Participants accessed the online study on Qualtrics via a link shared on social media platforms, accompanied by a short advert (see Appendix Q). Within the advert, participants were incentivised to partake in the study with the opportunity to enter a prize draw for a £25 Amazon gift voucher upon completion. Upon accessing Qualtrics, to ensure equal sample sizes, participants were randomly allocated to one of four possible conditions: “affective”, “cognitive”, “combined”, or “control” media portrayals. Randomisation was automated via Qualtrics.

Thereafter, participants read an information sheet (see Appendix R) informing them of the aims of the research and of their participation. After providing their informed consent (see Appendix S), participants completed a demographic questionnaire (see Appendix T). Within this, in line with previous research regarding the influence of familiarity with MCSO

on attitudes towards this population (Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999), participants were asked to indicate whether they had ever worked with this population and/or received training in this area.

All participants completed the pre-intervention ATS-21 scale (Hogue & Harper, 2019). Participants were then asked to read a fictitious newspaper article (i.e., the vignettes) reporting the recent release of a MCSO into the community. The mode of information of this report was dependent on the condition to which the participant was automatically assigned (affective, cognitive, combined, or control). Following this, participants in the "affective" and "cognitive" conditions accessed the brief audio clips designed to reinforce the attitudes targeted by the vignettes. Participants in the "combined" condition listened to both clips, whilst participants in the "control" condition listened to the neutral audio clip.

To minimise practice effects, all participants completed the filler task, a version of the Digit Symbol Substitution Task (McLeod et al., 1982), before completing the ATS-21 a second time. Participants then read the debrief form (see Appendix U).

Ethical approval for this study was obtained from the University of Birmingham's Science, Technology, Engineering, and Mathematics Committee (ERN-0798; see Appendix V).

Preliminary Data Analysis

To investigate possible sampling differences, a series of three independent samples t-tests were performed to examine between-group differences in participants' ATS-21 scores. The test groupings were "student status" (student vs. non-student), "work experience" (work experience vs. no work experience) and "training" (training vs. no training).

Parametric assumptions were explored prior to performing the t-tests. There were no outliers as identified by the boxplot, as there were no values greater than 3 box-lengths away

from the edge of the box. The assumption of normal distribution was examined by converting skewness and kurtosis values into z-scores for each cell of the design (see Appendix W), with acceptable values being ± 2.58 (Field, 2013). The assumption was violated in the "training" group. However, through visual inspection of Normal Q-Q Plots[1] it was considered that the data were approximately normally distributed (see Appendix X). Additionally, independent samples t-tests are considered robust against violations of normality when the groups are similarly skewed, which was the case for these data (Field, 2013). As such, it was considered that the data met the assumptions required for data analysis. The assumption of homogeneity of variance was confirmed for each group using the Levene's test (see Appendix Y).

Findings revealed that non-students had higher pre-intervention ATS-21 scores (M = 37.26, SD = 12.722), compared to students (M = 34.76, SD = 11.142). However, this finding was not statistically significant, $t(351) = 1.311$, $p = .191$ (see Appendix Z). Participants who had received training had more positive pre-intervention attitudes towards MCSO (M = 47.05, SD = 11.552), compared to those without training (M = 36.27, SD = 12.323). This finding was statistically significant, $t(351) = 3.901$, $p = <.001$ (see Appendix Aa). Additionally, findings revealed that participants with experience working with MCSO had more positive pre-intervention attitudes towards MCSO (M = 45.04, SD = 12.407), compared to those without this experience (M = 35.72, SD = 12.164). This finding was statistically significant, $t(351) = 4.809$, $p = <.001$ (see Appendix Bb).

However, further analysis of the "attitude change" variable, derived from the difference in scores between pre- and post-intervention measures of the ATS-21 scale, revealed that these between-group differences were not maintained. Further independent

[1] A graphical method used to compare the probability distribution of the observed dataset with the normal distribution. If the data is normally distributed, the points in the plot will fall along a straight diagonal line (Ghasemi & Zahediasl, 2012).

samples t-tests revealed that students demonstrated a greater change in the attitudes towards MCSO (M = 2.14, SD = 4.136), compared to non-students (M = 1.41, SD = 5.0). However, this difference was not statistically significant, $t(351) = -.975$, $p = .330$ (see Appendix Cc). Participants without training on working with MCSO demonstrated greater change in their attitudes towards this population (M = 1.56, SD = 4.887), compared to those without training (M = .86, SD = 4.993). However, this finding was not statistically significant, $t(351) = -.636$, $p = .525$ (see Appendix Dd). Finally, participants without work experience with MCSO demonstrated a greater change in their attitudes (M = 1.70, SD = 4.878), compared to participants with work experience (M = .22, SD = 4.819). However, again, this difference was not statistically significant, $t(351) = -1.907$, $p = .057$ (see Appendix Ee).

The findings of these preliminary analyses suggested that whilst individuals with work experience with MCSO and/or training in this area had more positive pre-existing attitudes towards this population, compared to those without this experience, this did not result in greater attitudinal change towards this population as a result of experimental manipulation. As such, based on preliminary data analysis, it was determined that including students, participants with work experience with MCSO, and participants with training in this area would not bias statistical analysis exploring attitudinal change towards MCSO. As such, these participants were included for subsequent data analysis examining the hypotheses of the present research.

Analytical Approach to Hypothesis Testing

One-Way Between-Groups ANOVAs

Four separate one-way ANOVAs were conducted to compare mean "attitude change" scores from pre- to post-intervention measures of the ATS-21 and its subscales (Trust, Intent,

and Social Distance), between the four media portrayal conditions (affective, cognitive, combined, and control; see Table 4).

In line with Hogue and Harper's (2019) scoring guide, prior to analysis, 11 items of the ATS-21 were reverse coded, total scores for all items summated, and then a constant of 21 subtracted to reveal a final total score. Scores for the three subscales of the ATS-21 were calculated by summating the relevant seven items for each scale. As previously explained, outcome measures for the analyses were created by subtracting pre-intervention attitude score totals from post-intervention attitude score totals, resulting in "attitude change" variables for the ATS-21 scale, and the Trust, Intent, and Social Distance subscales. All scale measures were treated as interval data (Blaikie, 2006; Norman, 2010; Sullivan & Artino, 2013).

Parametric assumptions were tested for each dependent variable in the one-way ANOVA. Outliers were identified by inspection of boxplots for values greater than 3 box-lengths away from the edge of the box. In total, three outliers were identified across the dependent variables and removed from the dataset (Field. 2013). The assumption of normal distribution was examined by converting skewness and kurtosis values into z-scores for each cell of the design (see Appendix Ff), with acceptable values being ± 2.58 (Field, 2013). The assumption was violated in the "combined" condition for the dependent variable "trust attitude change", and in the "affective" condition for the dependent variable "social distance attitude change". The assumption was met in every cell of the design for the dependent variables "intent attitude change" and "ATS-21 attitude change". With equal sample sizes, ANOVA is considered robust against violations of the normality assumption, so for the purposes of this research, analysis was continued (Field, 2013).

The assumption of homogeneity of variance was confirmed for each dependent variable using the Levene's test (see Appendix Gg). Results derived from the ANOVAs were reported with two-tailed levels of significance and alpha values set at .05.

Paired-Samples T-Test

Two paired-samples t-tests were conducted to compare overall changes in mean ATS-21 scores measured pre- and post-intervention for participants in the experimental conditions (affective, cognitive, and combined) versus the control; separate analyses were conducted for each group (experimental and control; see Table 4).

Preliminary data analysis was conducted to test the assumptions of the paired-samples t-test for the dependent variable ATS-21 scores, pre- and post-intervention. One outlier was identified as more than 3 box-lengths away from the edge of the box and removed from the dataset (Field, 2013). The assumption of normal distribution was confirmed by converting skewness and kurtosis values into z-scores with acceptable values being ± 2.58 (Field, 2013; see Appendix Hh). Results were reported with two-tailed levels of significance and alpha values set at .05.

Results

Descriptive Statistics

Table 6 contains an overview of the descriptive statistics for the "attitude change" dependent variables, at each level of the independent variables.

Table 6

Descriptive Statistics for Dependent Variables

Dependent Variable	Independent Variable	Mean	Standard Deviation	Minimum	Maximum
Trust Attitude Change	Affective	.81	2.10	-5	7
	Cognitive	.43	2.05	-5	7
	Combined	.70	2.34	-4	7
	Control	.10	2.02	-5	4
Intent Attitude Change	Affective	-.44	2.11	-6	6
	Cognitive	.09	2.21	-7	6
	Combined	-.29	2.51	-7	5
	Control	.02	1.85	-5	5
Social Distance Attitude Change	Affective	1.18	2.34	-4	10
	Cognitive	1.19	2.42	-5	7
	Combined	1.06	1.96	-3	6
	Control	.80	2.07	-5	6
ATS-21 Attitude Change	Affective	1.55	4.44	-7	14
	Cognitive	1.71	4.93	-10	16
	Combined	1.46	5.01	-11	13
	Control	.92	3.73	-11	9

Note. Minimum= minimum observed value; Maximum= maximum observed value.

One-Way ANOVA

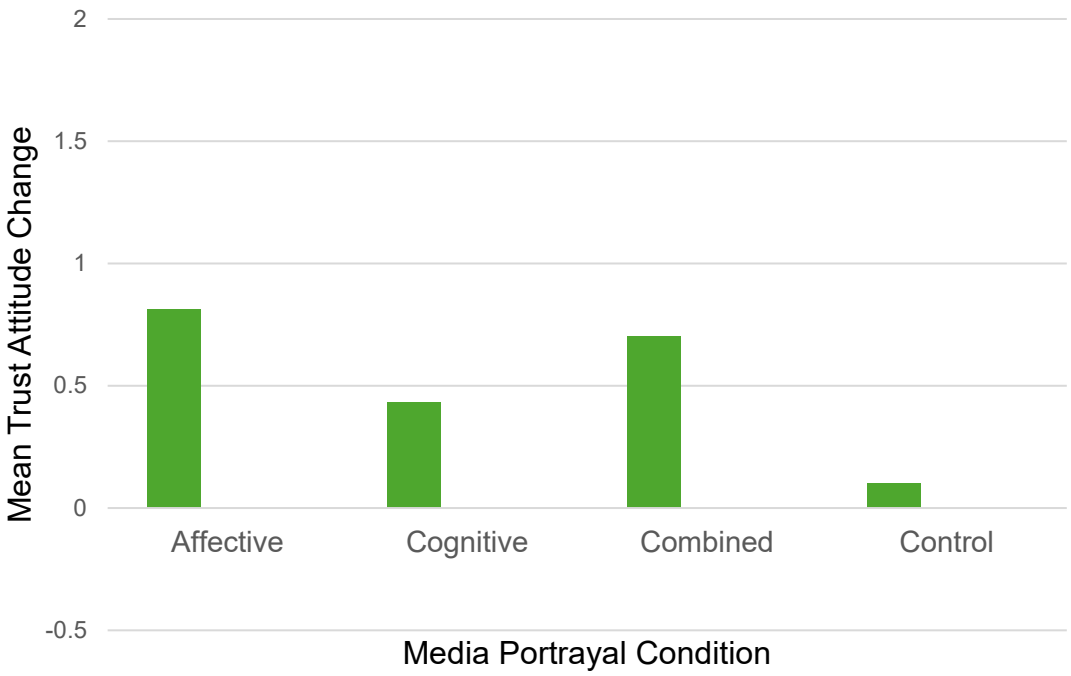
The Influence of Media Portrayal Intervention on Trust Subscale Attitude Change

A one-way ANOVA was conducted to examine between-group differences (media portrayal: affective, cognitive, combined, and control) on the dependent variable "trust attitude change". It was hypothesised that participants in the "affective" condition would demonstrate the greatest attitude change. Descriptive statistics revealed that positive attitude change was greatest for participants in the "affective" condition, followed by the "combined", "cognitive", and then "control" conditions (see Table 6; see Figure 2). However, these between-group differences were not statistically significant, $F(3, 346) = 1.940$, $p = .123$. The effect size, eta squared (η^2) was = .017 indicating a small effect (see Appendix Ii).

As such, contrary to the hypothesis, participants exposed to an emotive media portrayal (affective condition) did not exhibit a significantly greater change in the affective attitude domain (Trust subscale) compared to other participants. Thus, no support was found for the anticipated matching effect.

Figure 2

Mean Trust Attitude Change for Media Portrayal



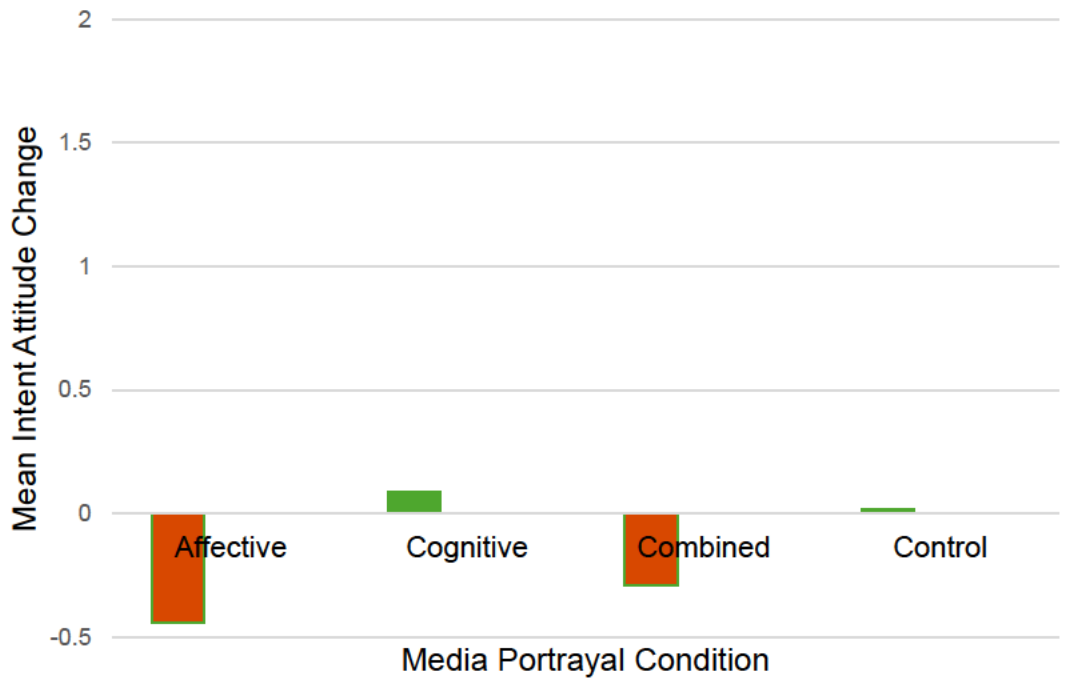
The Influence of Media Portrayal Intervention on Intent Subscale Attitude Change

A second one-way ANOVA was conducted to examine between-group differences (media portrayal: affective, cognitive, combined, and control) on the dependent variable "intent attitude change". It was hypothesised that participants in the "cognitive" condition would demonstrate the greatest attitudinal change. Descriptive statistics revealed that positive attitude change was greatest in the "cognitive" condition. With the exception of the "control" condition whereby attitudes slightly improved, attitudes on the Intent subscale worsened for participants in "affective" and "combined" conditions (see Table 6; see Figure 3). However, these between-group differences were small and not statistically significant $F(3, 36) = 1.207$, $p = .307$, $\eta^2 = .010$ (see Appendix Jj).

As such, contrary to the hypothesis, participants exposed to an informative media portrayal (cognitive condition) did not exhibit a significantly greater change in the cognitive attitude domain (Intent subscale), compared to other participants. Thus, no support was found for the anticipated matching effect.

Figure 3

Mean Intent Attitude Change for Media Portrayal.



The Influence of Media Portrayal Intervention on Social Distance Subscale Attitude Change

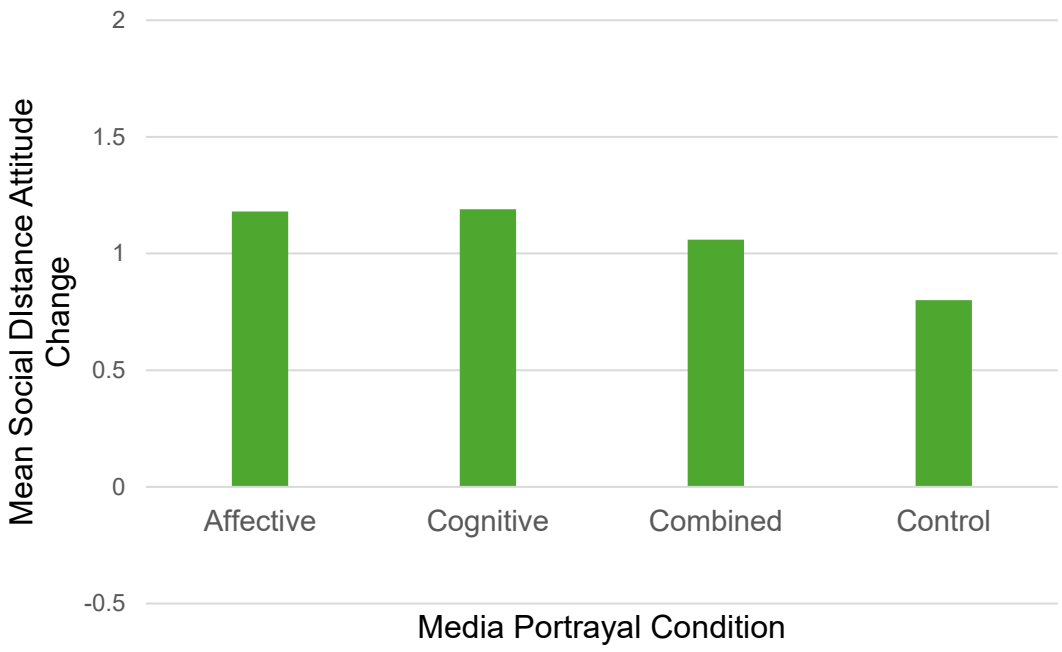
A third one-way ANOVA was conducted to examine between-group differences (media portrayal: affective, cognitive, combined, and control) on the dependent variable "social distance attitude change". It was hypothesised that participants in the "combined" condition would demonstrate the greatest attitudinal change. Contrary for the hypothesis,

attitude change was approximately equal for participants in the "cognitive" and "affective" conditions, followed closely by the "combined" condition and then the "control" (see Table 6; see Figure 4). However, these between-group differences were small and not statistically significant $F(3, 346) = .588$, $p = .623$, $\eta^2 = .005$ (see Appendix Kk).

Contrary to the hypothesis, participants exposed to both an emotive and informative media portrayal (combined condition) did not exhibit a significantly greater change in the behavioural attitude domain (Social Distance subscale) compared to other participants. Thus, no support was found for the matching effect or the anticipated cumulative influence of affective and cognitive information on behavioural attitudes.

Figure 4

Mean Social Distance Attitude Change for Media Portrayal



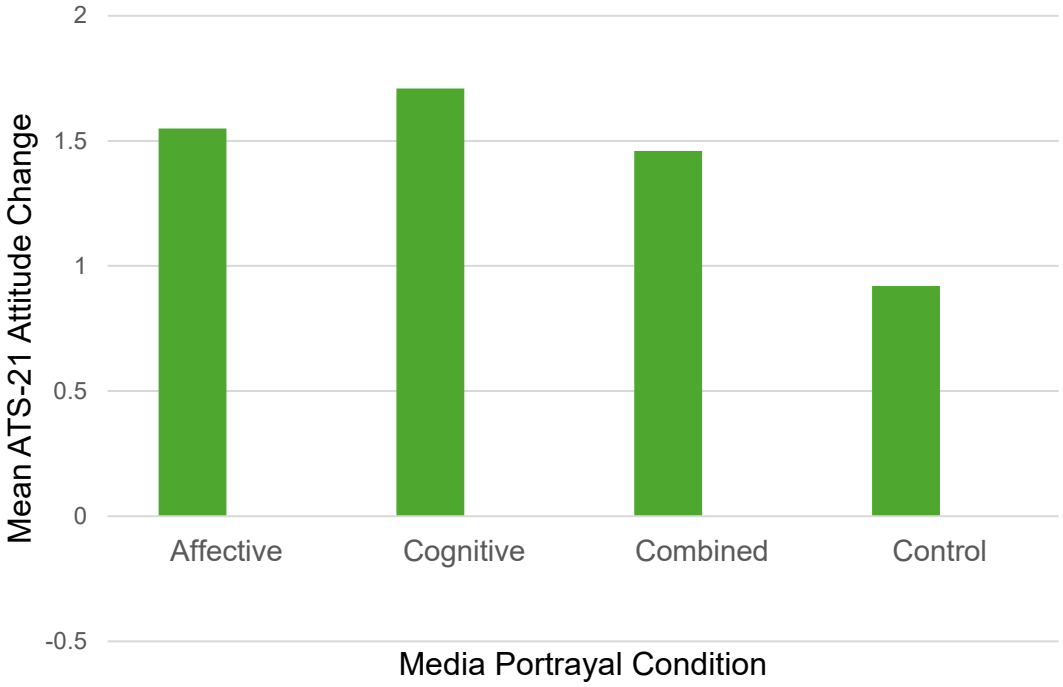
The Influence of Media Portrayal Intervention on Overall ATS-21 Scale Change

A final one-way ANOVA was conducted to examine between-group differences (media portrayal: affective, cognitive, combined, and control) on the dependent variable "ATS-21 attitude change" (i.e., the scale total). It was hypothesised that participants in the "combined" condition would demonstrate the greatest attitudinal change. However, descriptive statistics revealed that attitude change was greatest in the "cognitive" condition, followed by the "affective", "combined", and then the "control" conditions (see Table 6; see Figure 5) However, these between-group differences were small and not statistically significant $F(3, 346) = .486$, $p = .692$, $\eta^2 = .004$ (see Appendix Ll).

As such, contrary to the hypothesis, participants exposed to both an emotive and informative media portrayal (combined condition) did not exhibit a significantly greater change in overall attitudes towards MCSO (Total ATS-21 Scale) compared to other participants. Thus, no support was found for the matching effect or the anticipated cumulative influence of affective and cognitive information on overall attitudes.

Figure 5

Mean ATS-21 Attitude Change for Media Portrayal



Paired-Samples T-Test

Overall Change in Mean ATS-21 scores Pre- and Post- Intervention for Experimental and Control Groups

Two separate paired-samples t-test were conducted to examine the changes in mean ATS-21 total scores. The first test compared pre- and post- intervention scores for the combined experimental conditions (affective, cognitive, and combined) and the second test compared pre- and post-intervention scores for the control group. It was hypothesised that overall, ATS-21 scores would be significantly higher (improved attitudes) for the post-intervention measure, for participants in the experimental conditions, but not in the control group.

In support of the hypothesis, post-intervention ATS-21 scores (M= 38.29, SD =

13.486) were significantly higher than pre-intervention ATS-21 scores (M= 36.66, SD = 12.492) for the experimental conditions, $t(267) = 5.514$, $p < .001$. The effect size as measured by Cohen's d, was d= .337 indicating a small effect. There was no significant difference between post-intervention ATS-21 scores (M= 38.38, SD = 13.781) and pre-intervention ATS-21 scores (M= 37.58, SD= 12.709) for the control group, $t(83) = 1.893$, $p = .062$, d = .207 (see Appendix Mm).

As such, in line with the hypothesis, the experimental manipulation, but not the control, was successful in eliciting positive change in participants' attitudes towards MCSO.

Discussion

Improving public attitudes towards MCSO is integral to efforts aimed at promoting their successful community reintegration and increasing opportunities for desistance from further sexual harm (Harper et al., 2017). However, pervasive stigma fuelled by sensationalist media reporting continues to dominate public perceptions (Ducat et al., 2009; Thakker & Durrant, 2006), exacerbating negative attitudes and hindering efforts to reduce recidivism (Harper & Hogue, 2015b; Willis et al., 2010). Previous research aimed at improving attitudes towards this population has been criticised for lacking theoretical grounding and overlooking the multifaceted nature of attitudes (Willis et al., 2013a).

The present study aimed to address these criticisms by examining attitudes in line with Breckler's (1984) ABC model, providing insights into overall attitudes towards MCSO and their underlying structures. From this, the study examined support for the matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999), exploring the relative impact of emotive and informative media portrayals on attitudes towards MCSO. It was hypothesised that there would be a greater change in a relevant attitude domain (affective or cognitive), when it was matched with the salient information of a corresponding media portrayal (emotive or informative).

However, the results of the present study fail to provide support for the matching effect, finding only small between-group differences that did not achieve statistical significance. Nonetheless, analysis of ATS-21 scale scores measured pre- and post-intervention indicate that overall, attitudes improved across experimental conditions, suggesting that both emotive and informative interventions could be equally effective in improving public attitudes towards MCSO. Furthermore, consistent with existing literature, demographic findings indicate that individuals with therapeutic experience with MCSO may have more positive pre-existing attitudes towards this population. However, when

considering attitudinal change from pre- to post-intervention, these differences were not maintained, indicating that the intervention's impact on attitudes towards MCSO was similar regardless of prior therapeutic experience.

The Impact of Intervention on Overall Attitudes Towards MCSO

The findings of the present study contribute to the literature by examining the influence of evidence-based interventions on public attitudes towards MCSO. The results revealed a statistically significant improvement in attitudes towards MCSO from pre- to post-intervention for participants in the experimental conditions, but not for those in the control group, thereby demonstrating the efficacy of the intervention. This finding suggests that overall, attitudes towards MCSO were improved due to the combined effect of the various media portrayals (emotive and/or informative), supporting existing literature indicating the positive influence of informative (Malinen et al., 2013) and emotive (Harper et al., 2018; Walkington et al., 2020) information on attitudes towards this stigmatised group.

Applying these findings more widely, they demonstrate the potential brief interventions could have in improving attitudes towards MCSO. This contrasts with existing literature, which has largely found a limited impact of such approaches on eliciting attitudinal change towards this population (Willis et al., 2010), with some studies even demonstrating worsened attitudes as a result of brief interventions (Craig, 2005). The enhanced efficacy of the interventions used in the present study may be attributed to their strong empirical foundations, informed by research evidence identifying the necessary features required to adequately target attitudinal domains (Ryffel et al., 2014).

Specifically, rational, fact-based information, reinforced by statistics, scientific research, and infographics was employed to dispel myths about MCSO and manipulate cognitive-based attitudes (Harper and Bartels, 2016; Ryffel et al., 2014), while an emotive

writing style, utilising superlatives and direct speech, reinforced by an emotive image, was used to present a humanised portrayal and influence affect-based attitudes (Harper et al., 2018; Ryffel et al., 2014; Walkington et al., 2020). Furthermore, the interventions were framed as newspaper articles to ensure participants were able to easily access and relate to the information presented (Malinen et al., 2013), as research has indicated that this is the primary medium through which the public learns about this topic (Brown et al., 2008). It is asserted that the strong empirical grounding of the present interventions distinguishes them from previous literature, which has largely attempted to alter attitudes towards MCSO through a psychoeducational approach (e.g., Craig 2005; Kleban & Jeglic, 2012). Accordingly, the present study addresses a common critique in the field regarding the lack of empirical grounding when attempting to alter attitudes (Fabrigar & Petty, 1999; Harper et al., 2017; Willis et al., 2013a). This methodology contributes to the reliability of the current findings.

The Matching Effect of Persuasion

To strengthen the theoretical foundations of the intervention, the present study is the first to explicitly examine support for the matching effect of persuasion concerning public attitudes towards MCSO, within the framework of Breckler's (1984) tripartite model. From this, the present research attempted to apply a largely theoretical evidence base, previously focused upon artificially created attitudes with a singular domain (i.e., affective, behavioural, or cognitive), to real-life attitudes. By examining the influence of emotive *and* informative interventions on public attitudes towards MCSO, the study extends upon the work of Malinen et al. (2013), who explored the impact of only informative information on the three attitude domains.

However, the findings of the present study fail to demonstrate support for the matching effect of persuasion. Descriptive statistics reveal a trend consistent with the

predicted direction of attitude change: participants in the affective condition showed the greatest change on the "Trust" subscale (affective attitudes), and those in the cognitive condition demonstrated the greatest change on the "Intent" subscale (cognitive attitudes). However, these effects were small and not statistically significant. Furthermore, no support was found for the anticipated cumulative impact of exposure to both affective and cognitive interventions, as overall attitude change was approximately equal between experimental groups (affective, cognitive, and combined).

The lack of significant findings may be explained by the nature of the attitudinal object under examination. That is, unlike artificially created attitudes with a singular attitudinal base, attitudes towards stigmatised groups, like MCSO, are deeply entrenched and multifaceted (Fortney et al., 2007; Harper & Harris, 2016; Harper et al., 2018; Levenson et al., 2007a; Salerno et al., 2010), complicating their attitudinal basis. Allport's (1935) definition of attitudes as being "organised through experience" supports this idea, suggesting that there should be a high degree of correlation between the three domains, as they represent the experience of a single individual. Indeed, in his original research on the tripartite model, Breckler (1984) noted that whilst each attitudinal domain exerts a separate influence in attitude formation, this distinction lessens with attitudes formed through extensive experience, which exhibit high intercomponent correlations. As such, while novel or unfamiliar stimuli might result in distinct attitude domains, attitude domains held with high levels of certainty are likely to be closely correlated, making it difficult to target each domain in isolation (Breckler, 1984).

This complexity is likely evident within public attitudes towards MCSO, whereby sensationalist media portrayals simultaneously target all three attitude domains, spreading misinformation about reoffending rates (cognitive), portraying them as "evil monsters" (affective), and creating a desire for social distance (behavioural; Harper & Hogue, 2015b;

Willis et al., 2010). Consequently, the lack of support for the matching effect in this study may result from the interrelated nature of these attitudinal domains.

The Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986) offers further insight to this issue, proposing that when recipients are highly motivated, they will elaborate, or systematically analyse, persuasive messages. Accordingly, the nature of the present interventions within the context of a research study likely heightened participants' motivation to scrutinise the information closely, integrating it with their past experiences, and drawing inferences from their memories (Petty & Cacioppo, 1986). Thus, when asked to provide an evaluative judgement on MCSO within the ATS-21 scale, it is suggested that participants' "sexual offender" schemas were activated (Harper & Bartels, 2016), prompting them to consider all available information from each attitudinal domain, regardless of the intervention's initial framing. This comprehensive processing, along with the structural complexity of participants' attitudes towards MCSO, may explain why interventions targeting one domain inadvertently influenced all three.

Overall, the findings of the present study suggest that for engrained attitudes held with high levels of certainty, such as those towards stigmatised groups like MCSO, it may not be possible to individually target each attitudinal domain due to their complex structural underpinnings. Instead, exposure to affective or cognitive information may have an overarching influence on all three attitude domains, which are closely correlated due to the significant overlap during attitude formation, whereby the media targets the public's beliefs, feelings, and behavioural intentions towards this group simultaneously. This idea should be further explored within future research examining support for the matching effect of persuasion in relation to attitudes towards stigmatised groups.

Demographic Differences in Attitudes Towards MCSO

Preliminary analyses revealed pre-existing differences in attitudes towards MCSO among different groups: students versus non-students, individuals with experience working with MCSO versus those without experience, and participants who had received training in this area versus those without training. In line with previously published research, it was hypothesised that students (Willis et al., 2013a), individuals with experience of working with MCSO **(**Harper et al., 2017; Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999), and those who had received training in this area (Harper et al., 201; Lea et al., 1999**)** would exhibit more positive attitudes towards MCSO at baseline.

However, findings revealed no statistically significant differences between students versus non-students in their pre-existing attitudes towards MCSO. In fact, contrary to previous research, which highlighted a positive correlation between high levels of education and more positive attitudes (Harper et al., 2017; Willis et al., 2013a), descriptive statistics revealed that non-students reported more positive attitudes towards MCSO compared to students. This unexpected result may be explained by the possibility that the general public sample in the present study also possessed a high level of educational attainment, contributing to the more favourable attitudes observed. However, since information regarding prior educational attainment was not collected in the present study, no definitive conclusions can be drawn in this regard.

Further examination of pre-intervention ATS-21 scores revealed significant differences between groups, with participants who had work experience and/or training on working effectively with MCSO displaying more positive attitudes towards this population, than those without this experience. Upon exploration of the type of training received, it appeared that almost all participants who had received training obtained it as part of their jobs working directly with this population. As such, there was a large degree of conceptual

overlap between the two groups. Nonetheless, the findings of the present study support existing research highlighting a positive relationship between therapeutic experiences with MCSO and favourable attitudes towards this population **(**Harper et al., 2017; Higgins & Ireland, 2009; Hogue & Peebles, 1997; Lea et al., 1999).

Importantly, however, when examining attitudinal change from pre- to post-intervention as measured on the ATS-21, it was found that individuals without work experience or training exhibited greater improvement in attitudes compared to those with this experience, although this difference was not statistically significant. Consistent with available literature, this may suggest that participants with existing knowledge and experience of working with MCSO hold greater certainty in their attitudes towards this population, making them more resistant to change (Ryffel et al., 2014). Moreover, the finding that individuals without prior direct contact with MCSO exhibited greater attitudinal change supports literature emphasising the importance of humanisation (Harper et al., 2018; Walkington et al., 2020**)** and the dispelling of myths **(**Harper et al., 2017; Kleban & Jeglic, 2012) in improving attitudes towards MCSO. It is likely that individuals with prior experience with working with this population had already developed a realistic understanding and humanised perception of MCSO, potentially reducing the relative impact of the intervention for this group.

Limitations

Despite the sound theoretical design and aims of the present study, it is not without its limitations. Firstly, as a result of the stable and enduring nature of attitudes (Krosnick & Petty, 1995), it could be argued that the short time between administration of pre- and post-intervention measures in the present study was not sufficient to measure true attitudinal change. Whilst it was anticipated that this design would allow for insights into the efficacy of brief interventions designed to elicit immediate attitude change, follow-up assessment of

participants' attitudes towards MCSO would provide interesting insights. For example, as the aim of the study was to present a humanised version of MCSO (affective condition) and/or challenge existing stereotypical beliefs through fact-based information (cognitive condition), it may be that the intervention altered participants' category-based schemas about MCSO. That is, when required to pass judgement on MCSO in the future, participants' "sexual offender" schema may align more closely with the representative version of a MCSO presented in this study, which would be an indication of long-lasting attitude change. However, as follow-up assessment was not conducted in the present study, conclusions on the permanency of the observed attitude change cannot be drawn.

Secondly, it is possible that the "sex offender" label employed within the items of the ATS-21 scale activated participants' category-schemas and potentially pre-existing stigmatised attitudes towards this population (Harper & Bartels, 2016; Harris & Socia, 2016). Such activation could have potentially worsened participants' attitudes and diminished any ameliorating effects of the intervention. This idea is corroborated in the literature, highlighting the stigmatising impact of the "sex offender" label on individuals' attitudes towards this population, resulting in participants advocating for harsher punishments for MCSO (Harris & Socia, 2016) and demonstrating less willingness to volunteer with this population (Lowe & Willis, 2019), compared to when more person-centred descriptors (e.g., MCSO) are employed. Nonetheless, the use of the "sex offender" label and potential activation of respondents' category-based schemas allows for insights to be gained into participants' cognitive representations of MCSO, and any changes within this from pre- to post-intervention measure on the ATS-21.

Thirdly, it is possible that positive attitudinal change resulting from the intervention was limited by the subject of the media portrayals being a MCSO against children. Evidence has suggested that the public holds the most punitive attitudes towards this typology of sexual

offending, characterised by fear, hatred and disgust, and support for more punitive punishments, including castration and even death (Jahnke et al., 2015; Jara & Jeglic, 2021; Richards, 2018). As a result, it is possible that participants' responses in the pre- intervention measures of the ATS-21 scale reflected their attitudes towards one type of sexual offence, whereas following intervention and exposure to a MCSO against children, their post-intervention score on the ATS-21 score reflected their attitudes towards this specific population, potentially exacerbating negative attitudes. However, upon inspection of participants' responses on the ATS-21 scale, it appears that the majority of participants expressed that they were considering a "generalised" representation of a MCSO (55.5% pre, 52.7% post) when responding on the measure. Nevertheless, 44 participants did change their categorisation of typology from pre- to post-intervention measure, with the subsample considering MCSO against children in their responses increasing from 75 participants pre-intervention to 100 participants post-intervention.

It should be noted that the selection of a MCSO against children as the focus for the intervention was informed by research indicating widespread public perceptions of MCSO as a homogeneous group of "violent, predatory male paedophile[s]" (Kings & Roberts, 2017, p.72). Given this prevailing perception and the punitive attitudes towards MCSO against children (Jahnke et al., 2015; Jara & Jeglic, 2021; Richards, 2018), addressing the public's attitudes towards this specific type of sexual offending was considered pertinent. While Hogue and Harper (2019), in their conceptualisation of the ATS-21, suggested that attitude scores should reflect generalised attitudes towards MCSO, future research aiming to investigate changes in attitudes towards men convicted of specific sexual offences may benefit from explicitly instructing respondents to consider a particular offence type in their responses. Given the heterogeneity of MCSO, this approach could potentially yield more accurate reflections of public attitudes towards a specific offending population.

Finally, any observed changes in participants' attitudes towards MCSO can only be understood as a function of changes in ATS-21 scale and subscale scores. Therefore, to examine the presence of a matching effect between the framing of the media portrayal intervention (i.e., emotive or informative) and the corresponding attitude domain (i.e., affective or cognitive), it is essential that the ATS-21 scale accurately captures participants' affective, behavioural, and cognitive attitudes within its three-factor structure (Trust, Intent, and Social Distance). However, given the potential concerns about this structure highlighted in Chapter 3, the ability of the present study to find support for the matching effect may have been limited.

Consequently, whilst the ATS-21 scale was selected due to its theoretical grounding in Breckler's (1984) ABC model, it could be argued that to achieve a comprehensive understanding of changes in participants' affective, behavioural, and cognitive attitude domains, the incorporation of more implicit measures is warranted. These measures can offer insights into respondents' attitudes towards MCSO that extend beyond their conscious awareness (Fazio & Olson, 2003). Future research could investigate the differential impact of the experimental manipulations employed in the present study on participants' explicit versus implicit attitudes towards MCSO in affective, behavioural, and cognitive domains. Using the ATS-21 scale alongside implicit measures would help validate the three-factor structure of the ATS-21 by examining the consistency between relevant implicit measures and each subscale, ensuring they measure the same constructs.

Implications for Practice

The findings of the present study provide support for the efficacy of brief intervention employing narrative humanisation and the dispelling of myths in enhancing public attitudes towards MCSO. Contrary to the hypotheses, no support was found for the existence of a

matching effect of persuasion, with findings revealing that emotive and/or informative media portrayals are equally effective in enhancing public attitudes towards MCSO.

Exploring the most effective way to improve public attitudes towards this group has important practical implications. As highlighted by Wilson et al. (2020), nowhere is the public voice more influential than in shaping policy for the community management of MCSO. Negative public attitudes towards this group can lead to punitive measures, serving to block opportunities for desistance from sexual harm and inadvertently increase the likelihood of recidivism (Harper et al., 2017; Willis et al., 2010; Willis et al., 2013a).

In line with Ward's Good Lives Model (GLM; Ward & Gannon, 2006; Ward & Stewart, 2003), improved public attitudes can play a crucial role in helping MCSO attain "primary human goods" integral to their desistance from sexual harm. Within the UK, the Circles of Support and Accountability (CoSA) programme offers a promising community-based initiative designed to assist MCSO in achieving these goods upon their release from custody. For example, volunteers within the programme foster "community" and "relatedness" by providing prosocial support networks and promote "excellence in work" by facilitating opportunities for employment (Clarke et al., 2017; McCartan et al., 2014). However, the success of such initiatives is undermined by negative attitudes, which reduce public support for the programme and can make it difficult to find volunteers (Lowe & Willis, 2019; Richards & McCartan, 2018). Therefore, understanding how to effectively improve public attitudes towards MCSO is essential for promoting a shift from punitive policies to evidence-based practice that enable desistance from sexual harm by supporting the acquisition of primary human goods.

The media's response to public policy is often seen as the "barometer" of government competence, resulting in a reluctance from policy makers to implement progressive approaches that may not receive widespread public support (Brown et al., 2008). Therefore,

as the relationship between public opinion and legislative change is both informed and mediated by the media, a transformation in the media landscape is required to improve public attitudes towards MCSO and foster support for rehabilitative responses. Academics could play a pivotal role by engaging with the media to dispel myths about high recidivism rates and present humanised portrayals of MCSO as individuals capable of change. While there has previously been a reluctance from academics to engage with the media (Willis et al., 2010), evidence suggests that the public has a preference for information communicated by experts (Wilson et al., 2020). As such, a co-operative alliance between the two fields may be well received by the public, improving attitudes and promoting progressive policies to reduce recidivism among MCSO.

Based on the present findings, it is suggested that this could be achieved through feature articles or audio campaigns that present a humanised portrayal of MCSO, challenging existing stereotypes around this population and highlighting the beneficial impact of improved attitudes on mitigating recidivism. It is recommended that these media appeals employ person-first language, encouraging the public to consider the individual, rather than the offence (Lowe & Willis, 2019).

A particularly promising medium for disseminating this information is podcasts, an online audio format which offers a platform for sharing diverse experiences and issues that may otherwise be overlooked in mainstream media (Carrotte et al., 2023). With an estimated 40% of UK adults listening to a podcast on a weekly basis (Statista, 2022), this approach offers and an effective means to spread accessible and engaging information to a large audience. Importantly, emerging evidence highlights the positive impact of podcasts employing narrative humanisation in improving attitudes towards stigmatised groups (Carrotte et al., 2024), demonstrating the potential value of this approach in enhancing public attitudes towards MCSO. Drawing on the present findings, both experts (cognitive

intervention condition) and MCSO (affective intervention condition) could engage with this platform to promote the public's accurate understanding of sexual offending, emphasising the crucial role of enhanced public attitudes in enabling successful community reintegration. This strategy may incentivise attitudinal change among the public, promoting pathways to desistance and ultimately preventing the creation of further victims.

Importantly, a cultural shift in the perception of sexual crime can also aid in its prevention by enabling individuals at risk of committing sexual harm to feel comfortable to seek support before committing an offence. The value of this proactive approach has been highlighted by the UK's Lucy Faithfull Foundation's "Stop it Now!" campaign, which in its first year of service provided anonymous support via "live chat" to 859 individuals concerned about their sexual behaviour, 41% of whom were not known to authorities (Naldrett et al., 2022). Given that 95% of sexual crimes are committed by first-time offenders (Sandler et al., 2008), such proactive interventions are crucial in preventing future victimisation.

Future Research

Although the present study suggests that the matching effect of persuasion may not exist within the context of attitudinal change towards stigmatised populations, several factors may have contributed to this outcome. Future research should build on these findings by using both explicit measures, like the ATS-21, and implicit measures that assess unconscious attitudes within each domain (affective, behavioural, and cognitive). By comparing scores on the ATS-21 and its subscales with implicit measures targeting the same attitude domains, researchers can examine the validity of the ATS-21's proposed three-factor structure. High consistency between the relevant subscales and implicit measures would confirm that they are indeed measuring the same concepts. Moreover, this approach would provide valuable

insights into the relative malleability of conscious versus unconscious attitudes and further elucidate the findings of the present study.

Additionally, future research should examine the potential of brief interventions such as those employed within the present study to elicit long-lasting attitude change, incorporating multiple follow-up periods within the experimental design. This would provide insight into the longevity of attitude change towards MCSO, and whether it is indeed possible to alter public attitudes within a short timeframe. Once a robust method for improving public attitudes towards MCSO has been identified, researchers should examine its ameliorative influence on support for progressive community initiatives, such as CoSA. These recommendations could provide a deeper understanding into the nuances of eliciting attitude change towards MCSO and their practical implications for enhancing support for rehabilitative efforts.

Conclusion

The present study examines support for the matching effect of persuasion by exploring the influence of emotive and informative media portrayals on public attitudes towards MCSO and their underlying structures. Contrary to the hypotheses, no support was found for the matching effect, with both emotive and informative interventions found to be equally effective in enhancing public attitudes across experimental conditions. Importantly, the findings highlight the potential of brief intervention to improve public attitudes towards MCSO over a short time period. This has significant practical implications, demonstrating the efficacy of targeted media appeals to elicit positive attitudinal change, with the potential to garner public support for progressive initiatives designed to support effective community integration and pathways to desistance for MCSO.

CHAPTER 5

General Discussion

Discussion

The impact of sexual offending is profound, with far-reaching consequences for victims, offenders, and society as a whole. In England and Wales, approximately two thirds of sexual assault victims suffer from mental or emotional difficulties, with a tenth attempting to take their own life as a result (ONS, 2018). While evidence supports the efficacy of psychological intervention in reducing recidivism and preventing further victimisation, high treatment attrition rates may mitigate this positive impact (Gannon et al., 2019; Hanson et al., 2002; Hanson et al., 2009; Lösel & Schmucker, 2005; Schmucker & Lösel, 2015, 2017), or even serve to increase the risk of recidivism compared to no treatment at all (McMurran & Theodosi, 2007). As such, the first aim of the present thesis was to explore the factors underpinning treatment-non completion (TNC) among men convicted of sexual offences (MCSO), with the aim of identifying ways to enhance motivation and engagement to complete intervention and maximise outcomes.

However, whilst successful treatment completion may reduce the risk of recidivism, negative public attitudes towards MCSO upon their release may undermine these gains by hindering their successful reintegration into the community and blocking opportunities for desistance from sexual crime (Willis et al., 2010). Accordingly, the second aim of this thesis was to explore the most efficacious ways to enhance public attitudes towards MCSO through brief intervention, underpinned by empirical evidence and relevant theory. The Attitude Towards Sexual Offenders-21 Scale (Hogue & Harper, 2019) was employed to examine changes in participants' attitudes from pre- to post- intervention, with Chapter 3 confirming the scale's strong psychometric properties.

The findings of the present thesis have important practical implications, informing efforts to maximise treatment outcomes by promoting effective intervention and cultivating an environment that supports the successful reintegration of MCSO into their communities

through improved public attitudes. Collectively, this thesis emphasises the need to support pathways to desistance for MCSO to ultimately prevent further victimisation.

Summary of Findings

Chapter 2: Treatment Non-Completion among MCSO

Chapter 2 presents a systematic literature review exploring the determinants of attrition from psychological, evidence-based interventions for MCSO. The review offers an update of the work by Larochelle et al. (2011), synthesising the key findings from 21 studies published between 2011 and 2023. Rates of non-completion ranged between 11 to 59%, with an average TNC rate of 27% across the samples. The identified themes relating to TNC were organised within the risk-need-responsivity principles (RNR; Andrews & Bonta, 2010), which are elaborated on next. Evidence suggests adherence to these principles is integral to promoting effective, evidence-based interventions (Hanson et al., 2009).

Risk. Findings reveal that assessed pre-treatment risk of general recidivism may be a more reliable predictor of TNC than the risk of sexual recidivism. In support of this idea, results indicate that after engaging in intervention, individuals who did not complete treatment were more likely to engage in general (but not sexual) offending behaviour, compared to those who completed the intervention. Accordingly, the review suggests that both pre- and post-treatment risks of general recidivism can serve as valuable indicators for identifying individuals who need additional support to effectively engage in the intervention. The poor outcomes for MCSO with a high-risk of general recidivism may stem from the presence of additional criminogenic needs that are not adequately addressed by sexual offence-specific interventions.

Need. Effective interventions aim to reduce the risk of recidivism by targeting the key criminogenic needs associated with one's offending behaviour. Importantly, the findings of the review suggest that addressing these needs within interventions may have a dual benefit of increasing the likelihood of treatment completion, as well as reducing the risk of recidivism. Of note, findings suggest that specialised (sexual offences only) offenders are more likely to complete treatment than those with a history of heterogenous offending behaviour, particularly those with anti-social traits. This suggests that there may be barriers to completing treatment for criminally versatile MCSO, who may perceive a lack of relevance of the intervention to their specific needs, thereby potentially reducing their motivation to engage.

Responsivity. Ward et al.'s (2004) Good Lives Model (GLM) emphasises the importance of working responsively with MCSO to enhance motivation and engagement for treatment, thereby increasing the likelihood of treatment completion. Although research examining the impact of meaningful adherence to the responsivity principle is in its infancy, the presented findings highlight the importance of enhancing treatment readiness and internal motivation to promote effective engagement. The findings also offer preliminary support for the mitigating influence of a strong therapeutic alliance on reducing the likelihood of TNC among high-risk, high-need individuals.

Overall, the findings of the review suggest that criminal versatility is the most reliable predictor of TNC among MCSO, with results indicating that heterogenous offending behaviour, pre- and post-treatment risk of general recidivism, and increased anti-social traits are all related to TNC. Preliminary support highlights the importance of working responsively with high-risk, high-need MCSO to promote motivation and engagement, and maximise treatment outcomes.

The Current State of the Evidence Base. A secondary aim of this review was to examine the state of the evidence-base, approximately 13 years after Larochelle et al.'s (2011) review, which had identified major methodological and conceptual flaws in the literature, precluding definitive conclusions regarding reliable predictors of TNC among MCSO. The present review notes some improvements, such as increased consistency in the measures used to examine predictors of TNC, facilitating meaningful cross-study comparisons. However, key limitations remain, including poor descriptors of the interventions employed, the samples studied, and definitions of TNC. Consequently, while this review identifies potentially important determinants of TNC, the findings largely varied across studies and should be interpreted with caution. Further research employing rigorous methodological designs is recommended to examine support for the findings of the present review.

Chapter 3: Critique of the Attitudes Towards Sexual Offenders-21 Scale

Chapter 3 presents a critique of the Attitudes Towards Sexual Offenders-21 Scale (ATS-21; Hogue & Harper, 2019). The ATS-21 is a revised version of Hogue's (1993) original 36-item scale, which has been criticised for its length and lack of theoretical foundation. Through component analysis, Hogue and Harper (2019) refined the scale to 21 items, which loaded evenly onto three factors: "Trust," "Social Distance," and "Intent." These factors are said to align closely with Breckler's (1984) ABC conceptualisation of attitudes, whereby "Trust" corresponds to the affective domain, "Social Distance" to the behavioural domain, and "Intent" to the cognitive domain. On this basis, the ATS-21 is said to reflect the current academic understanding of attitudes as an evaluative judgement (Hogue & Harper, 2019). It should be noted however, that this proposed three-factor structure accounted for just 45.6% of the variance in Hogue's (1993) original ATS scale scores, suggesting that other

factors must be considered to fully understand the psychological underpinnings of attitudes towards MCSO.

Nonetheless, the ATS-21 has been established as a reliable and valid measure of attitudes towards MCSO achieving high internal consistency across the overall scale (α = .91) and its subscales: Trust (α = .80), Intent (α = .84), and Social Distance (α = .79; Hogue & Harper, 2019). Moreover, the ATS-21 has demonstrated convergent validity with scales measuring similar concepts, and concurrent validity by consistently capturing expected theoretical differences in attitudes towards MCSO across various populations (e.g., forensic professionals).

Overall, the ATS-21 provides a psychometrically sound measure of public attitudes towards MCSO, providing valuable insights into overall attitudes and their underlying structures, aligned with Breckler's (1984) tripartite model. However, as a relatively novel measure, further research is needed to confirm its strong psychometric properties and explore additional factors that may account for the variance not currently explained by the scale's three factor structure.

Chapter 4: Improving Public Attitudes Towards MCSO

Chapter 4 presents the findings of an empirical study investigating the most effective methods to improve public attitudes towards MCSO, specifically examining support for the matching effect of persuasion (Edwards, 1990; Fabrigar & Petty, 1999). Participants were assigned to one of four media portrayal interventions: affective, cognitive, combined, and control, each depicting the recent release of an MCSO into the community. The interventions aimed to improve participants' attitudes towards MCSO, with the framing of the media portrayal manipulated to target a specific attitude domain. The affective condition featured a humanised portrayal designed to elicit empathy, while the cognitive condition presented

statistics and factual information to dispel myths about high recidivism rates and the inefficacy of treatment for MCSO. The combined condition included both affective and cognitive elements. Participants in the control condition were shown a basic media portrayal without additional manipulation targeting specific attitudinal domains.

Participants' attitudes were measured both before and after the intervention using the ATS-21 Scale (Hogue & Harper, 2019). This allowed for the assessment of overall changes in attitudes towards MCSO, as well as specific changes within each attitudinal domain (affective, behavioural, and cognitive). It was hypothesised that, in accordance with the matching effect, there would be greater changes within each attitude domain (i.e., affective or cognitive) when matched with the intervention's framing (i.e., emotive or informative). Additionally, it was predicted that participants in the combined condition, exposed to both emotive *and* informative media portrayals, would exhibit the greatest overall attitudinal change, reflecting the combined influence of affective and cognitive information on behavioural attitudes.

However, the findings did not support the matching effect. Instead, results indicate that both emotive and informative media portrayals are equally effective in eliciting attitudinal changes across all three domains. Additionally, there was no evidence of a cumulative effect from the combined media portrayals. This lack of significant results may be attributed to the complex structure of public attitudes towards MCSO, which are likely intercorrelated due to their frequent activation and reinforcement by sensationalist media reports that simultaneously target each attitude domain. This suggests that affective, behavioural, and cognitive domains of public attitudes towards MCSO are closely correlated, making it challenging to target each component independently (Breckler, 1984; Petty & Cacioppo, 1986).

Nonetheless, the results advocate for the overall efficacy of brief interventions to elicit positive attitudinal change over a short time period. A significant improvement in public attitudes towards MCSO was achieved in the experimental conditions only, demonstrating the efficacy of these interventions. These findings distinguish the present study from existing literature, which has largely failed to demonstrate the effectiveness of brief interventions in improving attitudes towards MCSO (Craig, 2005; Willis et al., 2010). The enhanced efficacy of the present interventions may be attributed to their strong empirical foundations, as the design of the empirical manipulations was guided by research evidence demonstrating the effectiveness of specific approaches in eliciting attitudinal change in affective and cognitive domains (Harper et al., 2018; Hope & Bartels, 2016; Ryffel et al., 2014; Walkington et al., 2020).

The limitations of this research include the short follow-up period between the pre- and post-intervention measure of the ATS-21, the potential stigmatising effect of using a MCSO against children as the subject of the intervention, and potential methodological issues inherent in the ATS-21 scale. These issues relate to the term “sex offender” within the scale’s items and the validity of its three-factor structure. It is recommended that future research examine support for the matching effect of persuasion concerning attitudes towards stigmatised populations using both explicit and implicit measures, providing valuable insights into participants' attitudes beyond their conscious awareness.

Implications for Practice

The findings of this thesis have significant practical implications for promoting pathways to desistance for MCSO. Firstly, existing evidence highlights the importance of completing psychological interventions to reduce the risk of recidivism and promote positive outcomes for MCSO (Gannon et al., 2019; Hanson et al., 2002; Hanson et al., 2009; Lösel &

Schmucker, 2005; Schmucker & Lösel, 2015, 2017). Chapter 2 identifies criminal versatility as the most reliable predictor of TNC, with pre- and post-treatment risks of non-sexual recidivism, antisocial traits, and heterogenous offending behaviours all linked to higher attrition rates. Therefore, assessing general recidivism risk before starting an intervention could offer valuable insights into which clients may require additional support to effectively engage with and complete treatment.

In line with the RNR and GLM principles, interventions should be tailored to meet the specific needs of each individual, promoting personal relevance and meaningful engagement with treatment goals that address their specific criminogenic needs. For those completing sexual offence-specific work, supplementary individual sessions focusing on general recidivism risks could be incorporated to better address the needs of this high-risk, high-need population.

Moreover, the findings from Chapter 2 provide preliminary support for the mitigating influence of working responsively with MCSO, promoting engagement and treatment completion regardless of the complexities of clients' risks and needs. In practice, meaningful adherence to the responsivity principle could be promoted through routine assessment of a client's treatment readiness prior to intervention. Such assessments would reveal key areas that must be addressed prior to intervention to facilitate change, whilst also informing how interventions can be adapted to meet clients' specific needs. This proactive approach may enable effective engagement and promote positive treatment outcomes for MCSO.

However, while the successful completion of custodial interventions promotes positive outcomes for MCSO, negative public attitudes can impede effective community reintegration, undermining these gains upon their release from custody (Wakeling & Saloo, 2018). Positively, Chapter 4 highlights the potential of brief intervention to promote positive change in public attitudes towards MCSO within a short timeframe. The study demonstrates

the efficacy of evidence-based interventions, employing narrative humanisation and the dispelling of myths to enhance attitudes. In practice, this could be achieved through effective collaboration between academics and the media to disseminate accurate information about MCSO. Podcasts provide a particularly promising platform, allowing nuanced information about sensitive topics to be presented to a large audience in an accessible and engaging way.

Improving public attitudes is crucial for supporting pathways to desistance for MCSO, promoting progressive policy change, and enhancing community reintegration through increased support for initiatives such as Circles of Support and Accountability and the Lucy Faithfull Foundation. The public should be made aware of the integral role they can play in promoting desistance among MCSO, supporting the attainment of important protective factors such as employment, accommodation, and pro-social networks. Furthermore, a cultural shift in the general perception of sexual harm is necessary to prevent further victimisation, enabling men at risk to seek support without fear of prejudice or discrimination.

Overall, this thesis highlights the importance of adopting an evidence-based approach, tailored to each individual's specific needs, in order to enhance the efficacy of interventions aimed at reducing recidivism for MCSO. It further emphasises the necessity of maintaining these positive treatment outcomes upon their release from custody by encouraging successful community reintegration through improved public attitudes, with the aim to facilitate pathways to desistance.

Recommendations for Future Research

The systematic literature review presented within Chapter 2 provides important insights into the determinants of TNC among MCSO. However, persistent methodological and conceptual flaws within the literature limit the reliability of these findings. As such, it is

recommended that future research employs rigorous methodological designs, providing detailed descriptions of participant samples, thorough outlines of the intervention employed, and the precise reasons for TNC within their relevant samples. This would facilitate cross-study comparisons, yielding more definitive conclusions around the precise reasons for TNC among MCSO. Furthermore, it is suggested that future research employ prospective designs, providing more accurate reflections of the current landscape of psychological interventions for MCSO, underpinned by the latest evidence and practices. This would provide insight into whether the identified predictors of TNC can indeed be mitigated through responsive practice.

To identify the most effective ways of improving public attitudes towards MCSO, it is recommended that future research examines the presence of the matching effect using both implicit and explicit measures. This dual approach would provide important insights into the relative malleability of conscious versus unconscious attitudes and whether it is possible to target individual domains of attitudes held towards stigmatised groups. Consistency between the implicit and explicit measures would also seek to validate the three-factor structure of the ATS-21. This is important, as findings from Chapter 3 highlight concerns around the proposed three-factor structure, indicating that it only accounts for approximately 45.6% of the variance within Hogue's (1993) original ATS scale. Future research should examine the factor structure of the ATS-21 and consider whether additional factors need to be considered to fully understand the psychological underpinnings of attitudes towards MCSO.

Finally, it is recommended that future research examine the longevity of positive attitudinal change towards MCSO resulting from brief interventions. These studies should employ interventions similar to those used within Chapter 4, underpinned by empirical evidence, to inform how to effectively target affective and cognitive attitude domains.

Conclusion

This thesis explores strategies to promote desistance for MCSO, both during and after their time in custody. This was achieved by: 1) a systematic review of the literature, identifying the factors underpinning treatment attrition among MCSO, aiming to understand how to enhance the efficacy psychological interventions; and 2) the development of an empirical research study, seeking to improve public attitudes towards this population, with the aim to reduce barriers for effective community reintegration.

The findings of the thesis highlight the importance of upholding evidence-based practice when working to reduce recidivism among high-risk, high-need MCSO. This is particularly important given the emotionally charged nature of sexual offending, which can lead to a reliance on intuitive but ineffective interventions. Offending behaviour interventions should adhere to the principles of RNR and GLM, employing a strengths-based approach to address the diverse risks associated with each individual's criminal behaviour. Particular emphasis should be placed on promoting responsivity to the client's unique needs and characteristics, ensuring their readiness and ability to meaningfully engage with the intervention. This tailored approach will enable individuals to derive maximum benefit from the intervention and achieve its successful completion.

Importantly, support for MCSO should not end upon their release from custody. The first six-months post-release represent the highest risk period for recidivism (McKillop et al., 2022), highlighting the necessity for effective community-based support. During this critical period, MCSO should be supported in applying the skills acquired through intervention, helping them to meet their core needs in positive and safe ways.

Collectively, these approaches may facilitate the acquisition of important protective factors that mitigate the risk of sexual harm, including employment, housing, and pro-social

networks. Progressive initiatives such as the Circles of Support and Accountability programme can facilitate this process but requires strong community support to succeed. Therefore, improving public attitudes towards MCSO to garner support for progressive policies and practices is crucial in promoting desistance and ultimately reducing future victimisation.

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Appendices

Appendix A: Original Search Terms Sourced from Larochelle et al. (2011)

treatment attrition *or* treatment dropouts *or* treatment noncompletion *or* premature termination from treatment

AND

sexual offenders *or* sex offenders *or* child molesters *or* rapists *or* paedophiles.

Appendix B: Individual Search Terms Across Databases

Table B 1

Individual Search Terms Across Databases

Database	Search completed	Date	No of hits
Ovid (PsychInfo 1967- January Week 4 2023) (Abstract) Combination of Subject Heading Searching and Free Text Seatching	**Free Text Searching:** ((Factor* or Predictor* or Influenc* or Determinant* or Mediator* or Moderator* or Facet* or Characterist*) and (sex* offen* or peadophile* or pedophile* or rapist or child molester*) and (Treatment* or Intervention* or Therap* or Program* or Correction*) and (Attrition* or Retention* or Complet* or Non-complet* or Non Complet* or Noncomplet* or Drop-out* or Drop out* or Dropout* or Discontin* or Fail* or Success* or Compliance* or Noncompliance* or Non compliance* or Non-compliance* or Adherence* or Terminat*))ab. **Subject Heading Mapping:** Sex offenses/ AND criminal offenders/ or perpetrators/ AND treatment compliance/ or treatment dropouts/ **Combined Free Text and Subject Heading Mapping:** **1.** criminal offenders/ or perpetrators/ **2.** *sex offenses/ **3.** 1 and 2 **4.** (sex* offen* or peadophile* or pedophile* or rapist or child molester*).ab. **5.** 3 or 4 **6.** treatment compliance/ or treatment dropouts/ **7.** ((Treatment* or Intervention* or Therap* or Program* or Correction*) and (Attrition* or Retention* or Complet* or Non-complet* or Non Complet* or Noncomplet* or Drop-out* or Drop out* or Dropout* or Discontin* or Fail* or Success* or Compliance* or Noncompliance* or Non compliance* or Non-compliance* or Adherence* or Terminat*)).ab.	29.01.2023	499

	8. 6 or 7 **9.** (Factor* or Predictor* or Influenc* or Determinant* or Mediator* or Moderator* or Facet* or Characterist*).ab. **10.** 5 and 8 and 9		
Web of Science. Core Collection. (Topic)	Factor* OR Predictor* OR Influenc* OR Determinant* OR Mediator* OR Moderator* OR Facet* OR Characterist* (Topic) and "Sex* Offen*" OR "Peadophile*" OR "Pedophile*" OR "Rapist*" OR "Child Molester*" (Topic) and Treatment* OR Intervention* OR Therap* OR Program* OR Correction* (Topic) and Attrition* OR Retention* OR Complet* OR Non-complet* OR "Non Complet*" OR Noncomplet* OR Drop-out* OR "Drop out*" OR Dropout* OR Discontin* OR Fail* OR Success* OR Compliance* OR Noncompliance* OR "Non compliance*" OR "Non-compliance*" OR Adherence* OR Terminat* (Topic)	29.01.2023	328
Scopus. (Article title, abstract, keywords)	((TITLE-ABS-KEY (factor* OR predictor OR influenc* OR determinant OR mediator OR moderator OR facet OR characterist*) AND TITLE-ABS-KEY ("sex offen*" OR p*dophile OR rapist OR "child molester") AND TITLE-ABS-KEY (treatment OR intervention OR therap* OR program* OR correction) AND TITLE-ABS-KEY (attrition OR retention OR complet* OR non-complet* OR "Non Complet*" OR noncomplet* OR drop-out OR "Drop out" OR dropout OR discontin* OR fail* OR success* OR compliance OR noncompliance OR "Non compliance" OR "Non-compliance" OR adherence OR terminat*))	29.01.2023	685
ProQuest. (Abstract)	(abstract(Factor* OR Predictor* OR Influenc* OR Determinant* OR Mediator* OR Moderator* OR Facet* OR Characterist*) AND abstract("Sex* Offen*") AND abstract(Treatment* OR Intervention* OR Therap* OR Program* OR Correction*) AND abstract(Attrition* OR Retention* OR Complet* OR Non-complet* OR ("non complete" OR "non completion") OR Noncomplet* OR Drop-out* OR ("drop outs") OR Dropout* OR Discontin* OR Fail* OR Success* OR Compliance* OR Noncompliance* OR ("non compliance" OR "non compliances") OR "Non-compliance*" OR Adherence* OR Terminat*))	29.01.2023	864

Appendix B.2: Output from Ovid (PsychInfo) search

Table B 2

Output from Ovid (PsychInfo) Search

#	Query	Results from 4 Feb 2023
1	criminal offenders/ or perpetrators/	21,889
2	*sex offenses/	10,764
3	1 and 2	2,769
4	(sex* offen* or peadophile* or pedophile* or rapist or child molester*).ab.	10,049
5	3 or 4	10,607
6	treatment compliance/ or treatment dropouts/	19,539
7	((Treatment* or Intervention* or Therap* or Program* or Correction*) and (Attrition* or Retention* or Complet* or Non-complet* or Non Complet* or Noncomplet* or Drop-out* or Drop out* or Dropout* or Discontin* or Fail* or Success* or Compliance* or Noncompliance* or Non compliance* or Non-compliance* or Adherence* or Terminat*)).ab.	338,823
8	6 or 7	344,925
9	(Factor* or Predictor* or Influenc* or Determinant* or Mediator* or Moderator* or Facet* or Characterist*).ab.	1,431,885
10	5 and 8 and 9	499

Appendix C: Details of Experts Contacted via Email

Experts contacted via email:

- Danielle DeSorcy (Research Gate)
- Lindsay Sewall (Research Gate).
- Mark Howard (Email).
- Mark Olver (email)
- Sebastein Larochelle (email)
- Stephen Wong (Research Gate)

Sample email sent to professionals:

Dear Dr ____.

My name is Abi Skinner, I am a Trainee Forensic Psychologist completing the Practice Doctorate at the University of Birmingham.

As part of my thesis, I am conducting a Systematic Literature Review on the factors underpinning drop-out from sex offender treatment programmes. As part of my systematic search, I came across your research _____.. I am emailing you, as I have identified that you are an expert in the field.

To ensure that I am including all relevant research in the field, I was wondering whether you have any published or unpublished research in this area, that you would be able to forward to me?

I would be extremely grateful for any help you could provide.

Kind regards,
Abi Skinner.

Appendix D: Articles Unable to Access Full Text and Therefore Excluded from Study

Table D

Articles Where Full Text was Unavailable

Author(s) and year of publication	Title of publication	How the study was identified	Type of article
Gray 2013	Sex offender assessment and treatment: one size fits all?	Database search	Thesis

Appendix E: Reasons for Exclusion from Review from Second Screening

Table E

Reasons for Exclusion from Review from Second Screening

Author(s) and date of publication	Title of publication	Reason for exclusion
Alemohammad, 2017	Support for the predictive validity of the multifactor offender readiness model (MORM): forensic patients' readiness and engagement with therapeutic groups	Population not specific to adult male sexual offenders
Ashbeck, 2014	Prevalence of mental illness and treatment efficacy among individuals convicted of sexual offenses	Population not specific to adult male sexual offenders
Barnett, 2012	How Useful Are Psychometric Scores in Predicting Recidivism for Treated Sex Offenders?	Comparator- Did not explore TNC
Beggs & Grace, 2011	Treatment Gain for Sexual Offenders Against Children Predicts Reduced Recidivism: A Comparative Validity Study	Comparator- Did not explore TNC
Blagden, 2011	Understanding denial in sexual offenders: The implications for policy and practice	Comparator- Did not explore TNC
Blagden, 2014	Making Sense of Denial in Sexual Offenders: A Qualitative Phenomenological and Repertory Grid Analysis.	Multiple PICOS- not relevant
Brunner, 2019	Determinants of Dropout From Correctional Offender Treatment	Population not specific to adult male sexual offenders
Carl & Lösel, 2021	Mandated aftercare treatment for released sex offenders: Predictors and association with recidivism	Non- English language
Chastain, 2014	Treatment and rehabilitation of violent sexual offenders: Professional providers' perceptions of risk factors, treatment models and their contribution to recidivism	Multiple PICOS- not relevant
Coles, 2011	Dynamic Risk Assessment, Personality Disorder, and Key Developmental Variables in Sexual Offenders.	Comparator- Did not explore TNC
Eastman, 2019	Young adult sexual offenders with emerging personality disorders: Developmental and offence-related characteristics and treatment engagement	Comparator- Did not explore TNC
Elfallal, 2018.	Predicting Success for Sex Offender Treatment Program: A Program Evaluation.	Population not specific to adult male sexual offenders
Engel et al., 2018	Reduction of Risk Factors for Pedophilic Sexual Offending	Population not convicted of sexual offences. Intervention includes pharmacological treatment.
Grady, 2013	Increasing Retention Rates in Sex Offender Treatment: Learning from Expert Clinicians	Outcome and comparator- explores third party (therapist) opinion around programme selection.
Griffiths, 2014	Persons with Intellectual Disabilities and Problematic Sexual Behaviors	Multiple PICOS- not relevant

Grover, 2011	The utility of MMPI-2 scores with a correctional population & convicted sex offenders	Multiple PICOS- not relevant
Harkins et al., 2015	Relationships between denial, risk, and recidivism in sexual offenders	Comparator- Did not explore TNC
Hopton et al., 2019	Exploring preliminary outcomes of a community treatment programme for men with sexual convictions screened into the offender personality disorder pathway	Intervention includes pharmacological treatment
Larochelle et al., 2011	Predictors of psychological treatment noncompletion among sexual offenders	Systematic Literature Review
Lindegren, 2022	A Pilot Study of the Swedish Sexual Offender Treatment Program	Comparator- Did not explore TNC
Lösel, 2017	Treatment of sex offenders: Concepts and empirical evaluations.	Review essay
Mann, 2013	Why do sexual offenders refuse treatment?	Comparator- Did not explore TNC
Mayfield, 2017	The Effectiveness of Treatment as Policy for Sex Offenders	Population not specific to adult male sexual offenders
Miller, 2015	Protective Strengths, Risk, and Recidivism in a Sample of Known Sexual Offenders	Comparator- Did not explore TNC
Milner, 2017	Desistance in men who have previously committed sexual offences: an exploration of the early processes	Comparator- Did not explore TNC
Mivshek & Schriver, 2022	Attitudes toward treatment among sex offender treatment providers affect burnout and empathy	Multiple PICOS- not relevant
Moosburner et al., 2022	Admission to-, Stay in and Termination of Social Therapy: A Complete Survey of Social Therapy Units in Germany)	Non- English language
Moosburner et al., 2022	Characteristics and Perspectives of (Psycho-)Therapeutic Treatment in the Prison System. A Complete Survey of the Therapeutic Practice in Social Therapy Units in Germany	Non- English language
Nentzl & Scherner, 2021	Starting therapy, dropout and follow-up-Studies in the Prevention Project Dunkelfeld.	Non- English language
Noppel et al., 2018	Personality and therapy motivation of child sexual offenders.	Non- English language
O'Brien & Daffern, 2017	An Exploration of Responsivity among Violent Offenders: Predicting Access to Treatment, Treatment Engagement and Programme Completion.	Population not specific to adult male sexual offenders
Olver & Reimer, 2021	High-Psychopathy Men With a History of Sexual Offending Have Protective Factors Too: But Are These Risk Relevant and Can They Change in Treatment?	Comparator- Did not explore TNC
Olver & Wong, 2013	A description and research review of the Clearwater Sex Offender Treatment Programme	Review study
Olver & Wong, 2013	Treatment programs for high risk sexual offenders: program and offender characteristics, attrition, treatment change and recidivism	Systematic Literature Review
Olver et al., 2018	Construct validity of the Violence Risk Scale-Sexual Offender version instrument in a multisite sample of treated sexual offenders	Multiple PICOS- not relevant
Olver et al., 2018	Risk-need-responsivity applications of the MMPI-2 in sexual offender assessment	Comparator- Did not explore TNC

Olver et al., 2021	Assessment and Modification of General Criminal Attitudes Among Men who have Sexually Offenders	Comparator- Did not explore TNC
Osiadacz, 2016	Group treatment for male sex offenders with an intellectual disability	Comparator- Did not explore TNC
Parker et al., 2020	The Personality Assessment Inventory (PAI): Treatment Scales and Interpersonal Characteristics in a Sample of Men Charged with or Convicted of a Sexual Offense*	Comparator- Did not explore TNC
Pearson, 2018	Sex offenders, personality disorders, and the effects of comorbidity on treatment	Population not specific to adult male sexual offenders
Pruitt, 2020	The Role of Male Gender Role Conflict and Strain in Convicted Male Sex Offenders Engagement in Mandated Psychotherapy.	Comparator- Did not explore TNC
Rayment-McHugh et al., 2022	Beyond 'what works': implementing sex offender treatment programs in the 'real world'	Outcome and comparator- explores third party (therapist) opinion around programme success.
Schwedler & Wößner, 2013	Within-treatment changes in dynamic criminogenic risk factors among incarcerated sexual and violent offenders	Non- English language
Seewald et al., 2018	Effectiveness of a risk-need-responsivity-based treatment program for violent and sexual offenders: Results of a retrospective, quasi-experimental study	Population not specific to adult male sexual offenders
Sellen et al., 2013	Enhancing treatment engagement in sexual offenders: A pilot study to explore the utility of the Personal Aspirations and Concerns Inventory for Offenders (PACI-O).	Comparator- Did not explore TNC
Sowden & Olver, 2017	Use of the violence risk scale-sexual offender version and the stable 2007 to assess dynamic sexual violence risk in a sample of treated sexual offenders.	Comparator- Did not explore TNC
Stams, 2015	From criminogenic risk to rehabilitation: Is there a need for a culturally sensitive approach?	Editorial study
Stephenson, 2015	Treatment of offenders: the delivery and sequencing of interventions	Comparator- Did not explore TNC. Population not specific to adult male sexual offenders.
Stinson, 2016	Predictors of Treatment Noncompletion in a Sample of Inpatient Sex Offenders With Serious Mental Illness	Comparator- Did not explore TNC (defined as non-completion, but was in fact treatment accepted vs. refused)
Theeman, 2014	The impact of psychosis on the treatment and evaluation of individuals with problematic sexual behavior	Comparator- Did not explore TNC
Watson et al., 2017	The Impact of Interpersonal Style on Ruptures and Repairs in the Therapeutic Alliance Between Offenders and Therapists in Sex Offender Treatment.	Comparator- Did not explore TNC
Woessner & Schwedler, 2014	Correctional treatment of sexual and violent offenders: Therapeutic change, prison climate, and recidivism	Comparator- Did not explore TNC Population not specific to adult male sexual offenders.
Yoder et al. 2015	The Impact of Family Service Involvement on Treatment Completion and General Recidivism Among Male Youthful Sexual Offenders	Population not specific to adult male sexual offenders.

Youssef, 2022	Therapeutic alliance and its setting with those who have sexually offended and implications for community maintenance programs	Review study
Zara, 2018	The impact of denial between recidivism risk and treatment of sex offending. The paradoxical effect.	Non- English language

Appendix F: Studies Identified via Automated Search Alerts and Reasons for Exclusion

Table F

Overview of Studies Identified via Automated Search Alerts

Search alert database and date	Author(s) and date of publication	Title of publication	Reasons for exclusion
Web of Science 29.03.24	Augustyn & Olver, 2024	Therapeutic and risk relevance of psychopathy and general criminal attitude change in an institutional sexual offense treatment program.	Comparator- did not explore TNC.
Web of Science 28.12.23	Carl & Lösel, 2024	Relaxation of prison sentences and legal probation for imprisoned sex offenders	Non-English Language.
Google Scholar 21.01.24	Helmus et al., 2024	Cross-Cultural Validity of Sexual Recidivism Risk Assessments Using Static-99R, STABLE-2007, and the VRS-SO	Multiple PICOS- not relevant.
Web of Science 12.01.24	Lindegren, 2023	Looping Disruption: A Relational Mechanism Enhancing Treatment Readiness among Individuals Convicted of Sexual Offending?	Comparator- did not explore TNC.
Ovid 23.03.24	Millar, 2024	The Stigmatisation of Minor Attracted Persons.	Multiple PICOS- not relevant.
Scopus 12.01.24	Ogilvie et al., 2023	Assessing the Effectiveness of a Specialized, Field-Based Treatment Program for Youth Who Have Committed Sexual Offenses in an Australian Jurisdiction	Population not specific to adult male sexual offenders.
Google Scholar 27.04.23	Olver et al., 2023	The Risk, Need, and Responsivity Relevance of Working Alliance in a Sexual Offense Treatment Program: Its Intersection With Psychopathy, Diversity, and Treatment Change	Comparator- did not explore TNC.
Scopus 17.11.23	Prenzler et al., 2023	Best practice in sexual offender rehabilitation and reintegration programs	Review Study.
Web of Science 29.03.23	Turner et al., 2023	Comparative effectiveness of psychological interventions for treating the psychological consequences of sexual abuse in children and adolescents: a network meta-analysis (Review)	Review Study.

Appendix G: MMAT Quality Assessment

Title of study:
Author(s):
Date of publication:

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions? S2. Do the collected data allow to address the research questions? *Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.*				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question? 1.2. Are the qualitative data collection methods adequate to address the research question? 1.3. Are the findings adequately derived from the data? 1.4. Is the interpretation of results sufficiently substantiated by data? 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed? 2.2. Are the groups comparable at baseline? 2.3. Are there complete outcome data? 2.4. Are outcome assessors blinded to the intervention provided? 2.5 Did the participants adhere to the assigned intervention?				
3. Quantitative non-randomized	3.1. Are the participants representative of the target population? 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)? 3.3. Are there complete outcome data? 3.4. Are the confounders accounted for in the design and analysis? 3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question? 4.2. Is the sample representative of the target population? 4.3. Are the measurements appropriate? 4.4. Is the risk of nonresponse bias low? 4.5. Is the statistical analysis appropriate to answer the research question?				

5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?		
	5.2. Are the different components of the study effectively integrated to answer the research question?		
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?		
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?		
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?		

Appendix H: Dual Coding for Quality Assessment

Table H

Dual Coding for Quality Assessment

Authors of study	Year of study	Title of study	Quality assessment marker 1	Quality assessment marker 2
1 Carl & Lösel	2021	When sexual offender treatment in prison-based social-therapeutic treatment is not completed: Relationship to risk factors and recidivism after release	100%	100%
2 Carr	2011	An Exploratory Study of The Association Between The Static Variables of The Static-99 And Successful or Unsuccessful Treatment Completion	80%	80%
3 Clegg, Fremouw, Horacek, Cole & Schwartz	2011	Factors associated with treatment acceptance and compliance among incarcerated male sex offenders.	80%	80%
4 Craissati and Blundell	2013	A Community Service for High-Risk Mentally Disordered Sex Offenders: A Follow-Up Study	60%	60%
5 DeSorcy, Olver and Wormith	2016	Working Alliance and Its Relationship With Treatment Outcome in a Sample of Aboriginal and Non-Aboriginal Sexual Offenders	80%	80%
6 DeSorcy, Olver and Wormith	2020	Working Alliance and Psychopathy: Linkages to Treatment Outcome in a Sample of Treated Sexual Offenders	80%	80%
7 Howard	2016	Process Evaluation of the Custody Based Intensive Treatment (CUBIT) Programs for Sex Offenders. Factors Associated with Program Completion.	60%	60%
8 Howard, Neto, & Galouzis	2019	Relationships Between Treatment Delivery, Program Attrition, and Reoffending Outcomes in an Intensive Custodial Sex Offender Program	80%	80%

9 Howard & Wei	2022	Effects of closed versus open groups on attrition and recidivism outcomes for sex offenders in custody-based treatment programmes.	80%	80%
10 Olver & Wong	2011	Predictors of sex offender treatment dropout: psychopathy, sex offender risk, and responsivity implications	80%	80%
11 Percosky, Boccaccini, Bitting & Hamilton	2013	Personality Assessment Inventory scores as predictors of treatment compliance and misconduct among sex offenders participating in community-based treatment	80%	80%
12 Sewall & Olver	2018	Sexual offender treatment outcomes among psychopathy subtypes	80%	80%
13 Sewall & Olver	2019	Psychopathy and Treatment Outcome: Results From a Sexual Violence Reduction Program	100%	100%
14 Sowden & Olver	2017	Sexual Offender Treatment Readiness, Responsivity, and Change: Linkages to Treatment Completion and Recidivism	80%	80%
15 Stevenson, Thomas & Daffern	2022	Open Versus Closed Group Treatment of Men with a History of Sexual Offenses	100%	100%
16 Stück, Briken & Brunner	2022	Changes in the Risk of Sexual Reoffending: The Role and Relevance of Perceived Self-Efficacy and Adult Attachment Styles in Correctional Treatment	80%	80%
17 Stumpf	2022	Predicting Sexual Offense Treatment Completion Through Specific Responsivity Factors	80%	80%
18 Willis & Levenson	2022	Exploring Risk for Sexual Recidivism and Treatment Responsivity Through the Lens of Early Trauma	60%	60%
19 Zara, Farrington, and Jung	2020	Denial in Sex Offending Treatment: Examining Criminal Career Diversity	80%	80%
20	2023	Differences in Sociodemographic Characteristics and Treatment	60%	60%

Gimenez-Salinas, Perez Ramirez, Ruiz Alvarado & Pozuelo Rubio		Refusal Between Lone and Multiple Perpetrator Rapists		
21	2023	A Measure Predicting Treatment Outcome for Sexual Offenders	80%	80%
Guston				

Appendix I: Blank Data Extraction Form

Data Extraction Form:

Study Details

Title:

Authors:

Year:

Location:

Time frame:

Aim of study:

Quality score:

Source:

Design

Qualitative:

Quantitative randomised control trial:

Quantitative non-randomised:

Quantitative descriptive:

Mixed methods:

Population

Size of relevant sample:

Age of sample:

Ethnicity of sample:

Offence type:

Recruitment method:

Responsivity factors:

Intervention

Setting:

Programme name:

Description of programme:

Frequency of programme:

Duration of programme:

Facilitators:

Format:

Mandated/voluntary:

Theoretical basis:

Measured and recorded

How was data collected:

Comparator definition:

TNC rate:

Factors explored:

Reasons for TNC:

Recidivism rate (if reported):

Length of follow-up:

Findings and implications

Relevant statistical analysis used:

Factors related to TNC:

Relationship between TNC and recidivism (if applicable):

Conclusions:

Strengths/ limitations/ bias

Strengths identified in paper:

Limitations identified in paper:

Bias identified in paper:

Implications and future research

Implications:

Future research:

Appendix J: Mean TNC Rate for Treatment Setting

Table J 1

Mean TNC Rate for Outpatient Treatment Setting

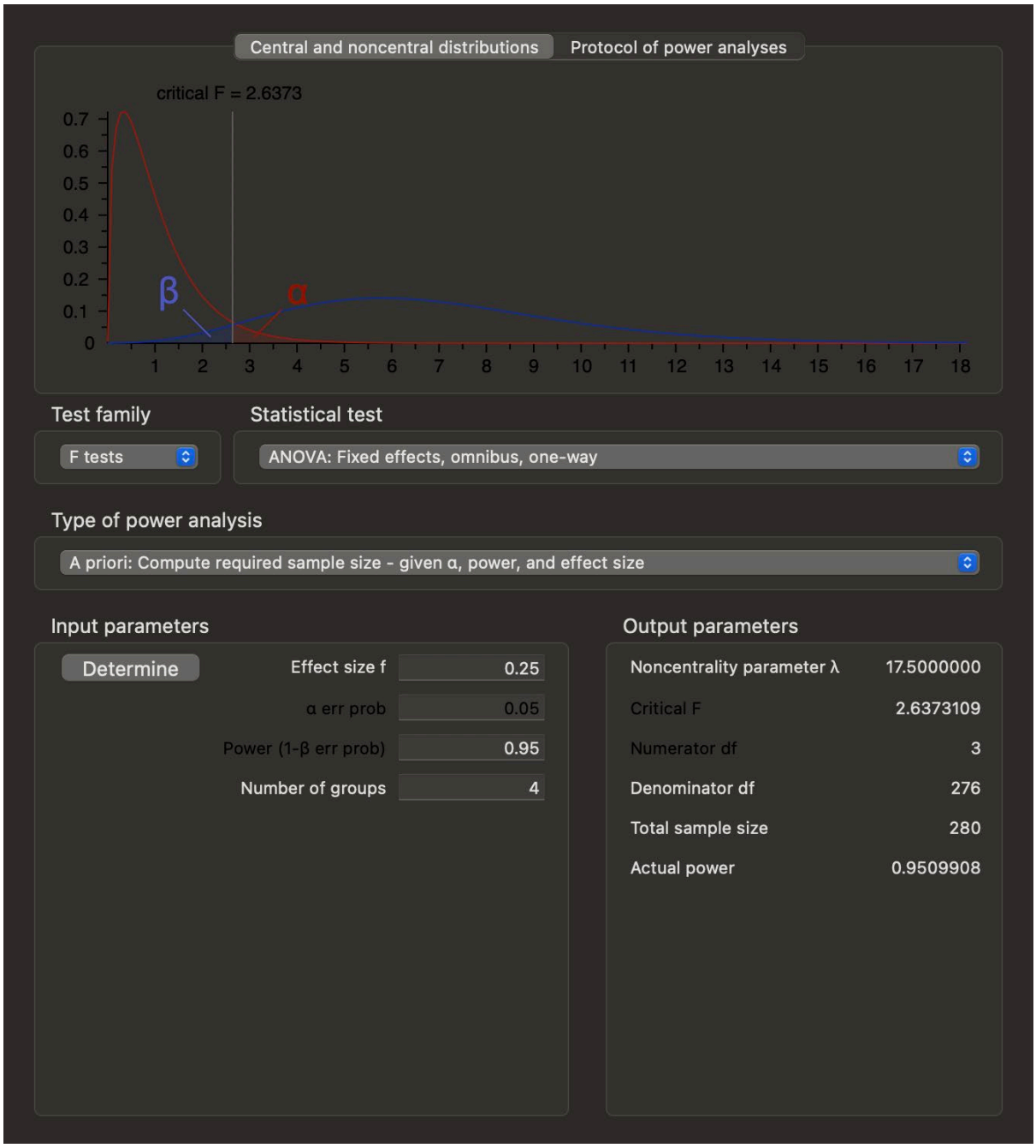
Setting	Authors (Date)	TNC Rate (%)	Mean TNC Rate (%)
Community	Crasissati & Blundell (2013)	25	
	Carr (2011)	61	
	Percosky et al. (2013)	59	
	Stevenson et al. (2022)	20	
	Stumpf (2022)	50	
	Willis & Levenson (2022)	21	
	Guston (2023)	35	
Total			**38.71428571**

Table J 2

Mean TNC Rate for Inpatient Treatment Setting

Setting	Authors (Date)	TNC Rate (%)	Mean TNC Rate (%)
Prison	Clegg et al. (2011)	39	
	Gimenez-Salinas et al. (2023)	-	
	Stevenson et al. (2022)	7	
	Zara et al. (2020)	56	**34**
Prison- TC	Carl & Lösel (2021)	19	
	Howard (2016)	13	
	Howard et al. (2019)	16	
	Howard & Wei (2022)	17	
	Stück et al. (2022)	19	**16.8**
Psychiatric Hospital	DeSorcy et al. (2016)	13	
	DeSorcy et al. (2020)	11	
	Olver & Wong (2011)	15	
	Sewall & Olver (2018)	31	
	Sewall & Olver (2019)	13	
	Sowden & Olver (2017)	26	**18.16666667**
Total			**21.07142857**

Appendix K: G*Power Analysis for One-way ANOVA



Appendix L: Attitudes Towards Sex Offenders- 21 Scale (Hogue & Harper, 2019

Attitudes Towards Sexual Offenders Scale- ATS-21

Please answer the following statements by indicating the extent to which you agree with each item.

To respond, tick the circle to the right of each item that describes the extent to which you agree with the statement.

There are no right or wrong answers.

Response options:

0= Strong Disagree

1= Disagree

2= Undecided

3= Agree

4= Strongly Agree

1. Sex offenders are different from other people
2. Most sex offenders are victims of circumstances and deserve help
3. Sex offenders have feelings like the rest of us
4. It is not wise to trust a sex offender too far
5. I think I would like a lot of sex offenders
6. Give a sex offender an inch and they take a mile
7. Sex offenders need affection and praise just like anybody else
8. Trying to rehabilitate sex offenders is a waste of time and money
9. Sex offenders are no better or worse than other people
10. You have to be constantly on your guard with sex offenders
11. If you give a sex offender your respect, he'll give you the same
12. Sex Offenders only think about themselves
13. There are some sex offenders I would trust with my life
14. Most sex offenders are too lazy to earn an honest living
15. I wouldn't mind living next door to a treated sex offender
16. Sex offenders are just plain mean at heart
17. Sex offenders are always trying to get something out of somebody
18. Sex offenders are immoral
19. I would like associating with some sex offenders
20. Sex offenders respect only brute force
21. If sex offenders do well in prison/hospital, they should be let out on parole

What type of sexual offenders were you thinking of?

_____

Appendix M: Vignette for Affective Media Portrayal

Man convicted of crimes of a sexual nature released into the community

22nd July 2022

Man convicted of crimes of a sexual nature, sentenced to life imprisonment, due to be released next month.

"I am so sorry for what I have done"

William Johnson released from prison

William Johnson, 56, is due to be released next month from prison, having served 22 years in custody. In this time, Johnson's case has been reviewed several times by the parole board, until it was decided on July 20th to grant Johnson his freedom.

In 2001, Johnson was found guilty of two counts of sexual offences against children, committed between 1998 and 2000.

"I now understand how what happened when I was a child impacted on my offending"

Upon sentencing, Johnson made an emotional appeal, expressing "I am so sorry for what I have done".

During his time in prison, Johnson took part in several treatment programmes for men convicted of sexual offences, which research suggests can have significant impact on reducing the likelihood of future reoffending.

During his parole hearing, Johnson reported learning a lot from these programmes, commenting “I now understand how what happened when I was a child impacted on my offending, I am certain that I will never do that again”.

In the UK, sexual offenders are known to have the lowest rates of reoffending.

Johnson will soon be released on licence in the UK and will be placed on the Sex Offender Register. He will be residing in a probation approved premises; his exact location will not be disclosed to the public.

Appendix N: Vignette for Cognitive Media Portrayal

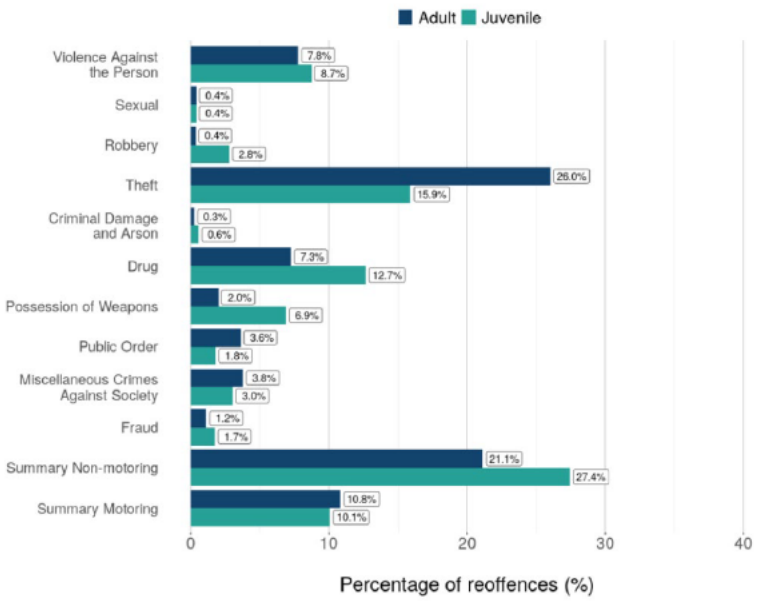
Man convicted of crimes of a sexual nature released into the community

---

“

this time, Johnson’s case has

”



Government figures reveal a "0.4% reconviction rate for sexual offences"

During his time in prison, Johnson took part in several treatment programmes for men convicted of sexual offences, which empirical research by Schmucker and Lösel (2015) shows can significantly reduce the likelihood of reoffending by approximately 10%. During his parole hearing, Johnson reported learning a lot from these programmes, including an understanding of how his childhood may have contributed to his offending. He reported being confident that will not reoffend again in the future.

In the UK, sexual offenders are known to have the lowest rates of reoffending compared to other offenders, with Government figures (2021) revealing a 0.4% reconviction rate for sexual offences, compared with 7.8% for violent offences, and 26% for theft.

Johnson will soon be released on licence in the UK and will be placed on the Sex Offender Register. He will be residing in a probation approved premises; his exact location will not be disclosed to the public.

Appendix O: Vignette for Combined Media Portrayal

Man convicted of crimes of a sexual nature released into the community

"I

what I have done"

having served 22 years in custody. In this time, Johnson's case has

"I now understand

offending"

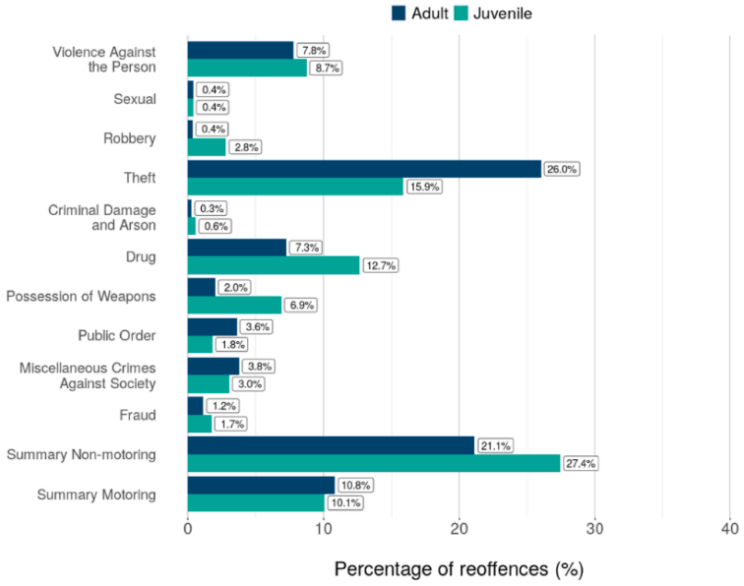
sentencing, Johnson made an emotional appeal, expressing "I am so sorry for what I have done".

ö

During his parole hearing, Johnson reported learning a lot from these programmes, commenting "I now understand how what happened when I was a child impacted on my offending, I am certain that I will never do that again".

Sex Offender Treatment can "reduce the likelihood of reoffending by approximately 10%"

In the UK, sexual offenders are known to have the lowest rates of reoffending compared to other offenders, with Government figures (2021) revealing a 0.4% reconviction rate for sexual offences, compared with 7.8% for violent offences, and 26% for theft.



Government figures reveal a "0.4% reconviction rate for sexual offences"

Johnson will soon be released on licence in the UK and will be placed on the Sex Offender Register. He will be residing in a probation approved premises; his exact location will not be disclosed to the public.

Appendix P: Vignette for Control Media Portrayal

Man convicted of crimes of a sexual nature released into the community

22nd July 2022

Man convicted of crimes of a sexual nature, sentenced to life imprisonment, due to be released next month.

Johnson "sorry for what he had done"

William Johnson released from prison

William Johnson, 56, is due to be released next month from prison, having served 22 years in custody. In this time, Johnson's case has been reviewed several times by the parole board, until it was decided on July 20th to grant Johnson his freedom.

In 2001, Johnson was found guilty of two counts of sexual offences against children, committed between 1998 and 2000. Upon sentencing, Johnson commented that he was sorry for what he had done.

During his time in prison, Johnson took part in several treatment programmes for men convicted of sexual offences, which research suggests can have significant impact on reducing the likelihood of future reoffending.

During his parole hearing, Johnson reported learning a lot from these programmes, including an understanding of how his childhood may have contributed to his offending. He reported being confident that will not reoffend again in the future.

Sexual offenders "have the lowest rates of reoffending"

In the UK, sexual offenders are known to have the lowest rates of reoffending.

Johnson will soon be released on licence in the UK and will be placed on the Sex Offender Register. He will be residing in a probation approved premises; his exact location will not be disclosed to the public.

Appendix Q: Advertisement for Study

UNIVERSITY OF BIRMINGHAM

Participants required!

We are looking for participants over the age of 18 to partake in our research study.

You will be presented with some information around sexual offending and asked to complete a short survey. Please be aware that the content of this study can be upsetting for some people.

It is estimated that the study should take up to **20 minutes** to complete.

If you are interested, please click on the link provided which will take you through all of the necessary steps.

BONUS!! Those who complete the study will be eligible to enter a prize draw for an **Amazon Voucher worth £25!** There will be **two winners!**

Thank you!

Appendix R: Participant Information Sheet

What is the research about?

Participant Information Sheet

The current research aims to explore people's views and opinions around sexual offending. Knowing these opinions will help us advise various, relevant parties more accurately.

What are you asking of me?

By agreeing to take part in the study, you will be asked to provide basic demographic information, such as age and biological sex. You will also be presented with some information around sexual offending. This information may discuss sensitive topics such as childhood sexual abuse. Finally, you will be asked to complete some short personality and memorisation tasks. These tasks will ask you about your personal opinions relating to sex offending. For example, you will be asked about your perception of individuals personality characteristics and behaviours.

It is estimated that the study will take approximately 20 minutes to complete. Additionally, you will have the opportunity to provide your email address to be entered into a prize draw to win a £25 Amazon gift card.

Where shall I complete the study?

Please complete the study on your personal computer in a safe, private, and comfortable space, away from excessive noise, distractions, and individuals who may oversee your responses or potentially be unwell and infect you. Please give yourself enough time to complete the study without feeling rushed, this should be around 20 minutes.

What if I wish to withdraw from the study?

You can withdraw from the study without giving reason at any point prior to submitting responses, that is after reading a section called 'debrief'. You can do this by exiting your internet browser and your data will be automatically destroyed. Once you submit responses the study, it will no longer be possible to withdraw.

Can I request a summary of the studies findings?

You will be able to contact the researcher if you wish to receive a summary of the findings which should be available around September 2023. The researcher's email address can be found at the end of the current sections and at the end of the study.

What if I become upset during the study?

It is not anticipated that your participation in the study will cause greater upset than typically exhibited when reading a newspaper. However, if you do become distressed at any point, you can withdraw from the study. If you experience any distress as a result of your participation, please consider contacting *Mind Infoline* on 0300 123 339, or email info@mind.org.uk, or contact *Samaritans* on 116 123, or email jo@samaritans.org

Data Protection and Confidentiality

All of your data will be collected and processed in accordance with the Data Protection Act 2018 and the General Data Protection Regulation 2016 (GDPR). The data will be securely stored on the research data store at The University of Birmingham.

Will I be kept anonymous?

There will be no personally identifiable information collected from you during the study. You will have an opportunity to provide your email address to take part in the prize draw for a £25 Amazon Voucher. The draw will take place over the Summer 2023 and only successful participants will be contacted. Your email address will be stored in a separate location to the data collected during the study and deleted shortly after the draw. If the thesis is published, the anonymised data may be made available on public repositories.

Who is conducting the research?

The research will be conducted by Abi Skinner [redacted] a Trainee Forensic Psychologist studying at the University of Birmingham. If you have concerns about this research and wish to address them to someone outside of the research team, you may contact Research Governance on adm-researchgov@adf.bham.ac.uk

Appendix S: Consent Form

Consent Form

Please read each of the following statements carefully.

By consenting to take part in this study, you are agreeing:

- That I am over the age of 18 year, and that I have voluntarily agreed to participate in this online study
- That I have read and fully understood the *Information Sheet* provided
- That I understand the generic aims of the study
- That I understand my data will be kept confidential and that I consent to the researcher using my anonymised data within the research
- That my data will be collected and stored in accordance with the General Data Protection Regulation (GDPR)
- To have my anonymised responses shared on public repositories
- That I understand my rights to withdraw at any point during the study without giving reason, up until the point that I submit my data
- That I have the researcher's contact details if I should require to contact them with any queries
- I understand that participation in the study may cause distress

If you agree with the above and consent to take part in the study, please select 'I agree' and if you do not agree and do not consent, please select 'I do not consent', if you select the latter, you will be provided with a debrief sheet and eliminated from the study.

I agree	I **do not** consent to this study

Appendix T: Demographic Questionnaire

□

□

□

□

□

□

□

□

'Yes'

Appendix U: Debrief Form

Debrief Form

The study aims to explore the influence of different types of information on sexual offending on individual's attitudes towards sex offenders.

Attitudes comprise of various components, such as beliefs, emotions, and behaviours. Previously published research suggests that people change attitudes more freely if information relayed to them matches these components. For example, providing fact-based information changes beliefs rather than emotion, and emotional information changes emotions. The present study sought to examine this notion by exploring the influence of different information types on attitudinal components in relation to attitudes towards sex offenders. It is anticipated that the findings of this study will provide valuable insights into the most efficacious way of minimising negative impact of attitudes on this population. This is crucial because previous research has also indicated that strong negative attitudes held by the public reduce opportunities for desistance and ultimately increase offending.

By submitting your data, you are acknowledging that you understand what the research aims were and that you are happy for your anonymous data to be included in the study. If you wish to withdraw from the study, you must do so now.

If you wish to contact the researcher with any queries, then please contact Abi Skinner by emailing axs2018@student.bham.ac.uk. If you have concerns about this research and wish to address them to someone outside of the research team, you may contact Research Governance on adm-researchgov@adf.bham.ac.uk

If you have experienced any distress as a result of your participation, you are able to contact *Mind Infoline* on 0300 123 339, or email info@mind.org.uk, or contact *Samaritans* on 116 123, or email jo@samaritans.org

Thank you for very much for participating in the study! Please help us to collect more data by sharing this link *(link to advert; Appendix B)* on social media.

Appendix V: Ethical Approval

UNIVERSITY OF BIRMINGHAM

Dear Dr Artur Brzozowski and Abigail Skinner

RE: Attitudes Towards Sexual Offenders: The Impact of Emotive and Informative Media Portrayals

Application for Ethical Amendment: ERN_0798-Aug2023

Thank you for your application for amendment to the above project, which was reviewed by the Science, Technology, Engineering and Mathematics committee.

On behalf of the Committee, I confirm that this amendment has full ethical approval.

Any adverse events occurring during the study should be promptly brought to the Committee's attention by the Principal Investigator and may necessitate further ethical review.

Please ensure that the relevant requirements within the University's Code of Practice for Research and the information and guidance provided on the University's ethics webpages (available at https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Links-and-Resources.aspx) are adhered to.

Please be aware that whilst Health and Safety (H&S) issues may be considered during the ethical review process, you are still required to follow the University's guidance on H&S and to ensure that H&S risk assessments have been carried out as appropriate. For further information about this, please contact your School H&S representative or the University's H&S Unit at healthandsafety@contacts.bham.ac.uk.

Kind regards,

The Co-Chairs of the Science, Technology, Engineering and Mathematics Committee

E-mail: ethics-queries@contacts.bham.ac.uk

Appendix W: Skewness and Kurtosis Z-Scores for the Dependent Variable Pre-measures ATS-21 Scores

Table W 1

Skewness and Kurtosis Z-Scores for the Dependent Variable Pre-ATS-21 Scores

IV	Skewness	Skewness SE	Z-Score S	Kurtosis	Kurtosis SE	Z-Score K
Student	0.038	0.337	0.112759644	-0.237	0.662	-0.358006042
Non-student	-0.347	0.14	-2.478571429	-0.392	0.279	-1.405017921

Table W 2

Skewness and Kurtosis Z-Scores for the Dependent Variable Pre-ATS-21 Scores

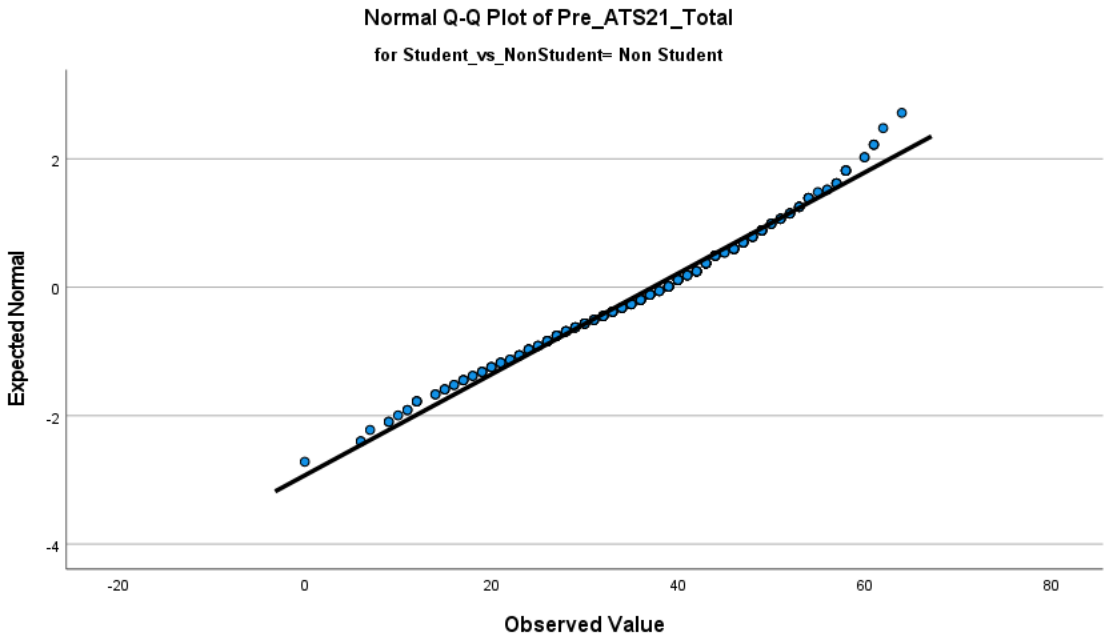
IV	Skewness	Skewness SE	Z-Score S	Kurtosis	Kurtosis SE	Z-Score K
Work Experience	-0.854	0.354	-2.412429379	0.227	0.695	0.326618705
No Work Experience	-0.282	0.139	-2.028776978	-0.342	0.277	-1.23465704

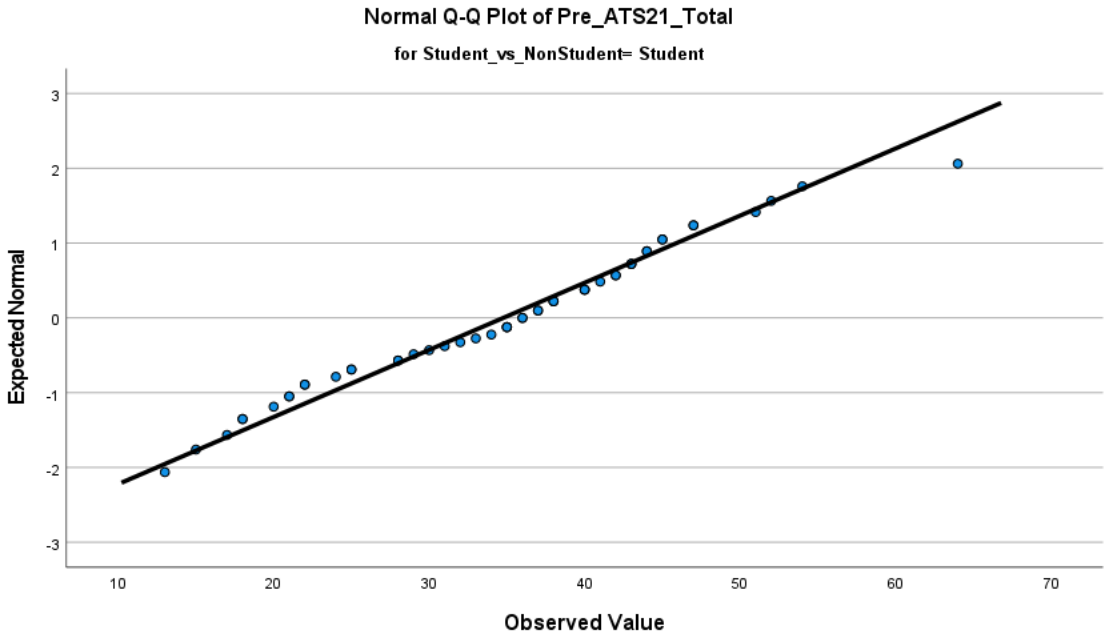
Table W 3

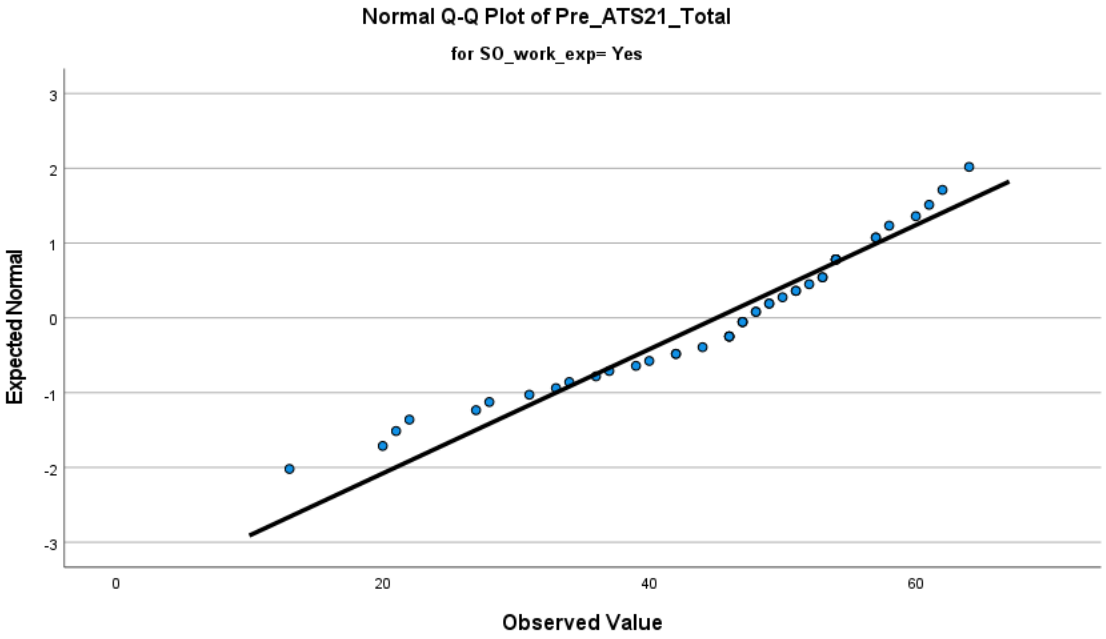
Skewness and Kurtosis Z-Scores for the Dependent Variable Pre-ATS-21 Scores

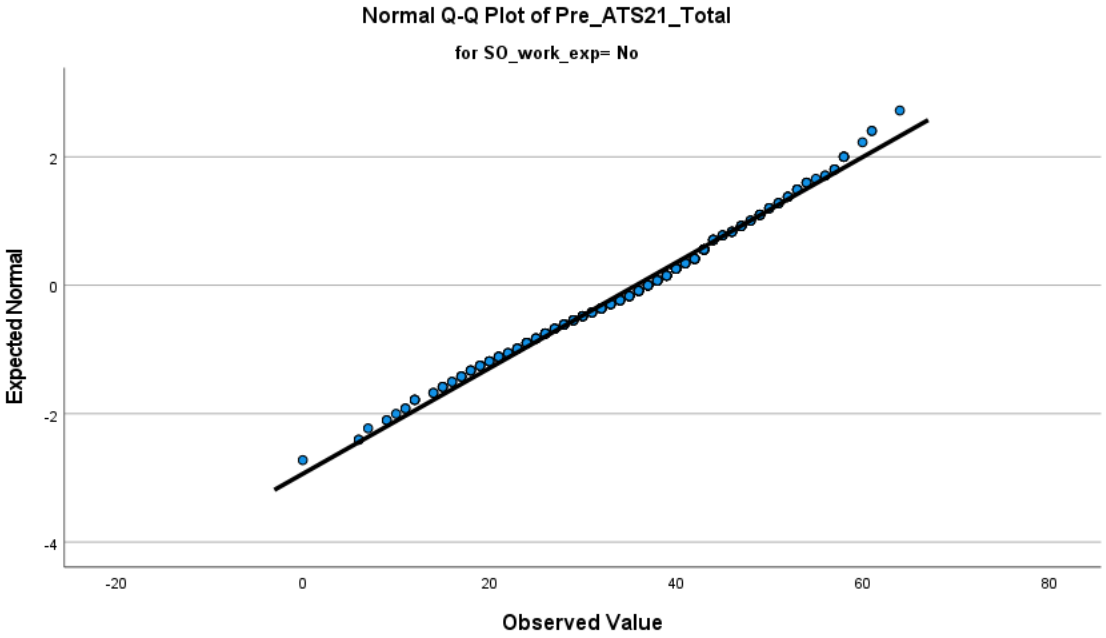
IV	Skewness	Skewness SE	Z-Score S	Kurtosis	Kurtosis SE	Z-Score K
Training	-1.335	0.501	**-2.664670659**	1.684	0.972	1.732510288
No Training	-0.274	0.134	-2.044776119	-0.355	0.267	-1.329588015

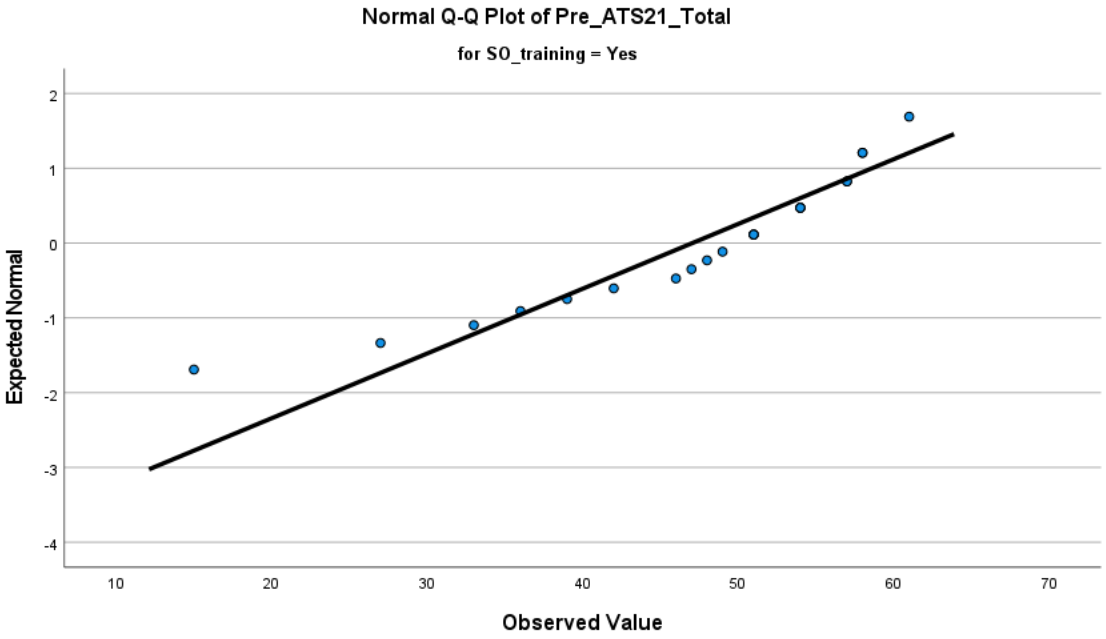
Appendix X: Normal Q-Q Plots for Pre-Measures ATS-21 scores for Student (versus Non-Student), Work Experience (versus No Work Experience) and Training (versus No Training).

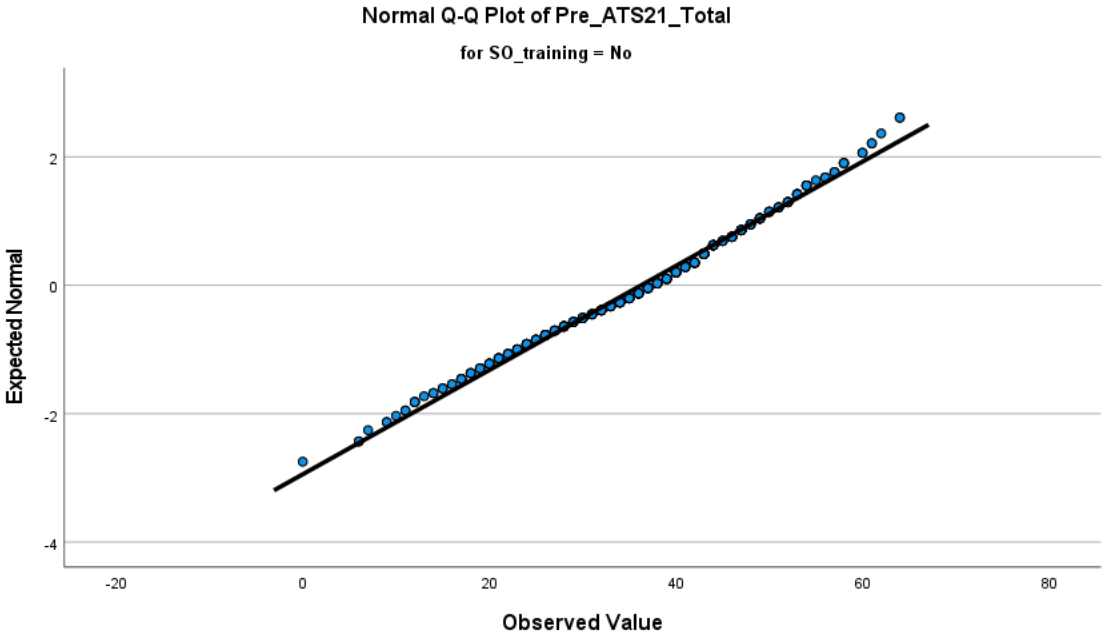





Normal Q-Q Plot of Pre_ATS21_Total
for SO_work_exp= Yes
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
0
20
40
60


Normal Q-Q Plot of Pre_ATS21_Total
for SO_work_exp= No
Expected Normal
Observed Value
2
0
-2
-4
-20
0
20
40
60
80


Normal Q-Q Plot of Pre_ATS21_Total
for SO_training = Yes
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
10
20
30
40
50
60
70


Normal Q-Q Plot of Pre_ATS21_Total
for SO_training = No
Expected Normal
Observed Value
2
0
-2
-4
-20
0
20
40
60
80

Appendix Y: Levene's Test for Pre-Measures ATS-21 scores for Student (versus Non-Student), Work Experience (versus No Work Experience) and Training (versus No Training).

Table Y 1

Levene's Test for Independent Variable Student Vs. Non-Student

		Levene's Test for Equality of Variances	
		F	Sig.
Pre_ATS21_Total	Equal variances assumed	1.643	.201
	Equal variances not assumed		

Table Y 2

Levene's Test for Independent Variable Work Experience vs. No Work Experience

		Levene's Test for Equality of Variances	
		F	Sig.
Pre_ATS21_Total	Equal variances assumed	.166	.684
	Equal variances not assumed		

Table Y 3

Levene's Test for Independent Variable Training vs. No Training

		Levene's Test for Equality of Variances	
		F	Sig.
Pre_ATS21_Total	Equal variances assumed	.662	.416
	Equal variances not assumed		

Appendix Z: Descriptive Statistics and Independent Samples t-test for Pre-Intervention ATS-21 scores for Student (versus Non-Student)

Table Z 1

Descriptive Statistics for Pre-Measures ATS-21 scores for Student (versus Non-Student)

Group Statistics

	Student vs Non Student	N	Mean	Std. Deviation	Std. Error Mean
Pre_ATS21_Total	Non Student	303	37.26	12.722	.731
	Student	50	34.76	11.142	1.576

Table Z 2

Independent Samples t-test for Pre-Measures ATS-21 scores for Student (versus Non-Student)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
						Significance				95% Confidence Interval of the Difference
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Pre_ATS21_Total	Equal variances assumed	1.643	.201	1.311	351	.095	.191	2.504	1.910	-1.253	6.261
	Equal variances not assumed			1.442	71.810	.077	.154	2.504	1.737	-.959	5.967

Appendix Aa: Descriptive Statistics and Independent samples t-test for Pre-Measures ATS-21 scores for Training (versus No Training).

Table Aa 1

Descriptive Statistics for Pre-Measures ATS-21 scores for Training (versus No Training).

Group Statistics

	SO_Training	N	Mean	Std. Deviation	Std. Error Mean
Pre_ATS21_Total	Yes	21	47.05	11.552	2.521
	No	332	36.27	12.323	.676

Table Aa 2

Independent samples t-test for Pre-Measures ATS-21 scores for Training (versus No Training).

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
						Significance				95% Confidence Interval of the Difference
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Pre_ATS21_Total	Equal variances assumed	.662	.416	3.901	351	< .001	< .001	10.780	2.763	5.345	16.214
	Equal variances not assumed			4.130	22.975	< .001	< .001	10.780	2.610	5.380	16.179

Appendix Bb: Descriptive Statistics and Independent samples t-test for Pre-Measures ATS-21 scores for Work Experience (versus No Work Experience)

Table Bb 1

Descriptive Statistics for Pre-Measures ATS-21 scores for Work Experience (versus No Work Experience)

Group Statistics

	SO_work_exp	N	Mean	Std. Deviation	Std. Error Mean
Pre_ATS21_Total	Yes	45	45.04	12.047	1.796
	No	308	35.72	12.164	.693

Table Bb 2

Independent samples t-test for Pre-Measures ATS-21 scores for Work Experience (versus No Work Experience

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Pre_ATS21_Total	Equal variances assumed	.166	.684	4.809	351	< .001	< .001	9.324	1.939	5.510	13.137
	Equal variances not assumed			4.843	57.901	< .001	< .001	9.324	1.925	5.470	13.177

Appendix Cc: Descriptive Statistics and Independent samples t-test for ATS-21 Attitude Change for Student (versus Non-Student).

Table Cc 1

Descriptive Statistics for ATS-21 Attitude Change for Student (versus Non-Student).

Group Statistics

	Student vs Non Student	N	Mean	Std. Deviation	Std. Error Mean
ATS21_AttitudeChange	Non Student	303	1.41	5.000	.287
	Student	50	2.14	4.136	.585

Table Cc 2

Independent samples t-test for ATS-21 Attitude Change for Student (versus Non-Student).

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
ATS21_AttitudeChange	Equal variances assumed	.413	.521	-.975	351	.165	.330	-.727	.746	-2.195	.740
	Equal variances not assumed			-1.116	74.790	.134	.268	-.727	.652	-2.026	.571

Appendix Dd: Descriptive Statistics and Independent samples t-test for ATS-21 Attitude Change for Training (versus No Training).

Table Dd 1

Descriptive Statistics for ATS-21 Attitude Change for Training (versus No Training).

Group Statistics

	SO_Training	N	Mean	Std. Deviation	Std. Error Mean
ATS21_AttitudeChange	Yes	21	.86	4.993	1.090
	No	332	1.56	4.887	.268

Table Dd 2

Independent samples t-test for ATS-21 Attitude Change for Training (versus No Training).

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
ATS21_AttitudeChange	Equal variances assumed	.576	.448	-.636	351	.263	.525	-.700	1.101	-2.865	1.465
	Equal variances not assumed			-.624	22.492	.269	.539	-.700	1.122	-3.024	1.624

Appendix Ee: Descriptive Statistics and Independent samples t-test for ATS-21 Attitude Change for Work Experience (versus No Work Experience)

Table Ee 1

Descriptive Statistics for ATS-21 Attitude Change for Work Experience (versus No Work Experience)

Group Statistics

	SO_work_exp	N	Mean	Std. Deviation	Std. Error Mean
ATS21_AttitudeChange	Yes	45	.22	4.819	.718
	No	308	1.70	4.878	.278

Table Ee 2

Independent samples t-test for ATS-21 Attitude Change for Work Experience (versus No Work Experience)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
ATS21_AttitudeChange	Equal variances assumed	.047	.828	-1.907	351	.029	.057	-1.482	.777	-3.011	.046
	Equal variances not assumed			-1.924	57.972	.030	.059	-1.482	.770	-3.024	.060

Appendix Ff: Skewness and Kurtosis Z-Scores for the Dependent Variables Attitude Change in Trust, Intent, Social Distance Subscales and ATS-21 Scale.

Table Ff 1

Skewness and Kurtosis Z-Scores for the Dependent Variable Attitude Change on Trust Subscale Scores

Media Portayal	Skewness	Skewness SE	Z-Scores	Kurtosis	Kurtosis SE	Z-Scores
Affective	0.073	0.246	0.29675	0.636	0.488	1.303279
Cognitive	0.148	0.255	0.58039	1.067	0.506	2.108696
Combined	0.823	0.266	3.09398	0.414	0.526	0.787072
Control	0.074	0.264	0.2803	-0.326	0.523	-0.62333

Table Ff 2

Skewness and Kurtosis Z-Scores for the Dependent Variable Attitude Change on Intent Subscale Scores

Media Portayal	Skewness	Skewness SE	Z-Scores	Kurtosis	Kurtosis SE	Z-Scores
Affective	0.082	0.246	0.33333	0.459	0.488	0.940574
Cognitive	-0.065	0.255	-0.2549	0.722	0.506	1.426877
Combined	-0.517	0.266	-1.94361	0.45	0.526	0.855513
Control	-0.262	0.264	-0.99242	0.498	0.523	0.952199

Table Ff 3

Skewness and Kurtosis Z-Scores for the Dependent Variable Attitude Change on Social Distance Subscale Scores

Media Portayal	Skewness	Skewness SE	Z-Scores	Kurtosis	Kurtosis SE	Z-Scores
Affective	0.855	0.246	3.47561	1.674	0.488	3.430328
Cognitive	-0.032	0.255	-0.12549	0.075	0.506	0.148221
Combined	0.196	0.266	0.73684	-0.371	0.526	-0.70532
Control	-0.006	0.264	-0.02273	-0.012	0.523	-0.02294

Table Ff 4

Skewness and Kurtosis Z-Scores for the Dependent Variable Attitude Change on ATS-21 Scale Scores

Media Portayal	Skewness	Skewness SE	Z-Scores	Kurtosis	Kurtosis SE	Z-Score K
Affective	0.372	0.246	1.5122	-0.072	0.488	-0.14754
Cognitive	0.002	0.255	0.00784	0.253	0.506	0.5
Combined	0.201	0.266	0.75564	0.428	0.526	0.813688
Control	-0.568	0.264	-2.15152	1.119	0.523	2.139579

Appendix Gg: Levene's Test for each Dependent Variables Attitude Change in Trust, Intent, Social Distance Subscales and ATS-21 Scale.

Table Gg 1

Levene's Test for each Dependent Variables Attitude Change in Trust, Intent, Social Distance Subscales and ATS-21 Scale.

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
ATS21_AttitudeChange	Based on Mean	2.371	3	346	.070
	Based on Median	2.232	3	346	.084
	Based on Median and with adjusted df	2.232	3	327.418	.084
	Based on trimmed mean	2.371	3	346	.070
Trust_AttitudeChange	Based on Mean	.753	3	346	.521
	Based on Median	.478	3	346	.698
	Based on Median and with adjusted df	.478	3	332.861	.698
	Based on trimmed mean	.669	3	346	.572
Intent_AttitudeChange	Based on Mean	2.161	3	346	.092
	Based on Median	1.738	3	346	.159
	Based on Median and with adjusted df	1.738	3	329.175	.159
	Based on trimmed mean	2.018	3	346	.111
SocialDistance_AttitudeChange	Based on Mean	.712	3	346	.545
	Based on Median	.547	3	346	.651
	Based on Median and with adjusted df	.547	3	322.477	.651
	Based on trimmed mean	.686	3	346	.561

Appendix Hh: Skewness and Kurtosis Z-Scores for the Dependent Variables ATS-21 Scores Pre and Post Measure

Table Hh 1

Skewness and Kurtosis Z-Scores for the Dependent Variable ATS-21 Change

DV	Skewness	Skewness SE	Z-Score S	Kurtosis	Kurtosis SE	Z-Score K
ATS-21 Change	0.159	0.13	1.223076923	0.523	0.259	2.019305019

Appendix Ii: Descriptive Statistics and One-Way ANOVA for Trust Attitude Change

Table Ii 1

Descriptive Statistics for Trust Attitude Change

Descriptives

Trust_AttitudeChange

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Affective	96	.81	2.104	.215	.39	1.24	-5	7
Cognitive	89	.43	2.050	.217	.00	.86	-5	7
Combined	82	.70	2.340	.258	.18	1.21	-4	7
Control	83	.10	2.022	.222	-.35	.54	-5	4
Total	350	.52	2.138	.114	.29	.74	-5	7

Table Ii 2

One-Way ANOVA for Trust Attitude Change

ANOVA

Trust_AttitudeChange

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26.390	3	8.797	1.940	.123
Within Groups	1569.007	346	4.535		
Total	1595.397	349			

Table Ii 3

One-Way ANOVA Effect Sizes for Trust Attitude Change

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Trust_AttitudeChange	Eta-squared	.017	.000	.045
	Epsilon-squared	.008	-.009	.037
	Omega-squared Fixed-effect	.008	-.009	.037
	Omega-squared Random-effect	.003	-.003	.012

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.
b. Negative but less biased estimates are retained, not rounded to zero.

Appendix Jj: Descriptive Statistics and One-Way ANOVA for Intent Attitude Change

Table Jj 1

Descriptive Statistics for Intent Attitude Change

Descriptives

Intent_AttitudeChange

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Affective	96	-.44	2.112	.216	-.87	-.01	-6	6
Cognitive	89	.09	2.209	.234	-.38	.56	-7	6
Combined	82	-.29	2.512	.277	-.84	.26	-7	5
Control	83	.02	1.848	.203	-.38	.43	-5	5
Total	350	-.16	2.182	.117	-.39	.07	-7	6

Table Jj 2

One-Way ANOVA for Intent Attitude Change

ANOVA

Intent_AttitudeChange

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.207	3	5.736	1.207	.307
Within Groups	1643.833	346	4.751		
Total	1661.040	349			

Table Jj 3

One-Way ANOVA Effect Sizes for Intent Attitude Change

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Intent_AttitudeChange	Eta-squared	.010	.000	.033
	Epsilon-squared	.002	-.009	.025
	Omega-squared Fixed-effect	.002	-.009	.025
	Omega-squared Random-effect	.001	-.003	.008

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.
b. Negative but less biased estimates are retained, not rounded to zero.

Appendix Kk: Descriptive Statistics and One-Way ANOVA for Social Distance Attitude Change

Table Kk 1

Descriptive Statistics for Intent Attitude Change

Descriptives

SocialDistance_AttitudeChange

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Affective	96	1.18	2.340	.239	.70	1.65	-4	10
Cognitive	89	1.19	2.421	.257	.68	1.70	-5	7
Combined	82	1.06	1.959	.216	.63	1.49	-3	6
Control	83	.80	2.070	.227	.34	1.25	-5	6
Total	350	1.06	2.211	.118	.83	1.30	-5	10

Table Kk 2

One-Way ANOVA for Intent Attitude Change

ANOVA

SocialDistance_AttitudeChange

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.662	3	2.887	.588	.623
Within Groups	1697.956	346	4.907		
Total	1706.617	349			

Table Kk 3

One-Way ANOVA Effect Sizes for Intent Attitude Change

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
SocialDistance_Attitude Change	Eta-squared	.005	.000	.021
	Epsilon-squared	-.004	-.009	.013
	Omega-squared Fixed-effect	-.004	-.009	.013
	Omega-squared Random-effect	-.001	-.003	.004

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Appendix Ll: Descriptive Statistics and One-Way ANOVA for ATS-21 Scale Attitude Change

Table Ll 1

Descriptive Statistics for ATS-21 Scale Attitude Change

Descriptives

ATS21_AttitudeChange

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Affective	96	1.55	4.443	.454	.65	2.45	-7	14
Cognitive	89	1.71	4.930	.523	.67	2.75	-10	16
Combined	82	1.46	5.012	.553	.36	2.56	-11	13
Control	83	.92	3.729	.409	.10	1.73	-11	9
Total	350	1.42	4.548	.243	.94	1.90	-11	16

Table Ll 2

One-Way ANOVA for ATS-21 Scale Attitude Change

ANOVA

ATS21_AttitudeChange

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30.316	3	10.105	.486	.692
Within Groups	7188.944	346	20.777		
Total	7219.260	349			

Table Ll 3

One-Way ANOVA Effext Szies for ATS-21 Scale Attitude Change

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
ATS21_AttitudeChange	Eta-squared	.004	.000	.019
	Epsilon-squared	-.004	-.009	.010
	Omega-squared Fixed-effect	-.004	-.009	.010
	Omega-squared Random-effect	-.001	-.003	.003

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.
b. Negative but less biased estimates are retained, not rounded to zero.

Appendix Mm: Descriptive Statistics and Paired- Samples T Test for ATS-21 Scale Scores

Table Mm 1

Descriptive Statistics for Mean Scores on Trust, Intent, and Social Distance Subscales, Pre and Post Measure

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre ATS21 Total	352	0	64	36.88	12.532
Post ATS21 Total	352	0	69	38.31	13.538
Pre Trust Total	352	0	21	7.94	4.515
Post Trust Total	352	0	21	8.45	4.955
Pre Intent Total	352	0	26	16.35	4.813
Post Intent Total	352	0	27	16.19	5.064
Pre_SocialDistance_Total	352	0	23	12.59	4.573
Post_SocialDistance_Total	352	0	24	13.67	4.799
Valid N (listwise)	352				

Table Mm 2

Paired-Samples Statistics for ATS-21 Scale Scores Experimental Conditions

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Post ATS21 Total	38.29	268	13.486	.824
	Pre ATS21 Total	36.66	268	12.492	.763

Table Mm 3

Paired- Samples T Test for ATS-21 Scale Scores Experimental Conditions

Paired Samples Test

		Paired Differences					t	df	Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			One-Sided p	Two-Sided p
Pair 1	Post_ATS21_Total - Pre_ATS21_Total	1.631	4.841	.296	1.048	2.213	5.514	267	<.001	<.001

Table Mm 4

Paired- Samples T Test Effect Sizes for ATS-21 Scale Scores Experimental Conditions

			Standardizer[a]	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Post ATS21 Total - Pre_ATS21_Total	Cohen's d	4.841	.337	.213	.460
		Hedges' correction	4.855	.336	.213	.458

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

Table Mm 5

Paired- Samples Statistics for ATS-21 Scale Scores Control Condition

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Post_ATS21_Total	38.38	84	13.781	1.504
	Pre_ATS21_Total	37.58	84	12.709	1.387

Table Mm 6

Paired- Samples T Test for ATS-21 Scale Scores Control Condition

Paired Samples Test

		Paired Differences					t	df	Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			One-Sided p	Two-Sided p
Pair 1	Post_ATS21_Total - Pre_ATS21_Total	.798	3.861	.421	-.040	1.636	1.893	83	.031	.062

Table Mm 7

Paired- Samples T Test Effect Sizes for ATS-21 Scale Scores Control Condition

			Standardizer[a]	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Post ATS21 Total - Pre_ATS21_Total	Cohen's d	3.861	.207	-.010	.422
		Hedges' correction	3.897	.205	-.010	.418

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation of the mean difference.
Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.