An Empirical Study into the Relationship Between Mental Wellbeing and Cell-Sharing in Male Prisons in England and Wales

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Abstract

This dissertation seeks to analyse if there is a relationship between cell-sharing and mental wellbeing in the male adult prisoner population in England and Wales. 5981 respondents to HM Inspectorate of Prisons' 2022/23 Survey represent this population. Quantitative research methods are used in this study to understand this relationship, through statistical analysis and logistic regression of the cross-sectional cohort. The exploration of mental wellbeing within prisons will argue that progression is needed in the prison system, as overcrowding has put a strain on staff and resources, removing the opportunity of rehabilitation for many prisoners. This study finds that prisoners in individual cells are more likely to experience mental health problems. Demographic and contextual factors are also found to affect this relationship. Those found to have the most significant impact on mental wellbeing are age; engagement in meaningful activity (such as education); feeling safe; illicit drug usage; and frequent visits from familial relations. This research reviews each of these factors, and how they may impact someone's mental wellbeing, depending on their cell status. Theoretical models, such as dramaturgy, are used to explain that prisoners in shared cells have no opportunity to revert to their backstage self.

Contents

Introduction

The male prison population in England and Wales is increasing, the number of males imprisoned in the year ending 2023 was 83,490 (Ministry of Justice, 2024). The most recent projections show that by November 2027, the total prison population is estimated to be 100,900. The majority of whom, will be males. This rate of increase will mean more prisons are overcrowded and above their maximum capacity. As of June 2023, 61% of prisons in England and Wales were overcrowded by classification of 'the number of prisoners held exceeds the establishments Certified Normal Accommodation' (UK Parliament, 2023).

A strain on prison resources and its staff can fail those who are incarcerated, as rehabilitation struggles to be successful; prisoners may be fixed in the cycle of reoffending and imprisonment, finding it difficult to escape. Overcrowded prisons can therefore negatively impact both society and the prisoner, but for someone living within these circumstances, the conditions can be considerably harmful. Cell-sharing is one of these conditions.

HM Inspectorate of Prisons (HMIP) (2023) define cell-sharing as a response to overcrowding, where prisoners must share cells that were designed for one person. Due to the increasing overcrowding, cell-sharing is also escalating. Living in close proximity to someone, but not being able to choose who, can have implications. One of which, is a change in mental wellbeing. Prison literature emphasises how the conceptualisation of wellbeing can involve a multitude of interlinked concepts (Netten and Gibson, 2023). This dissertation will focus its

research on the mental wellbeing of a prisoner, as there is limited research which examines the relationship between cell-sharing and mental wellbeing (Muirhead et al., 2023).

Current debates argue for both the positive and negative implications of having a cellmate. A potential benefit is the increased autonomy that comes with developing and maintaining a relationship, which imprisonment otherwise lacks (Sykes, 1958). On the other hand, a cellmate could be unsuitable and pose a risk, which exacerbates the harms of the prison experience further. Thus, this study will explore the relationship between cell-sharing and mental wellbeing, while considering the impact of other dimensions in prison. While the list could be endless, topics which will be discussed in this dissertation for their implications on mental wellbeing are theories of male emotionality; mental health; meaningful activity and education; relationships inside and outside of prison; substance use; and feelings of safety.

Male prisoners are often stereotyped by a tough, machismo, aggressive depiction, though they are a population who have likely experienced multiple vulnerabilities (Jordan, 2011). The importance of studying mental health in male prisons is acknowledged in international prison research, as statistically prisoners are at a greater risk of suicide and self-harm than the general population (Fazel and Seewald, 2012). Thus, cell-sharing and mental wellbeing will be the topics examined this dissertation.

The literature review will demonstrate that methodological constraints make qualitative prison research difficult for researchers to access cells (Schliehe and Crewe, 2022). The sorts of topics discussed often require the prisoner to trust the researcher. Quantitative, self-reported prisoner surveys offer a more generalisable alternative to qualitative research, as a wider range of topics can be studied over a larger population. Thus, the current study uses secondary

quantitative analysis, to utilise the most recent version of the data source, HMIP Prisoner Survey: Adults in England and Wales 2000-2023. This study uses logistic regression analysis to examine the effect of cell-sharing on mental wellbeing, while considering other relevant components of the relationship. This dissertation therefore seeks to test two hypotheses in answer to the question:

Is there a relationship between mental wellbeing and cell-sharing in male prisons in England and Wales?

H1: There is a significant association between cell-sharing and mental wellbeing in male prisons, whilst controlling for demographic and contextual factors.

H2: Participants in shared cells will report lower mental wellbeing, whilst controlling for contextual and demographic factors.

Chapter 1 of this dissertation will provide a comprehensive review of the literature on the topic of mental wellbeing and cell-sharing in male prisons. Justification of this study will be given by highlighting the research gap which this dissertation seeks to contribute to. Chapter 2 outlines the methodological approach of this study, including the research design and methods; the data and sample; ethical considerations; and the analytical process. Chapter 3 presents the findings of statistical and logistic regression analyses. Chapter 4 will draw together these findings with the literature, outlining the implications of what this study can conclude.

Chapter One: Literature Review

This literature review aims to fill a gap in prison research by synthesising the existing cell-sharing and wellbeing literature both individually and collectively. The research reviewed includes both qualitative and quantitative studies. Wellbeing is a holistic term encompassing the mental, psychological, environmental, and physical dimensions of a prisoners' life (Muirhead, 2019). This literature review will closely examine the mental aspect of wellbeing. Many of the topics relating to prisoner wellbeing are interconnected, as this chapter will exhibit. Subsections have been created to categorise the associated themes.

This structure of this literature review firstly understands the theory of male emotionality in prison, with Jewkes' (2005) contested application of Goffman's dramaturgical theory to prisoners in shared cells. It addresses the poor mental health of the vulnerable prison population, who suffer multiple forms of social exclusion before entering prison (Jordan, 2011). The impact of prison overcrowding on these dimensions will be discussed. Research into cell-sharing, a consequence of overcrowding, will be reviewed. The importance of meaningful activity and relationships for prisoners' wellbeing will be highlighted, both of which are difficult to fulfil in overcrowded prisons (HMIP, 2023). Research analysing the relationship between cell-sharing and wellbeing has been limited until recently (Muirhead, 2019).

1.1 Male emotionality in prison

This section will underline the theory of male emotionality in prison, to lay the foundation of mental wellbeing. Research into emotionality in prisons has gained more prominence in recent years, and the studies are often qualitative in order to obtain emotionally laden data (Garrihy and Watters, 2020). Jewkes' (2005) ethnographic research of the 'self', in four male prisons in the English Midlands, developed the argument that wearing a metaphorical mask in prison is the most common coping strategy. This concept of "masking" embodies Goffman's dramaturgical model which suggests that impression management is comprised of a dramatised, frontstage self in public and a more nurtured, private backstage self (Goffman, 1959, p.13). In the context of male prisons, an outward hypermasculine presentation is necessary to conform to the male dominant culture, and a more nurtured version may exist privately to the prisoner (Jewkes, 2005). Likewise, research by Haney (2012) on mass incarceration in the USA, where prisoners are often housed in dormitories rather than cells, also illustrates the hypermasculinity displayed by male prisoners. Haney (2012) further acknowledges that prisoners are often from socially and economically marginalised backgrounds, increasing their vulnerability to prison life. The author expresses that hypermasculinity is a necessary response, which alludes to the prisoner stereotype of toughness. Therefore, masking in prison is a survival strategy as it conceals a prisoner's true self to avoid appearing outwardly vulnerable to other prisoners, otherwise they may be exposed to emotional or physical exploitation.

Crewe et al. (2014) reject Jewkes' (2005) application of Goffman's dramaturgical model to prisoners due to its simplicity; instead, they argue that prisoners are under constant peer and institutional surveillance leaving no opportunity to revert from their public emotional façade to

their backstage self. This is particularly true for prisoners in shared cells, who experience less privacy than those in single cells (Muirhead, 2019). This constant masked state is difficult to uphold and damaging to prisoners' mental wellbeing, as they suppress their emotions to avoid discussion and victimisation (Laws and Crewe, 2016). Laws and Crewe (2016) build on the previous work by Crewe et al. (2014), aiming to redress the balance of what dramaturgy misses as it focuses on emotion in prison at the social level, neglecting the individual. They combine Gross and Thompson's (2007) emotional regulation framework with the data from 16 qualitative interviews, to consider how emotions in prison are modified to help male prisoners cope. However, the semi-structured interviews were susceptible to recall, interpretation and accuracy issues. Opportunistic, snowball sampling was used to collect the participants from art and informational technology classrooms in HMP and YOI Moorland in South Yorkshire. The sampling methods used may have biased the results as the authors noted that like-minded prisoners may utilise educational and meaningful activity in prison, determined by Laws and Crewe (2016) to impact prisoner wellbeing, so they may regulate their emotions differently as opposed to those who are in their cells all day. The effect of education on prisoner wellbeing will be explored further in a later sub-section.

1.2 Male Mental Health in Prison

Male prisoners have often experienced multiple forms of social exclusion at greater rates than the general population, including homelessness, unemployment, substance and alcohol misuse, and living in care as a child (Jordan, 2011). In addition, Haney (2012) adds that they may have suffered socioeconomic marginalisation, exposure to violence, parental abuse, neglect,

and instability. Imprisonment exacerbates some of these vulnerabilities as it is a form of "*re*traumatization" (Haney, 2012. p.13), whereby a prisoner is exposed to traumatising experiences they have already faced. These vulnerabilities can negatively impact male prisoners' mental health and wellbeing.

Qualitative research by Hemming et al. (2020) consisted of the thematic analysis of interviews with 15 male prisoners from two prisons in North-West England who had experienced suicidal and/or violent thoughts in the three months prior. Despite the small research sample of White British men, limiting generalisability, the study found that the external pressures of the prison environment and internal difficulties of recognising and articulating mental health is problematic for prisoners. It was found that prisoners simultaneously promote their confident emotions whilst masking their vulnerability, emulating the findings of Laws and Crewe (2016). When comparing age groups, Hemming et al. (2020) found that wings with older prisoners were more open to discussing their mental state than wings with younger prisoners, as there was less competition for masculinity, therefore less need to uphold a front. This reinforces Jewkes' (2005) argument that younger, newer prisoners are keener to promote their hypermasculine front to survive in the prison environment. Conversely, Muirhead et al. (2021) argue that new inmates initially struggle with imprisonment before adapting to the environment. Therefore, age and length of imprisonment for can influence how prisoners cope with their mental health. These coexisting arguments highlight how mental health varies for each prisoner: inmates may mentally struggle and be emotionally withdrawn, but on the other hand they may overcompensate with hypermasculinity.

To draw attention to the importance of prisoners with severe mental health problems briefly, a qualitative systematic review by Fazel and Seewald (2012) found consistent reporting of high psychiatric morbidity over four decades in prisons worldwide. They found 1 in 7 prisoners had depression or psychosis and noted the concern for public safety if prisoners are untreated when released. This is substantiated in a longitudinal cohort study by Chang et al. (2015), where an association between violent reoffending and diagnosis of a psychiatric disorder was found. Also, there was a stronger effect on violent reoffending by those with alcohol and drug use disorders. Both Fazel and Seewald (2012) and Chang et al.'s (2015) studies are extremely reliable, with the former including a sample of 33,588 prisoners in their worldwide meta-regression, and the latter a sample of 47,326 prisoners in Sweden. Both studies reinforce the need to tackle severe mental health problems and substance abuse in prisons, where the demand for illicit substances remains high (HMIP, 2023).

A multivariate analysis into factors associated with self-inflicted death in prison by Leese et al. (2006) found higher suicide rates in prisons, with overcrowding, assault rate and purposeful activity as significant predictors. The authors expressed how overcrowded prisons have a higher turnover of inmates, making it difficult for prisoners to form stable networks and relationships which are integral to wellbeing. This finding is corroborated by Van Ginneken et al. (2017), who exhibited concern over the increasingly larger prisons being built to house more inmates. The authors also drew attention to newer inmates being at a higher risk of suicide. As suicide occurs predominantly in single cells, cell-sharing has been used to mitigate this risk (Van Ginneken et al., 2017). However, those who cell-share have a worse experience of prison, which may make cell-sharing counter-intuitive (Molleman and Van Ginneken, 2015). Thus, it is important to

consider other factors which impact prisoner life and their wellbeing, such as engagement with meaningful activity.

1.3 Meaningful Activity: Education

Education, as a form of purposeful or meaningful activity in prison, has been found to have positive impact on prisoners' mental wellbeing, and a lack of this has led to self-harm in prisoners (HMIP, 2023). Self-harm is an alternative response to sharing emotion, as it allows a prisoner to feel *something*, even physical pain, after concealing, suppressing, and modifying their actual feelings (Hemming et al., 2020). Crewe et al. (2014) combined their research from their varied roles in HMP Wellingborough in 2002-03, proposing that prisons are comprised of 'emotion zones', where displaying emotion is acceptable to a certain degree, depending on the geographical zone of the prison. Significantly, these were classroom based, namely cookery, pottery, sociology, and philosophy classes. Garrihy and Watters (2020) argue that emotions in prison are gendered and integral to the organisational structure. In support of this, the subjects listed in Crewe et al.'s (2014) research are typically feminine, offering evidence that classroom-based meaningful activity can elicit and encourage the display of positive mental wellbeing.

Similarly, the qualitative study by Hemming et al. (2020) in the North-West of England recognised geographical zones in prisons where emotions were more easily shared. They found that prisoners will discuss their emotions within certain conditions; educational classrooms were one of these locations. Education therefore creates a safe space, with the opportunity for positive wellbeing and a means to mitigate self-harm. Utilising this would be pertinent in overcrowded

prisons as vulnerability to suicide risk is increased when there is a lack of meaningful activity in place due to being locked up for longer periods of time (Leese et al., 2006; Van Ginneken et al., 2017). The similarities in the findings mentioned suggest a shortfall in establishing more classrooms and spaces where male prisoners can share their emotions. Despite prisoners being "desperate" for purposeful activity, the increasing overcrowding in prisons and the consequential stretch of staff and resources has hindered the ability to achieve this (HMIP, 2023, p.6).

1.4 Relationships: Inside Prison

The challenges faced by male prisoners in the research discussed so far emphasise the dimensions of prison life which promote wellbeing. Kyprianides and Easterbrook (2019) build on this, arguing that positive relationships in prison offer a form of autonomy which imprisonment otherwise lacks, as stated as a 'pain of imprisonment' (Sykes, 1958, p.71). Kyprianides and Easterbrook (2019) analysed the Measuring Quality of Prison Life (MQPL) dataset to investigate the importance of social interactions on wellbeing. Their findings concluded that prisoners should increase their social connectedness. Van Ginneken et al. (2019) reinforce this, arguing that peer relationships are a large part of the prison climate. Their Dutch study of 4538 participants found that those with good peer relationships rated higher wellbeing, which was operationalised as a subjective affective dimension, linking to life satisfaction and happiness. A caveat of their sampling, however, is that those with severe mental health problems were not approached, so while the results are generalisable to the Dutch adult prison population, they cannot be applied to prisoners with severe mental health problems.

1.5 Relationships: Outside of Prison

Research has found that visits by friends and family are important for the mental wellbeing of prisoners (Liebling, 2004; Lanskey et al., 2018). Liebling (2004) argues that maintaining family relationships is painful for a prisoner due to implemented restrictions which they have no control over. This struggle is mirrored for the families, who face difficulties when navigating the penal system to arrange visits. The social injustice faced by an increasing number of families when contacting or visiting their loved ones in prison can manifest as an additional stressor on the prisoner, in turn negatively impacting their wellbeing as they are vicariously, helplessly experiencing the same inconveniences as their family (Lanskey et al., 2018). Qualitative interviews in the study by Liebling (2004) provided examples of these inconveniences: a lack of phones in prison; searching young children for drugs; visitors being held for hours in waiting rooms; and prison being an inconvenient location.

Family visitor zones in prison have been merited as a "sacred space of sorts," where it is granted by other prisoners that warmth and affection can be displayed to their visitors, especially when children are present (Crewe et al., 2014, p.67). This implies a mutual and potentially unspoken understanding between prisoners that the vulnerable emotions elicited by visits are to be untouched by the usual hostile prison culture, and instead fragility is permitted, which has been demonstrated as crucial for wellbeing (Liebling, 2004; Lanskey et al., 2018). This may be a subconscious awareness held by prisoners, but nevertheless it demonstrates that male prisoners display innate morality, despite the prominent machismo culture which previous literature has emphasised (Jewkes, 2005; Crewe et al., 2014). Both Hemming et al. (2020) and Laws and

Crewe (2016) discussed how family contact is made difficult by short periods in which prisoners can make phone calls using a limited number of phone booths. This struggle is exacerbated in an overcrowded prison whereby resources are stretched; prison overcrowding will be reviewed next.

1.6 Cell-sharing and Overcrowding

The previous literature has detailed the elements of prison life which are crucial to prisoner wellbeing, and how overcrowding can often diminish this. One impact of overcrowding is cell-sharing. The United Nations state that prisoners should be accommodated in single rather than shared cells (UN General Assembly, 2015). However, the international overcrowding of prisons has meant that cell-sharing is the reality for many (Van Ginneken, 2022). In England and Wales, prisoners often share cells originally designed for one person (HMIP, 2023). This removes their privacy, an integral part to their dignity (Baggio et al., 2018; Sykes, 1958). To apply Jewkes' (2005) aforementioned theory, a cellmate prevents a prisoner from embodying their backstage self as their masked front is maintained for an extended period.

The quantitative study investigating the relationship between cell-sharing and self-reported wellbeing was carried out in Northern Ireland by Muirhead et al. (2023) on a random stratified sample of 569 imprisoned males. In this study, wellbeing was measured with Likert-scale responses to 14 positively worded statements, but the subjectivity of wellbeing means that interpretation may have varied with respondents. Also, the results were susceptible to social desirability bias and recall effects. No significant difference between the wellbeing of prisoners in single or shared cells was found, but the study observed a significant difference when cellmate

relationships were considered. Those with good cellmate relationships reported better wellbeing than those with poorer relationships, potentially a result of the better cellmate relationships bolstering and supporting each other. On the other hand, Schliehe and Crewe (2022) found that even with good cellmate relationships, prisoners may feel like a burden to their cellmate which in turn can damage their mental wellbeing. Their qualitative study of 278 male and female prisoners researched the impact of cell-sharing on wellbeing in local prisons in England and Wales. After transcribing the interviews, the most prominent themes to emerge were indignity, violence, threat, and abuse, signifying the risks associated with cell-sharing. This contests the view that a cellmate's presence mitigates suicide risk, by instead highlighting the dangers cell-sharing may expose. This emulates the findings by Van Ginneken et al. (2017).

The aforementioned emotional regulation framework exhibits these risks (Laws and Crewe, 2016). One regulation method they identified in their study in South Yorkshire was situation modification, whereby prisoners would customise their physical environment (their cell). This causes conflict as their personal space is shared and governed not only by imprisonment, but by a cellmate. Likewise, negotiating cell space can prove difficult if a smoker and a non-smoker are housed together, impacting their physical health as well as their mental wellbeing.

The Cell Sharing Risk Assessment ('CSRA') in prisons exists in the UK, whereby a risk assessment is conducted to reduce self-harm and suicide risk, and to ensure cellmates do not pose a threat to one another (UK Government, 2024). The CSRA followed the racist murder of Zahid Mubarek by his cellmate in YOI Feltham in 2000 to prevent similar attacks from occurring (HMIP, 2014). However, Moss (2006) wrote that prisoner complaints of racism are

predominantly due to other prisoners, emphasising the importance of an adequate CSRA. Despite this, Muirhead (2019) argues that the CSRA does not prevent prisoners from feeling unsafe within the presence of their cellmate. Consequently, participants who feel unsafe are found to report lower wellbeing (Muirhead et al., 2023). A Dutch study of 3408 survey participants by Van Ginneken (2022) substantiate this, finding a significant negative effect of cell sharing on a prisoner's rating of their safety. The studies by Muirhead (2019) and Van Ginneken (2022) both offer quantitative analyses of cell-sharing and wellbeing in their respective countries, though their research emphasised cellmate relationships. A study in this area has not been conducted in England and Wales with quantitative research.

Present Study

This literature review has depicted the current landscape of mental wellbeing and cell-sharing in male prisons in England and Wales, drawing upon abundant contemporary evidence. The notion of what 'wellbeing' encompasses has proven to be multifaceted and extremely interlinked.

Education, as a meaningful activity, is an escape from the prison climate which increases wellbeing (Crewe et al., 2014; Hemming et al., 2020). Likewise, relationships outside of prison are a safe haven where vulnerability need not be hidden, however challenges in navigating the penal system make it difficult for these relationships to be maintained (Liebling, 2004; Lanskey et al., 2018). Relationships inside prison grant autonomy which prisoners otherwise lack (Sykes, 1958), and are crucial to social connectedness and improving wellbeing (Kyprianides and

Easterbrook, 2019; Van Ginneken et al., 2019). The mental health of prisoners continues to be a concern as the vulnerable population are likely to be diagnosed with a mental health problem (Fazel and Seewald, 2012; Chang et al., 2015). If ignored, this can be a concern for public safety on their release. Goffman's frontstage and backstage self has been applied to male prisoners by Jewkes (2005), who argued that masking is the most common prison survival method, however Muirhead (2019) contended that in shared cells, the backstage self does not exist, consequently damaging wellbeing. Finally, the overcrowding of prisons has resulted in many prisoners sharing cells despite guidelines and evidence not to (UN General Assembly, 2015; HMIP, 2023). Generally, cell-sharing can exacerbate the issues discussed above, harming mental wellbeing, but this area is less researched.

Most of the studies consulted are qualitative and of small samples, partially due to the methodological issues of accessing large samples within prison research (Schliehe and Crewe, 2022). Schliehe and Crewe (2022) researched the relationship between cell-sharing and wellbeing in England and Wales, albeit qualitatively. Quantitative studies exist in the Netherlands and Northern Ireland exploring the relationship (Van Ginneken, 2022; Muirhead et al., 2023), but at present such research does not exist for the prison population in England and Wales.

Thus, based on this literature review, the current dissertation will conduct a quantitative empirical study into the relationship between cell-sharing and the mental wellbeing of male prisoners in England and Wales, whilst considering demographic factors and the contextual dimensions of prison life. The following chapter will present the methodological framework of this research.

Chapter Two: Methodology

This chapter will outline, explain, and justify the methodology of the present study, including the methodological approach; research methods and design (separated into methods and design; data and sample); research ethics; and analytical process.

2.1 Methodological Approach

The current study has a positivist epistemological position, in which the observation and recording of social phenomena are done systematically and with rigour to minimise subjectivity (Matthews and Ross, 2010). Positivist research is typically characterised by the quantitative analysis of large datasets and statistical analysis to test theory-driven hypotheses and seek the association and relationships between variables. The ontological stance of the current study is objectivism, whereby the research, the relationship between cell-sharing and mental wellbeing, exists independently from human experience and bias (Clarke et al., 2021). This allows for the study to be conducted without subjective influence from the researcher. The current study takes a deductive approach, as theory is drawn upon to deduce a hypothesis which will be tested empirically with quantitative research methods.

Qualitative researchers have critiqued the quantitative study of the social world (Clarke et al., 2021). Prison literature, specifically, has argued that a quantitative tick box study is insufficient in telling the story of a prisoner (Liebling et al., 2012). Thus, much of the research

discussed in the previous chapter was of a qualitative nature. However, a rich, qualitative research study is infeasible to conduct on large scale samples which quantitative research allows for, limiting its generalisation (Matthews and Ross, 2010). For this reason, this study uses quantitative methodology.

2.2 Research Design (Research Methods and Design; Data and Sample)

Research Methods and Design

Considering the methodological approach, and the access constraints of prison research, the most suitable method to answer the research question in this study was quantitative, secondary data analysis. As well as this, ethical limitations may have restricted the ability to access the vulnerable population of prisoners, and collect their sensitive data, further supporting the decision to use secondary data. Finally, a high quality, respectable and systematic dataset was accessible for the use of this study, making primary data collection unnecessary; this dataset will be introduced next.

The secondary dataset analysed was the HMIP Prisoner Survey: Adults in England and Wales 2000-2023. The most recently released version of this dataset was conducted during the 2022-23 inspections. This is now referred to as ‘the survey’. This version of the survey was analysed in the current study to ensure a contemporary reflection of the current prison climate. Utilising the secondary data source ensured a fast, inexpensive alternative to obtaining primary data from prisoners, of whom access to would have not been ethically possible (Matthews and

Ross, 2010). Moreover, the survey provided a large sample size, and it covered a wider breadth of topics than would have been feasible with primary data collection. This increases generalisability and aligns with the objectivist stance of this research.

The current study employed a cross-sectional research design, with the analysis of the data providing insight into the research population during the 2022-23 inspections when the survey data was recorded (Matthews and Ross, 2010). Cross-sectional research cannot determine a causal relationship between variables, however, the patterns and associations between the studied variables can be identified (Clarke et al., 2021). These are the self-reported variables of male mental wellbeing in prison and cell-sharing. Additionally, control variables are also examined. The operationalisation of each variable is justified in further detail in the analysis section of this chapter. This research design is replicable with versions of the survey from other prison cohorts.

Data and Sample

The survey is conducted by HMIP during their annual inspection of prisons, with a sample of adult prisoners who are incarcerated in England and Wales at that time (Reising et al., 2023). The survey itself has a repeated, cross-sectional design, allowing for observation of different samples in each cohort, as the same subjects are not recorded, leaving no opportunity for attrition of the sample (Cummings, 2017). This may be particularly important with a prisoner research population, as the majority of prisons in England and Wales are overcrowded so the

population of interest has a high turnover rate and is therefore constantly changing (Haney, 2012).

A wide range of topics are covered, those of relevance to the current study include background information; life on the wing; contact with family and friends; healthcare; alcohol and drugs; safety; and education, skills and work (Reising et al., 2023). The sociodemographic characteristics of each respondent were captured in the survey, allowing for comparisons to be identified during analysis. Data on prisoners held in young adult prisons are not published in the dataset. The survey was completed by the respondent, unless help was requested, so it should be acknowledged that the questions were open to subjective interpretation of the prisoner.

The survey was accessed and downloaded from the UK Data Service website. The downloaded documents included the complete series of the dataset, and files which contained the data dictionaries and technical details of the survey. It should be acknowledged that results of the survey are susceptible to methodological limitations such as sampling error, recall issues and non-response implications, all of which may bias the data (Clarke et al., 2021). Nevertheless, the survey remains a "rich source of data for analysis" and utilisable for the current study (Reising et al., 2023, p.24). The survey is a reliable secondary source due to its consistency in obtaining a considerable volume of data from the prison population in England and Wales since 2000. This means that the current study could be repeated with past or future cohorts of the dataset, increasing this study's replicability (Fox and Jennings, 2014).

The research population for this study is adult male prisoners in England and Wales. On the 31st of December 2023, the total prison population of England and Wales was 87,489

(Ministry of Justice, 2024). Of this, the adult male prison population totalled 83,490 people. This research population is represented by a sample of 6403 adult prisoners who participated in the most recent version of the survey. Of these, 5981 were male (the coding out of those in women's prisons will be explained in the analysis section). This is a relatively large sample and has been deemed an "exceptional" response rate for prison research by those who conducted the survey (Reising et al., 2023, p.17).

The survey is conducted in all prisons which are part of the annual HMIP inspection report, on a prison-by-prison basis. Each prison in England and Wales will be inspected between every one and five years depending on the current priorities of HMIP. As these priorities may change on a yearly basis, caution is advised to be taken when interpreting the survey data because generalisability may be limited if particular prisons are inspected for practical or theoretical reasons, and others are not (Reising et al., 2023). Within each individual prison, a minimum sample size is calculated to ensure representativeness of that prison, prior to the sample being randomly selected from the prison system's database. Prisoners in the sample are each invited to voluntarily participate individually by the researchers, and if they decline, resampling may be used to mitigate the overall representativeness.

This study sought to understand the relationship between cell-sharing and mental wellbeing. Due to constraints of the survey, wellbeing was an operationalised variable in the version of the survey given to women only, no male measure of 'wellbeing' was recorded. As the research population of this study is male prisoners, the decision was made to analyse the variable with the closest paralleled meaning to mental wellbeing. This manifested as the variable which

recorded self-reported mental health problems (MHP). This decision was made on the basis that the survey question asked, ‘Do you have any mental health problems?’. As this does not ask for specific mental illnesses, rather more general ‘problems’, it was the closest measure representative of mental wellbeing. A similar justification is given in a study where “mental wellbeing is a related but distinct concept to mental illness” (Tweed et al., 2021, p.e188). The MHP variable is self-reported, thus remains open to interpretation and subjectivity. To maintain clarity of the study, the terms ‘mental wellbeing’ and ‘MHP’ will not be conflated; they will be used in their own rights.

Therefore, the variables included in the analyses in this study included, MHP which was measured by the question, ‘Do you have any mental health problems?’. Cell-sharing was measured in the survey by the variable which asks, ‘Are you in a cell on your own?’. Other variables relevant to this study included the variables describing the demography and background of the prisoner: age; ethnicity; sentence length; and prison category which the respondent was in when they completed the survey. These variables were chosen based on the two studies of wellbeing and cell-sharing (Van Ginneken, 2022; Muirhead et al, 2023). As demonstrated by the literature review, mental wellbeing is affected by a variety of dimensions. Hence, other variables which were relevant to analyse in this study were: feeling safe in prison; illicit drug problems; recent visiting by friends and family; and ease in accessing education (Liebling, 2004; Crewe et al., 2014; Chang et al., 2015; Lanskey et al.,2018; Muirhead et al., 2019; Hemming et al., 2020). Some of the topics analysed in this study are of a sensitive nature, the ethical issues will be discussed in the following section.

2.3 Research Ethics

As the current study analyses a secondary dataset, ethical issues were minimal but still present (Clark et al., 2021). The survey was identified and downloaded from UK Data Service website, access to which required agreement and compliance to the End User Licence Agreement. This was agreed to when creating an account with the UK Data Service and complied with throughout the research. A data management plan (see Appendix A) was also created and adhered to, to ensure responsible usage of the source. This study covers topics which may be deemed sensitive, such as imprisonment, mental health, self-harm, suicide, and substance use. It also researches the vulnerable population of prisoners. For these reasons, the analysis of a secondary dataset was best suited to ensure that the study would not go beyond the ethical guidelines in place. Ethical approval of this study was granted by University of Leeds (see Appendix B).

As the data was collected by HMIP, the current study poses no risk of mishandling participant's sensitive information. The survey is completed with anonymity, so identification of participants is not possible, which ensures confidentiality of the participants (Reising et al., 2023). Moreover, the End User Licence version of the dataset (as opposed to the highly safeguarded version) groups demographic variables for the protection of its participants. For example, prison category in the End User Licence version groups *Trainers, Trainers – Cat B* and *Trainers – Cat C,* into *Trainers.* A document detailing these groupings is downloaded with the

dataset. Specific requirements of HMIP state that any published table should not contain frequencies of less than ten for the protection of minority groups. This requirement has been fulfilled in this study.

2.4 Analytical process

This section will detail the analytical process of the current study, which involved the secondary data analysis of the survey dataset, conducted using RStudio Version 2023.12.0+369 (RStudio). Using RStudio, the analytical process involved the univariate analysis of each variable, bivariate statistical tests, and logistic regression analyses, which evaluates the probability of a particular outcome for each case (Tabachnick and Fidell, 2014). All variables analysed in this study were categorical.

Before any analyses were conducted, the data was cleaned. The dataset does not specify sex, instead 'Women' was a possible response to the variable which records prison category. As the current study is investigating mental wellbeing in male prisons, the respondents in women's prisons would have biased the results and decreased the validity of the study by measuring a population which were not intended to be measured (Fox and Jennings, 2014). So, to reduce this bias and error, these 422 respondents in women's prisons were removed prior to any analysis. This reduced the original sample from 6403 to 5981.

The MHP variable was measured by the question, 'Do you have any mental health problems?' with 'Yes' and 'No' as possible responses. Cell-sharing is measured in the survey by the variable which asks, 'Are you in a cell on your own?' with 'Yes' and 'No' as responses. Missing data of both variables were recorded. In order to answer the research question, 'Is there a relationship between mental wellbeing and cell-sharing in male prisons in England and Wales?' the following process was followed.

The first stage of the analytical process was univariate analysis of the two main variables, cell-sharing and MHP. Cell-sharing was coded as a dichotomous variable, where *0= 'No, I'm in a shared cell'* and *1= 'Yes',* as answers to the question '*Are you in a cell on your own?*'. The same process was conducted with the variable recording MHP, which was coded as a dichotomous variable, where *0= 'No'* and *1= 'Yes'.* Descriptive statistics, including the frequencies and percentage distributions, of cell-sharing and MHP were reported. Univariate analyses of the control variables age; ethnicity; sentence length; prison category; feeling safe in prison; illicit drug problems; recent visiting by friends and family; and ease in accessing education were conducted. A table was created to display the frequencies and percentages of each variable. For variables which were multi-category (age; ethnicity; sentence length; prison category; recent visiting by friends and family; and ease in accessing education) a dummy, binary variable was created for every category of each variable.

Bivariate analyses between the two variables of interest, cell-sharing and MHP. Cell-sharing was operationalised as the main predictor, or the independent variable (IV), and mental health as the outcome, or dependent variable (DV). A contingency table was created to calculate

the distribution within the variables. Statistical tests, Chi-squared and Cramer's V, were performed to analyse the association and strength of the bivariate relationship.

A simple logistic regression model of the IV and DV was fitted, with the objective of understanding the effect of cell-sharing status on MHP. A full model, testing *H1*, was then fitted to analyse the same effect, whilst controlling for demographic and predictor variables. Following the aim of logistic regression analysis, to "simplify the model by eliminating some predictors while still maintaining strong prediction" (Tabachnick and Fidell, 2014, p,485), attempts to fit the best model were made, by including statistically significant and theoretically relevant variables. The Akaike Information Criterion (AIC) was used to examine the best model fit in explaining the relationship with the fewest predictors. The Variance Inflation Factor (VIF) was used to test the models for multicollinearity. *H2* was tested with these logistic regression models.

The following chapter presents the findings of the analytical process.

Chapter Three: Findings

The structure of the previous section, which detailed the analytical process of this research, will be reproduced in this chapter to exhibit the findings of the present study. The hypotheses tested are:

H1: *There is a significant association between cell-sharing and mental wellbeing in male prisons, whilst controlling for demographic and contextual factors.*

H2: Participants in shared cells will report lower mental wellbeing, whilst controlling for contextual and demographic factors.

Univariate analysis of the variables of interest are demonstrated by the following results. Cell-sharing totalled a frequency of 5878 responses in the survey. This consisted of 3378 participants (57.5%) in an individual cell, and 2500 participants (42.5%) in a shared cell. 103 responses were classed as missing data. The MHP variable, which is representative of mental wellbeing in this study, received 5655 responses. 2330 participants (41.2%) answered that they do not have any MHP, and 3325 participants (58.8%) reported that they do. 315 responses were classed as missing data. As the missing data of both cell-sharing and MHP were ~5%, it was deemed safely negligible (Tabachnick and Fidell, 2014).

The univariate analysis of the control variables relevant to this study are presented on the following page; Table 1 displays the demographic characteristics of the prisoner, and Table 2 displays the contextual variables. The missing data ('NA') has been included for transparency, as there may be a reason as to why a participant chose to not answer a question, although data may

be missing for various reasons. The total count of each variable is not equal, as the decision was made to retain as much information as possible, rather than to subset it to achieve an equal sample, to produce the most valid results.

Table 1: Demographic Characteristics

		n	%	*(NA)*
Prison Category				
	High security – Category A	167	(2.79%)	
	Locals	2326	(38.89%)	
	Trainers	3377	(56.46%)	
	Open – Category D	111	(1.86%)	
	Total	***5981***		*0*
Age				
	21 to 25	1162	(19.62%)	
	26 to 49	3913	(66.06%)	
	50 and over	757	(12.78%)	
	70 and over	91	(1.54%)	
	Total	***5923***		*0*
Ethnicity				
	Asian	430	(7.29%)	
	Black	722	(12.25%)	
	Mixed	430	(7.30%)	
	White	4145	(70.29%)	
	Other	169	(2.87%)	
	Total	***5896***		***0***
Sentence Length				
	Less than 6 months	360	(6.20%)	
	6 months – 1 year	433	(7.46%)	
	1 – 4 years	1426	(24.56%)	
	4 – 10 years	1316	(22.67%)	
	10 + years	716	(12.33%)	
	IPP	160	(2.76%)	
	Life	269	(4.63%)	
	Not currently serving a sentence	1126	(19.39%)	
	Total	***5806***		*167*

Table 2: Contextual Variables

	n	**%**	*(NA)*
Ever Felt Unsafe *(Have you ever felt unsafe here?)*			
No	3171	(55.42%)	
Yes	2551	(44.58%)	
Total	***5722***		*250*
Illicit Drug Problems *(Have you developed a problem with illicit drugs since you have been in this prison?)*			
No	5203	(91.62%)	
Yes	476	(8.38%)	
Total	***5679***		*295*
Recent Visiting by Friends and Family *(How often have you been able to see your family and friends in person in the last month?)*			
Every week	298	(5.51%)	
2 or 3 times	1024	(18.92%)	
Once	1211	(22.38%)	
Not at all	2878	(53.19%)	
Total	***5411***		*558*
Ease in Accessing Education *(Is it easy or difficult to get into education?)*			
Easy	2133	(39.09%)	
Difficult	1952	(35.78%)	
Don't know	1264	(23.17%)	
Not available here	107	(1.96%)	
Total	***5456***		*510*

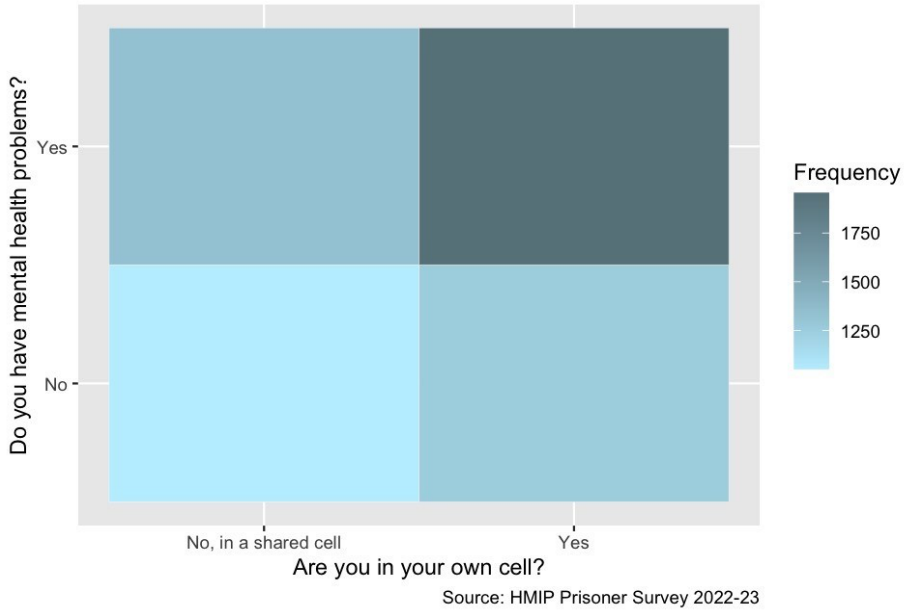
The bivariate analysis of the main predictor (cell-sharing) and the outcome variable (MHP) is presented in Table 3, which is displayed in frequencies and column-percentages. Out of those in a shared cell, more respondents report having MHP (55.9%), whereas fewer respondents report not having MHP (44.1%). Similarly, for those in their own cell, more respondents report having MHP (60.9%), than those who report not having MHP (39.1%).

Among those with MHP, more individuals were in their own cell than in a shared cell. Figure 1 presents a visualisation of the bivariate association between the two variables, for ease of interpretation.

Table 3: Bivariate Distribution of Cell-sharing and Wellbeing (*n = 5596*)

Mental Health Problems	Cell-sharing		
	In a shared cell	*In own cell*	**Total**
Yes	1332	1956	3288
	55.9 %	60.9 %	58.8 %
No	1052	1256	2308
	44.1 %	39.1 %	41.2 %
Total	2384	3212	5596
	100 %	100 %	100 %

Figure 1 (below): Bivariate Association of Cell-Sharing and MHP



A Chi-squared test was conducted to measure the association between the IV and DV, which calculated a significant association between cell-sharing and MHP, as demonstrated by the result: x^2 (1) = 14.253, $p < 0.001$. Cramer's V was calculated (φ=0.05), indicating a weak strength of association. These results indicate that the null hypothesis of the Chi-squared test, that there is no association between cell-sharing and MHP, can be rejected. However, due to the weak Cramer's V value, the practical significance may be limited.

Logistic regression was used to analyse the relationship between cell-sharing and MHP. A simple model of the predictor and outcome variable was fitted, as well as a full model with all variables which were controlled for based on the literature. This includes the variables, Prison Category, Age, Ethnicity, Sentence Length, Feeling Unsafe in Prison, Illicit Drug Problems, Recent Visits by Friends and Family, and Accessing Education. The logistic regression results are displayed in Table 4. The reference category of each variable is stated in the table.

Model 1 fit the predictor, whether someone was in a shared cell or not and the outcome, MHP. The coefficient (*'β'*) of the intercept demonstrates that the log-odds of having MHP in a shared cell is expected to be 0.24 ($p < 0.001$). The exponential of the intercept is 1.27, so the odds of someone having MHP in a shared cell is 1.27, or 27% more likely to occur than not occur. The coefficient of Model 1 ($\beta = 0.21$, $z = 3.77$, $p < 0.001$) shows that the log-odds of having MHP are statistically significantly larger amongst those in an individual cell, compared to being in a shared cell. For a 1 unit change in cell-sharing, the log-odds of having MHP are expected to change by 0.21. The odds ratio of the coefficient is 1.23, so the odds of having MHP are greater by 1.23 times (95% CI = 1.10-1.37) in an individual cell than in a shared cell.

Model 2, which tested *H1*, fitted the full model with the additional control variables held constant at each reference category. The reference categories are considered in the interpretation of the following findings. Model 2 supports *H1* as a significant association between cell-sharing and MHP, while controlling for demographic and contextual factors, has been found.

The intercept of Model 2 suggests a statistically significant association between cell-sharing and MHP (β = -1.16, z = -3.60, $p < 0.001$) where those in shared cells have the log-odds of -1.16 of having MHP compared to those in individual cells. The exponential of the intercept (-1.16) is 0.31, so for someone in each of the reference categories, the odds of having MHP in a shared cell are 31%. The odds ratio of the intercept is 0.31 (95% CI = 0.17-0.59), so the odds of having MHP in an individual cell rather than a shared cell are decreased by 0.31 times. The coefficient of the log-odds of someone being in an individual cell rather than a shared cell is 0.47 (β = 0.47, $z = 6.33$, $p < 0.001$), suggesting a statistically significant association between cell-sharing and MHP. The odds ratio of the coefficient is 1.59, so the odds of having MHP by a 1 unit change from shared cell to individual cell, are increased by 1.59 times (95% CI = 1.38-1.84). A check for multicollinearity of Model 2 was conducted using the Variance Inflation Factor ('VIF') on all predictors. The results for each variable were <2.5, indicating minimal multicollinearity between the predictors and assurance that they are independent of one another.

With the addition of demographic and contextual variables, the odds ratio of having MHP increased from 1.23 (95% CI = 1.10-1.37) to 1.59 (95% CI = 1.38-1.84) and remain statistically significant. The Akaike Information Criterion ('AIC') test of model fit improves from 7575.0 in

Model 1 to 5654.6 in Model 2, indicating that the demographic and contextual predictors are related to the outcome of MHP. However, the confidence interval of Model 2 is much wider.

Table 4: Effect of Cell-Sharing on MHP (Model 1 & Model 2)

	MHP (Model 1)				MHP (Model 2)			
Predictors	*β*	*std. Error*	*CI*	*p*	*β*	*std. Error*	*CI*	*p*
Intercept	0.24	0.04	0.16 – 0.32	**<0.001**	-1.16	0.32	-1.79 – -0.53	**<0.001**
Cell (reference = Shared Cell)								
Own Cell	0.21	0.05	0.10 – 0.31	**<0.001**	0.47	0.07	0.32 – 0.61	**<0.001**
Prison Category (reference = High Security – Cat A Prison)								
Local Prison					0.21	0.22	-0.23 – 0.64	0.354
Trainers Prison					-0.19	0.21	-0.60 – 0.22	0.369
Open - Cat D Prison					-0.83	0.33	-1.48 – -0.19	**0.012**
Age (reference = Age 21-25)								
Age 26-49					-0.05	0.08	-0.21 – 0.12	0.582
Age 50+					-0.52	0.12	-0.76 – -0.28	**<0.001**
Age 70+					-1.76	0.33	-2.43 – -1.15	**<0.001**
Ethnicity (reference = Asian)								
Black Ethnicity					0.23	0.15	-0.06 – 0.52	0.119
Mixed Ethnicity					0.53	0.16	0.21 – 0.85	**0.001**
White Ethnicity					0.97	0.12	0.73 – 1.21	**<0.001**
Other Ethnicity					0.24	0.23	-0.20 – 0.69	0.282

(table continued on next page)

Sentence Length (reference = Less than 6 months)					
6m - 1yr Sentence		0.09	0.18	-0.27 – 0.45	0.632
1-4yr Sentence		-0.13	0.15	-0.44 – 0.17	0.401
4-10yr Sentence		-0.10	0.16	-0.42 – 0.21	0.521
10+yr Sentence		-0.53	0.17	-0.87 – -0.19	**0.002**
IPP Sentence		0.09	0.25	-0.39 – 0.59	0.706
Life Sentence		-0.61	0.22	-1.04 – -0.19	**0.004**
Not Currently Serving a Sentence		-0.18	0.16	-0.50 – 0.12	0.244
Feeling Safe in Prison (reference = Has Not Felt Unsafe in Prison)					
Has Felt Unsafe in Prison		0.85	0.07	0.72 – 0.98	**<0.001**
Illicit Drug Problems (reference = Has Not Had an Illicit Drug Problem Since Prison)					
Illicit Drug Problem Since Prison		1.07	0.15	0.79 – 1.37	**<0.001**
Friends & Family Visit: (reference = Every Week)					
F&F Visit: 2 or 3 times		-0.06	0.15	-0.35 – 0.24	0.714
F&F Visit: Once		0.29	0.15	-0.00 – 0.59	0.052
F&F Visit: Not at all		0.45	0.14	0.17 – 0.73	**0.002**
Difficulty in Accessing Education (reference = Accessing Education: Easy)					
Accessing Education: Difficult		0.30	0.08	0.15 – 0.45	**<0.001**
Accessing Educ: Don't Know		0.02	0.08	-0.14 – 0.19	0.801
Accessing Educ: Not Available		0.06	0.25	-0.42 – 0.54	0.823
Observations	5596	4624			
R^2 Tjur	0.003	0.137			
AIC	7574.957	5654.569			

Due to the limited research in this area, the model fit was improved by retaining the variables which were expected to influence the relationship between cell-sharing and mental wellbeing based on the existing literature, as well as their significance in Model 2. The test of multicollinearity indicated the predictor variables were independent of one another, so variables were not removed on this basis. The following findings are interpreted with the predictor variables held constant at their reference categories.

Thus, Model 3 (presented in Table 5) is fitted with age, ethnicity, feeling safe in prison, illicit drug problems and recent visiting by friends and family. Multicollinearity was tested using the VIF, with the result of every variable as <1.1. The AIC of Model 3 is to 5821, indicating the best fit with the fewest predictors, as theorised by cell-sharing and mental wellbeing literature.

The intercept of Model 3 suggests a statistically significant association between cell-sharing and MHP with the reduced predictor variables (β = -1.28, z = 0.19, $p < 0.001$). The exponential of the intercept is 0.28, so the odds of someone having MHP in a shared cell is 28%. This is a decrease in the odds from Model 2 (31%) which was fitted with all predictors. The odds ratio of the intercept is 0.28 (95% CI = 0.19-0.40), so the odds of having MHP in a shared cell are 0.28. The coefficient of the log-odds being in an individual cell is 0.25 (β = 0.25, z = -6.27, $p < 0.001$), suggesting a statistically significant association between cell-sharing and MHP. The odds ratio of the coefficient is 1.29 (95% CI = 1.13-1.46), so the odds of having MHP are increased by 1.29 times in an individual cell. These findings reject *H2*, as the odds of experiencing MHP in an individual cell, compared to a shared cell, are increased.

The odds of MHP for prisoners aged over 50 (representing 12.87% of respondents) is 0.54, (β = -0.61, z = -5.17, $p < 0.001$). This indicates a statistically significant decrease in the odds. Results were not significant for 66.06% of the sample, aged 26-49. For prisoners who answered that it is difficult to access education (35.78%), the odds of experiencing MHP increase by a statistically significant factor of 1.38 (β = 0.32, z = 4.34, $p < 0.001$). Feeling unsafe in prison (44.58% of the sample) increase the odds of experiencing MHP by 2.48 times (β = 0.91, z = 13.79, $p < 0.001$). Similarly, the odds of experiencing MHP whilst having a drug problem since being in prison (8.38% of respondents) increase by 2.77 times (β = 1.02, z = 7.06, $p <$ 0.001). The odds of experiencing MHP, with no visits from friends or family in the last month (53.19% of participants) increase by 1.57 times (β = 0.45, z = 3.23, $p = 0.001$).

Table 5: Effect of Cell-Sharing on MHP (Model 3)

	MHP (Model 3)			
Predictors	*β*	*std. Error*	*CI*	*p*
Intercept	-1.28	0.19	-1.65 – -0.91	**<0.001**
Own Cell	0.25	0.06	0.13 – 0.38	**<0.001**
Age (reference = Age 21-25)				
Age 26-49	-0.06	0.08	-0.22 – 0.10	0.436
Age 50+	-0.61	0.12	-0.84 – -0.38	**<0.001**
Age 70+	-1.93	0.32	-2.59 – -1.33	**<0.001**
Ethnicity (reference = Asian)				
Black Ethnicity	0.18	0.14	-0.10 – 0.46	0.206
Mixed Ethnicity	0.52	0.16	0.20 – 0.83	**0.001**
White Ethnicity	1.00	0.12	0.77 – 1.24	**<0.001**
Other Ethnicity	0.22	0.22	-0.22 – 0.65	0.326
Feeling Safe in Prison (reference = Has Not Felt Unsafe in Prison)				
Has Felt Unsafe in Prison	0.91	0.07	0.78 – 1.04	**<0.001**
Illicit Drug Problems (reference = Has Not Had an Illicit Drug Problem Since Prison)				
Illicit Drug Problem Since Prison	1.02	0.14	0.74 – 1.31	**<0.001**
Friends & Family Visit: (reference = Every Week)				
F&F Visit: 2 or 3 times	-0.05	0.15	-0.34 – 0.24	0.734
F&F Visit: Once	0.25	0.15	-0.04 – 0.54	0.086
F&F Visit: Not at all	0.45	0.14	0.18 – 0.73	**0.001**
Difficulty in Accessing Education (reference = Accessing Education: Easy)				
Accessing Education: Difficult	0.32	0.07	0.18 – 0.47	**<0.001**
Accessing Educ: Don't Know	0.06	0.08	-0.10 – 0.22	0.469
Accessing Educ: Not Available	0.07	0.24	-0.40 – 0.55	0.772
Observations	4718			
R^2 Tjur	0.123			
AIC	5821.059			

This chapter can conclude by accepting that the odds of having MHP are increased in an individual cell, whilst controlling the effect of the predictor variables. *H1* can be accepted, and *H2* can be rejected. The following chapter will interpret and discuss the findings of this chapter,

with reference to the expectations from the literature review. Practical implications will be proposed, and the strengths and limitations of this study will be analysed.

Chapter Four: Discussion

The previous chapter reported the findings of this study. This research has determined that the relationship between cell-sharing and mental wellbeing is complex and multifaceted. The results demonstrated that for respondents to the HMIP Prisoner Survey 2022-23, the likelihood of reporting having mental health problems is higher in an individual cell than in a shared cell, whilst controlling for demographic and contextual factors. This study therefore supported *Hypothesis I: 'There is a significant association between cell-sharing and mental wellbeing in male prisons, whilst controlling for demographic and contextual factors'* and rejected *Hypothesis 2: 'Participants in shared cells will report lower mental wellbeing, whilst controlling for demographic and contextual factors'.* This chapter will discuss the implications of these finding for male prisoners in England and Wales, offering exploration of the research question: Is there a relationship between mental wellbeing and cell-sharing in male prisons in England and Wales? It can be answered that yes, there is a relationship.

4.1 Discussion of the Findings

Despite guidance against cell-sharing (UN General Assembly, 2015) and the preference to be accommodated in individual cells (Muirhead et al., 2023), almost half of the participants in this study were cell-sharing. Participants with mental health problems outweighed those without, in both individual and cell-sharing groups, reinforcing the detrimental impact that imprisonment has on a person.

The impact of cell status on mental wellbeing can be perceived from different directions. For those who cell-share, they are denied an opportunity to revert to their backstage self which can amount to an overwhelming suppression of emotion with no circumstance to escape (Jewkes, 2005), especially in an overcrowded prison. If the cellmate relationship is good, which was found to be significantly influential on wellbeing by Muirhead et al. (2023), then mental wellbeing may improve. On the other hand, if prisoners feel like a burden to one another then cell-sharing may be a double-edged sword, as found by Schliehe and Crewe (2022), because they may not be able to build a meaningful relationship. The current study was unable to measure the quality of cellmate relationships, so it is a constraint that this cannot be commented on in relation to the previous literature. Conversely, in an individual cell, while inmates can express their backstage self, they may experience loneliness and lower mental wellbeing. Hence, cell-sharing is used as a mitigating risk for self-harm and suicide, as it is in individual cells where these rates are higher (Van Ginneken et al., 2017). This effect can be exacerbated while vulnerable to other factors which are found to worsen mental wellbeing. A prisoner's mental wellbeing is therefore not just a result of whether they are in a shared cell or not, as this study has demonstrated. Significant variables which also impacted mental wellbeing, and can have implications depending on cell type, were age, access to education, the frequency of family and friends visiting, feeling unsafe in prison, and illicit drug problems. This is the order in which they will be discussed, however the concepts remain connected, as they have done throughout this dissertation.

This study found that for prisoners aged over 50, the likelihood of experiencing mental health problems is decreased. This emulates the findings of Hemming et al. (2020), where wings

with older prisoners were more inclined to discuss their mental state than those with younger prisoners. Thus, more encouragement in discussing wellbeing would benefit the younger groups, as evidently openness does not come to them as naturally as it does to the older prisoners. This reinforces the masked front which literature demonstrates to be more common for younger prisoners as a hypermasculine survival strategy (Jewkes, 2005). As Crewe et al. (2014) established, a safe space where this discussion would benefit younger prisoners is in classrooms. However, the notion that classroom activities are typically 'feminine' could offer some explanation as to why younger groups may be less willing, because they are upholding their hypermasculinity to appear tough and to survive, and therefore not emotionally vulnerable as an older person may be. Hence, this study reinforces the benefits of education as a meaningful activity, as those who find it difficult to access education in prison are at greater odds of poor mental wellbeing.

Difficulty in accessing education may be due to either not having the knowledge to, actively choosing not to, or because of the practical, resource constraints in a prison. Overcrowding is a likely explanation of these constraints, and therefore a probable explanation in this study (HMIP, 2023). A lack of meaningful activity therefore contributes to poor mental wellbeing, and potentially the cycle of imprisonment, because without meaningful activity, not only is wellbeing lower, but offenders may be unrehabilitated and likely to reoffend after being released. The relevance this has to cell-sharing is that those who find accessing education difficult, as well as being in an individual cell, are disadvantaged by having little to no social interaction in prison, and therefore a lack of social connectedness. These interactions and relationships give a prisoner autonomy (Sykes, 1958). The findings of this study therefore

corroborate with the research which proclaimed the importance of peer relationships on mental wellbeing (Kypriandes and Easterbrook, 2019; Van Ginneken et al., 2019).

As well as peer relationships being crucial, connections to those outside prison are even more so, as identified in this study. Prisoners with no visits from friends and family in the month prior to the survey made up the largest proportion of respondents of that variable. This group were much more likely to experience mental health problems than those who had weekly visits, supporting the research by Liebling (2004) and Lanskey et al. (2018) which emphasised the damaging effect that an absence of visits can have. While these relationships are important, they can be difficult to maintain, but this may be out of the prisoner and family's control. Interestingly, the missing data in the 'friends and family visiting' variable had the most missing cases (558) out of all variables included in this study. The cause of the missing data should not be assumed, as it may have been due to practical reasons in the survey. However, a possible explanation may be that some participants did not answer the question as it is a topic which elicits a sensitive emotional response. Thus, they may have avoided it. If this explanation is the case, then it depicts the "sacred" supposition of the family to the prisoner, so much so that answering the question may have tarnished this notion (Crewe et al., 2014, p.67).

To contextualise the importance of family relationships with cell-sharing, the findings of this study demonstrate that the mental wellbeing of those in individual cells is significantly better with regular family visits. This can be explained by the meaningful connections which may not otherwise exist for someone in an individual cell. Additionally, it shows the importance that those inside prison have some exposure to the outside world, by having a connection to

normality outside of the prison walls. If these familial connections do not exist for someone in an individual cell, they could become further detached from society.

Meanwhile, someone with a cellmate may develop this connection inside the cell and not have the same reliance on visits as someone in an individual cell does. While this may be the case, cellmates are not chosen by the prisoner, so despite the CSRA which is intended as a prevention to being placed with someone of threat (UK Government, 2024), there is no guarantee of being placed with a suitable cellmate. Hence, this study found a stark increase in the likelihood of having mental health problems with participants who feel unsafe in prison. This aligns with previous findings (Muirhead, 2019; Van Ginneken, 2022; Muirhead et al., 2023).

Similarly, for those who have had problems with illicit drugs in prison, mental health problems were more likely, although only 8.38% of responses in this category reported that they had a drug problem. Considering the demand for illicit drugs is high in prison (HMIP, 2023), this is an unexpectedly small response level. However, the few responses could be the result of social desirability bias and fears that their responses were not completely anonymous, and if so, answering truthfully could leave them open to potential repercussions. In an individual cell, the relationship a prisoner has with drugs could be a result of boredom or loneliness. Muirhead et al. (2021) acknowledged that substance use is a more likely coping mechanism in shared cells. However, this may bring its own problems, as noted by Schliehe and Crewe (2014), where there is the potential for spiking, drug abuse and conflict, negatively impacting both cellmates' mental, and physical, wellbeing.

The low response rate of admitting to an illicit drug problem indicates the methodological issue of conducting "candid" prison research, which is acknowledged to be "virtually impossible" (Schliehe and Crewe, 2014, p.487). Thus, topics exist which prisoners are less likely to discuss honestly, and therefore the true validity of prison studies can be questioned. For this reason, quantitative secondary analysis was most suited to the present study, as it offered the highest possible validity for researching this topic. The following section will reflect on the methodological strengths and weaknesses of this research.

4.2 Reflection of the Current Study

A drawback to using a secondary data source is that the researcher has no control over the creation or design of the survey. As mentioned in the methodology chapter, the regularity of prison inspections, and therefore the administering of the survey, are based on priorities of HMIP. This means that the results may not be generalisable to the entire prison population in England and Wales, as there may be certain prisons which require more frequent inspections. As mental health is an urgent concern in prisons (HMIP, 2023), there is potential that prisons with higher levels of mental health problems are inspected on a more frequent basis. If so, the mental health figures could be inflated, in comparison to the complete prison population. This, however, is an example, and prisons could be inspected on a more regular basis for a multitude of reasons.

Missing data is typical of quantitative research (Tabachnick and Fidell, 2014), and this has been the case in the present study. Despite this, missing data can provide insight further than what the findings show, as demonstrated in the preceding discussion. Logistic regression is liable

to missing data, as shown in Model 3 where 1263 cases were removed due to missingness, leaving 4718 cases in the final model. The decision was made to not subset the dataset during the coding process, in order to retain as much information as possible, but this sample did decrease considerably.

Another source of uncertainty in this study was the operationalisation of mental wellbeing with the survey variable recording 'mental health problems'. Wellbeing is a subjective and interpretable term, but the attempt was made to operationalise it with the closest possible measure. As it is self-reported, the validity of the data may be questioned as one prisoner could have a different subjective understanding of 'mental health problems' to the next. Nevertheless, the survey provided a reputable and reliable source for analysis.

The systematic process of this study has ensured a positivist, objectivist stance throughout. A large sample size and a rigorous analytical process has offered reliable findings, to which many parallels have been found to coincide with the previous research. The cross-sectional research design allows for this study to be repeated in other cohorts of the HMIP Prisoner Survey, as many of the survey variables are retained for future use (Reising et al., 2023).

4.3 Future Research and Implications

Prison research is valuable; it calls attention to areas in which the system is flawed and failing its near 90,000 inmates (Ministry of Justice, 2024). This study has reiterated that both the prisoner, and the prison service would benefit by increasing the use of meaningful activity in

prison as a means to improve mental wellbeing, when self-harm and suicide rates are rising. While this would require significant funding and resources, which are currently sparse as prisons are over-capacity, investing in this process could offer prisoners an optimistic outlook. Moreover, relationships inside prison have shown to be integral to prisoner wellbeing, so increasing the opportunity in which these relationships can form would have profound effects. The importance of this has found to be significant for both those who are in shared, and individual cells.

A causal explanation cannot be found in cross-sectional research. However, this study has provided a foundation to which further research can be proposed. Potential avenues which could be discovered include investigating the difference between certain demographic groups more closely, as age has proven to be of insight. This study could be conducted with the women's responses to the survey, to understand how male and female prisoners may benefit in terms of cell-sharing and what improves wellbeing. Repetitions of this study with different cohorts of the survey could be conducted to make temporal comparisons, to understand the changes in the relationship between cell-sharing and mental wellbeing over time. Alternatively, this research design could be applied and adjusted to prisoner surveys in other countries. A change to the analytical process could be useful in examining the relationship further, for example, analysis with an interaction effect. Finally, a mixed methods approach investigating the topic of cell-sharing and wellbeing in prisons in England and Wales could be conducted. As of present, a study of this kind has not been done.

The following section will conclude this dissertation.

Conclusion

To conclude this dissertation, the present study has offered a systematic contribution to current research examining the relationship between cell-sharing and mental wellbeing. Using quantitative research methods, a statistically significant association was found between cell-sharing and mental wellbeing, accepting the first hypothesis of the study. This adds findings to an area where little research exists for the male prison population in England and Wales. This research therefore contributed a unique analysis using responses to the 2022-23 version of the HMIP Prisoner Survey.

While the operationalisation of mental wellbeing initially prompted some concern, the findings coincided with the expectations as found in the literature. Statistical analyses and logistic regression were conducted to find that there is a relationship between cell-sharing and mental wellbeing in male prisons, and it is a complex issue. Mental health problems were found to be more likely in individual cells, than in shared cells, rejecting the second hypothesis.

Cell-sharing, which is likely to increase due to prison overcrowding, can have both positive and negative impacts on a prisoners' mental wellbeing. As this study found, there are many dimensions of prison life which are influential of mental wellbeing in prison, and in some cases, cell-sharing can either exacerbate the negative impacts, or improve the benefits. Meaningful activity in the form of education was found to be highly impactful on mental wellbeing, due to the space in which it allows male prisoners to be open about their emotions, when usually a hypermasculine front is upheld, demonstrating the theory of dramaturgy.

Relationships both inside and outside of prison are crucial to keeping prisoners socially connected. Feeling unsafe and having an illicit drug problem also reduces wellbeing. All of these factors in prison leave a prisoner open to vulnerability whether they are in a shared or individual cell. Thus, more research is needed to further investigate how these factors should be mitigated, if they negatively impact mental wellbeing or encouraged, if they promote it.

The increased prison population projections suggest that the need to share cells is likely to grow. As this study has found, the likelihood of having poor mental wellbeing in prison is greater in individual cells, so perhaps pairing prisoners together will be a mitigator of this risk. The Cell Sharing Risk Assessment does not promise a suitable cellmate, but it may offer prisoners some reassurance as to who they will be living in such close proximity to. An increased investment in the prison system would give more opportunity to promote positive mental wellbeing to a vulnerable population who have experienced multiple societal disadvantages, in their lifetime.

While a broader view of what constitutes mental wellbeing was applied, this study has offered a strong foundation to which further research can be proposed. Its cross-sectional design is replicable to other prison contexts. To summarise, there is a relationship between cell-sharing and wellbeing in male prisons in England and Wales.

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Appendices

Appendix A

LAW3035 Dissertation
Data Management Plan (DMP) (Adapted from University of Leeds template)

Researcher Name	201414310
Dissertation Title	An Empirical Study into the Relationship Between Mental Wellbeing and Cell-Sharing in Male Prisons in England and Wales
Supervisor Name	Toby Davies
Research Start Date	31.1.2024
Research End Date	25.4.2024

Please provide a brief overview of your project including proposed research methods

My project researches the relationship between wellbeing in male prisons, with a specific focus on mental health, and cell-sharing.

It will use the dataset from responses to the HMIP Prisoner Survey: Adults in England and Wales, 2022-2023. Quantitative research methods will be used to analyse the relationship between these variables, and other confounding variables will also be analysed.

1. What data will be produced? What data will be used from other sources? My dissertation will use secondary dataset: The HMIP Prisoner Survey: Adults in England and Wales, 2000-2023. This was downloaded from the UK Data Service. The dataset contains the responses to a survey conducted by HM Inspectorate of Prisons during their annual inspections of prisons in England and Wales. Each row of the dataset corresponds to an individual's responses, and the variables correspond to their responses to a range of questions. The dataset also includes data dictionaries and documents containing a user guide and technical details of the survey.
2. Where will data be stored? How will data be structured? Include file formats and approximate volume.

As I am using the End User Licence Version of the data which does not have special storage requirements, it will my stored on my personal computer, which is protected via fingerprint recognition and a secure password. The screen locks after 10 minutes of inactivity.

The size of the file is 44.4MB and will be downloaded in the format supplied by the UK Data Service. I will retain the folders and the filenames provided to avoid confusion. The downloaded bundle provides a file information sheet with the names of each file and its corresponding description. The file type of the dataset is a '.dta' file which will be accessed and analysed using RStudio. Other files are in '.pdf' format.

3. Will data be shared (beyond your supervisor) at any stage of the project – e.g. for the purposes of transcription?

The data will not be shared with anyone other than my supervisor at any stage of the project.

4. Ethics and legal compliance: are there any 'special' requirements for your data? Any contractual or consent issues? Key policies (internal and external)

I agreed to the UK Data Service End User Licence Agreement prior to accessing the HMIP Prisoner Survey.

The survey data has already been anonymised prior to being downloaded from the UK Data Service, so there is no opportunity to identify survey participants. The End User Licence version of the data groups specific demographic variables into broader categories, to protect identification further.

5. How will data be documented and described? Methodologies and protocols.

The data has been documented by HM Inspectorate of Prisons. Each variable of the dataset is described within the data dictionary in the document bundle.

6. Training and support

No training will be required for using the dataset.

Support for quantitative analysis will be requested from my dissertation supervisor in scheduled dissertation meetings.

7. What resources will you need to manage data?

Use of the UK Data Service is required to access the data. RStudio will be required to analyse the data. This is already downloaded to my personal computer.

8. Ongoing data curation / data housekeeping / destruction of data

The data will be saved to my computer for the duration of my dissertation until its due date. This is from January – April 2024. The data file will be deleted once my degree has been awarded. Written proof will be supplied to my supervisor.

End of Dissertation

Following the award of your degree, you should ensure that any data collected is destroyed. **You should confirm to your dissertation supervisor, in writing, that you have fulfilled this obligation**.

Appendix B

Internal research ethics application form for taught student modules (where University ethical approval is in place for the module)

For modules LAW3035 covered by University of Leeds ethical approval reference [AREA 11-019]

Student ID	201414310
Your name	Emily Rumer
Provisional title/ topic area	Male Wellbeing in Prisons
Name of dissertation supervisor	Toby Davies

Are you planning to conduct fieldwork with (data on) human participants for your dissertation? Enter a tick in the box next to either yes or no below.

Yes (This includes online research methods and secondary data analysis).	✓
No, I am conducting library based research or content/ media analysis only.	

If you ticked 'no' you do not need to take further action in respect of ethical approval. Please proceed to the declarations on page 8 and 9.

If you ticked 'yes' you need to complete the rest of this form.

You MUST submit your signed ethics form to your supervisor upon their request.

INTERNAL RESEARCH ETHICS APPLICATION

Part A: Compliance with the module's block ethical approval

Ethical review is required for all research involving human participants, including research undertaken by students within a taught student module. Further details of the University of Leeds ethical review requirements are provided in the *Research Ethics Policy* available at:

http://ris.leeds.ac.uk/ResearchEthicsPolicies and at www.leeds.ac.uk/ethics.

1. **Will your dissertation involve any of the following?**	**Yes**	**No**
New data collected from observing individuals or populations		✓
Working with aggregated or population data		✓
Any other research methodology, please specify: Secondary data analysis	✓	

2. **Will any of the participants be from any of the following groups?** (Tick as appropriate)	**Yes**	**No**
Children under 16		✓
Adults with learning disabilities		✓
Adults with other forms of mental incapacity or mental illness		✓
Adults in emergency situations		✓
Prisoners or young offenders		✓
Prisoners or young offenders		✓
Those who could be considered to have a particularly dependent relationship with the investigator, e.g. members of staff, students		✓
Other vulnerable groups, please specify:		✓

3. **Will the project/dissertation/fieldwork involve any of the following:** (You may select more than one)	**Yes**	**No**
Patients and users of the NHS (including NHS patients treated under contracts with private sector)		✓
Individuals identified as potential participants because of their status as relatives or carers of patients and users of the NHS		✓
The use of, or potential access to, NHS premises or facilities		✓
NHS staff - recruited as potential research participants by virtue of their professional role		✓

A prison or a young offender institution in England and Wales (and is health related)		✓

	Yes	No
4. **Will any of the fieldwork or research take place outside the UK?**		✓

If you have answered 'yes' to ANY of the above questions in 2, 3 or 4 then you will need to apply for full ethical review, a faculty committee level process. This can take up to 6-8 weeks, so it is important that you consult further with your supervisor for guidance with this application as soon as possible. Please now complete and sign the final page of this document. The application form for full ethical review and further information about the process are available at http://ris.leeds.ac.uk/uolethicsapplication.

If you answered 'no' to ALL of the questions in sections 2, 3 and 4 please continue to part B.

INTERNAL RESEARCH ETHICS APPLICATION

Part B: Ethical considerations within block ethical approval

5. **Will the research touch on sensitive topics or raise other challenges?**	**Yes**	**No**
Will the study require the cooperation of a gatekeeper for initial access to groups or individuals who are taking part in the study (eg students at school, members of self-help groups, residents of a nursing home)?		✓
Will participants be taking part in the research without their knowledge and consent (eg covert observation of people in non-public places)?		✓
Will the study involve discussion of sensitive topics (eg sexual activity, drug use)?	✓	
Could the study induce psychological stress or anxiety or cause harm or have negative consequences beyond the risks encountered in normal life?		✓
Are there any potential conflicts of interest?		✓
Does any relationship exist between the researcher(s) and the participant(s), other than that required by the activities associated with the project (e.g., fellow students, staff, etc)?		✓
Does the research involve any risks to the researchers themselves, or individuals not directly involved in the research?		✓

If you have answered 'yes' to any of the questions in (5), please describe the ethical issues raised and your plans to resolve them on a separate page. Agree this with your supervisor and submit it with this form. Again you MAY be referred for light touch or full ethical review.

6. **Personal safety** Where will any fieldwork/ interviews/ focus groups take place?	**Yes**	**No**
At the university or other public place (please specify below).		✓
At my home address		✓
At the research subject's home address		✓

Some other location (please specify below).		✓

If you conduct fieldwork anywhere except at the university or other public place you need to review security issues with your supervisor and have them confirmed by the Dissertation Co-ordinator who may refer you for light touch or full ethical review. A risk assessment may also be required: http://ris.leeds.ac.uk/HealthAndSafetyAdvice. Write a brief statement indicating any security/personal safety issues arising for you and/or for your participants, explaining how these will be managed. Agree this with your supervisor and submit it with this form.

Please note that conducting fieldwork at the research subject's home address will require strong justification and is generally not encouraged.

7. **Anonymity**	**Yes**	**No**
Is there any potential for data to be traced back to individuals or organisations, for instance because it has been unanonymised or anonymised in such a way that there remains risk (eg highlighting people's positions within an organisation, which may reveal them).		✓

If you have answered 'yes' to question 7, please discuss this further with your supervisor. You need to provide a strong justification for this decision on a separate sheet. This application will need to be reviewed by the dissertation co-ordinator and may require a full ethical review.

8. **Data management issues**

Will the research involve any of the following activities at any stage (including identification of potential research participants)?		**Yes**	**No**
a. Examination of personal records by those who would not normally have access			✓
b. Sharing data with other organisations			✓
c. Use of personal addresses, postcodes, faxes, e-mails or telephone numbers			✓
d. Publication of direct quotations from respondents			✓
e. Publication of data that might allow identification of individuals to be identified			✓
f. Use of audio/visual recording devices			✓
g. Storage of personal data on any of the following:			✓
	FLASH memory or other portable storage devices		✓
	Home or other personal computers		✓
	Private company computers		✓
	Laptop computers		✓

If you have answered 'yes' to any of the questions under 7, you must ensure that you follow the University of Leeds Information Protection Policy: http://www.leeds.ac.uk/informationsecurity and the Research Data Management Policy: http://library.leeds.ac.uk/research-data-policies#activate-tab1_university_research_data_policy.

You are obliged to destroy data when your degree has been confirmed.

Dissertation Research Ethical Approval: Declaration

For students	*Please tick as appropriate*
Option 1: I **will NOT** conduct fieldwork with (data on) human participants for my dissertation.	
Option 2: I **will** conduct fieldwork with (data on) human participants for my dissertation.	✓

For **options 1 and 2** - I confirm that:

- ☐ The research ethics form is accurate to the best of my knowledge.
- ☐ I have consulted the University of Leeds Research Ethics Policy available at http://ris.leeds.ac.uk/ResearchEthicsPolicies.
- ☐ I understand that ethical approval will only apply to the project I have outlined in this application and that I will need to re-apply, should my plans change substantially.

For **option 2** only:

- ☐ I am aware of the University of Leeds protocols for ethical research, in particular in respect to protocols on **informed consent**, **verbal consent**, **reimbursement for participants and low risk observation**. If any are applicable to me, signing this form confirms that I will carry out my work in accordance with them. http://ris.leeds.ac.uk/PlanningResearch)

Student's signature: 201414310…….....…….……..

Date: 6th March 2024…….....

For supervisors	**Yes**	**No**
No further action required		
I confirm that the dissertation is in line with the module's block ethical approval (Part A & question 7).	x	
I have discussed the ethical issues arising from the research with the student and agree that these have been accurately and fully addressed.	x	

Further actions required		
Refer to dissertation co-ordinator for further review/ discussion.		
The dissertation falls outside the module's block ethical approval and the student was advised to apply for full ethical review.		

Supervisor's signature: …  ……..

Date: …4/4/2024…….....……..

For office use only	**Yes**	**No**
This application satisfies the conditions for block ethical approval.		

201414310
LAW3035

RESEARCH PLAN

ONE copy to be handed in with your internal research ethics application and ONE copy to be given to your supervisor by [date].

Name	Emily Rumer
Degree course	BSc Criminal Justice and Criminology (Quantitative)
Email address	ed19egr@leeds.ac.uk

Research area and question:

Please give a detailed research question and topic area. Discuss which theoretical debates you might engage with and sociological or social policy questions you are interested in. If you are still unsure please just give as much information as you can.

I have not got a definitive question as of yet. The research area is male wellbeing in prison, and its relationship with cell-sharing. Wellbeing will specifically be focussed on in the form of mental health. The influence of other variables will also be assessed.

Research methods:

What methods do you intend to use in your research? E.g. questionnaires, interviews, secondary sources.

I will use a secondary dataset. This is the HMIP Prisoner Survey, accessed from the UK Data service. I will use quantitative research methodology to examine the relationship between cell-sharing and mental health. I will then examine other confounding variables to analyse whether they have any effect on the relationship.

Key sources:

Please list at least five academic sources relevant to your proposed dissertation research area.

Crewe, B., Warr, J., Bennett, P. and Smith, A. 2013. The emotional geography of prison life. *Theoretical Criminology*, **18**(1), pp.56–74.

Goffman, E. 1959. *The presentation of self in everyday life*. New York: Anchor.

Hemming, L., Bhatti, P., Shaw, J., Haddock, G. and Pratt, D. 2020. Words don't come easy: How male prisoners' difficulties identifying and discussing feelings relate to suicide and violence. *Frontiers in Psychiatry*, **11**, article no: 581390 [no pagination].

Jewkes, Y. 2005. Men Behind Bars. *Men and Masculinities*, **8**(1), pp.44–63.

Muirhead, A., Butler, M. and Davidson, G. 2021. Behind closed doors: An exploration of cell-sharing and its relationship with wellbeing. *European Journal of Criminology*, **20**(1), pp.335–355.

Ethical issue associated with question 5:

My dissertation will involve the discussion of sensitive topics as it is in the area of male wellbeing in prisons. These topics include drug use, mental health issues and suicidal thoughts. The data is provided from the prisoners themselves, so any information reported in my findings will be a result of their responses to the HMIP Prisoner Survey.

This data is anonymised, and participants are completely unidentifiable which removes any potential harm to the respondents. As these topics may be sensitive to some readers, harm will be reduced as I will state in the introduction the topics which will be discussed.