Exploring the factors associated with the quality of transition out of Secure Children's Homes

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Abstract

Young people residing within Secure Children's Homes (SCHs) and an assessment of the quality of practice of all staff working within this setting has received limited research attention. Attachment theory and self-efficacy theory provide the theoretical underpinning for the use of the good practice model, the Ideal Transition of Care model (ITC; Burke et al., 2012) to assess the quality of discharge practice in two SCHs. Attachment difficulties are very common within the population of young people admitted to SCHs (Zvara et al., 2020) along with chaotic and often traumatic childhoods (Dong et al., 2004; Taylor & Weems., 2009). The literature base has suggested that the link between exposure to Adverse Childhood Experiences (ACEs) and longer-term, life outcomes, may be mediated by attachment (Corcoran & McNulty, 2018; Lin et al., 2020).

This thesis aimed to study the quality of discharge of young people from two SCHs and what factors may predict good quality practice. To do this, the thesis first identified factors which are associated with readmission to non-custodial settings (chapter 2) to understand areas which may be useful for professionals to focus on when working towards discharge with the aim of reducing the chance of a readmission. This thesis focuses on the care of young people with a high level of vulnerability and complex needs which are specifically being met by the SCH setting. Although a number of young people enter the SCH via the criminal justice route, the specialist, therapeutic and health-focused SCH setting has been deemed necessary to meet their individual needs rather than a custodial setting

therefore, this systematic review excluded studies which sampled custodial settings. The systematic review found the following significant predictors of readmission: (a) age and gender, (b) severe conduct problems and suicidality, (c) harsh parental discipline, disengaged parent-child relations, and level of family risk, (d) maltreatment severity, (e) length of hospital stay, (f) history of self-harming behaviour, (g) internalising profile, (h) history of childhood sexual abuse, (i) medication non-adherence, (j) multiple psychiatric and medical comorbidities, (k) prior psychiatric admission, (l) symptom severity, (m) living arrangements post-discharge and (n) targeted case management services post-discharge.

Of the predictors for readmission identified in the systematic review, five relate to exposure to ACEs and the remaining seven relate to the individual's characteristics. There were two main similarities between the population of young people in chapter 2 and the sample of young people in chapter 4; both were placed in a therapeutic/healthcare focused placement in order to meet their needs, and the majority of each sample had mental health or neurodevelopmental difficulties/diagnoses. Given these similarities, the predictors for readmission identified in chapter 2 were used to guide the selection and development of composite variables (characteristic profile and ACEs) used in chapters 4 and 5.

Next, in chapter 4, the thesis explored the characteristic profile and exposure to ACEs of the population of young people admitted to two SCHs. Finally, in chapter 5, the thesis combined the acquired knowledge from

chapter 2 and chapter 4 to understand the current quality of practice within the two SCHs in relation to discharging young people and identified factors, focusing on the characteristic and ACE profile, which may predict good quality practice when working towards discharge.

Chapter 3 details the development and construction of the composite variables used in the research and how the questions within each of the five quality of discharge practice domains map onto the quality standards, requirements and regulations which SCHs are subject to. It also explains how data was accessed, coded, cleaned and analysed. This research used secondary data gathered from an existing anonymised database containing data from 118 young people under the age of 18 residing in one of two SCHs. One hundred and eleven participants (65 male and 46 female) were included in this research.

Findings from chapter 4 showed that young people in the two SCHs have experienced higher levels of ACEs compared to the general population and offender population with 86.5% of the sample experiencing ≤4 ACEs. Significant differences in total ACE scores according to gender highlighted the increased susceptibility of females to experiencing ACEs. The number of previous care environments experienced by the young person was also positively significantly correlated to the total ACE scores.

In chapter 5, a good practice model, the Ideal Transition of Care model (Burke et al., 2012) was used to assess the quality of discharge practice across five domains. A transition in the context of this thesis is a

purposeful and planned discharge from the SCH to a placement within the community (NICE, 2013). Thresholds were used to determine whether the practice of the two SCHs met the threshold for 'acceptable discharge practice' across the five domains (threshold=≥4/5) and overall, for the total quality of discharge practice score (threshold=≥20/25). Findings showed that the 'acceptable discharge practice' threshold was met by at least 50% of the sample in three domains; 'educating patients to promote self-management', 'enlisting help of social and community supports', and 'coordinating care among team members'. For the total quality of discharge practice score, only a third of the sample met the 'acceptable discharge practice' threshold. Through the use of ordinal regression analysis, three key predictors of good quality practice within the domains and for the total quality of discharge practice score, were identified. The number of mental health diagnoses, the number of ACEs the young person had experienced and the level of instability they experienced prior to admission all had negative influences on the quality of discharge practice they received.

Understanding the factors which may predict readmission may direct professionals to areas which require more focus when planning a young person's discharge with the aim to reduce a readmission. Combining this knowledge with knowledge about the factors shown to predict the quality of discharge practices, this thesis can inform the development of evidence-based interventions to support young people which considers their individual characteristics, needs, and trauma history, as well as indicate areas for clinical improvement to improve the quality of discharge.

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Chapter 1 – Introduction

Background on SCHs

Secure Children's Homes (SCHs) provide accommodation for individuals who are at risk of harm to themselves or others (La Valle & Hart, 2016). SCHs are part of the children and young people secure estate (CYPSE) in England and accommodate young people between 10 and 18 years old. Within the CYPSE, young people aged 10-11 years old can only be placed within SCHs. SCHs offer full residential care, educational facilities and healthcare provisions providing a well-rounded package of care (Secure Children's Homes, 2020). Typically, young people residing in SCHs have been remanded or sentenced to detention by the criminal courts, or they are subject to welfare orders under the Local Authority. Although young people can be held on different grounds, they often have very similar, complex needs (NHS England, 2023). Young people are admitted to SCHs for a variety of reasons such as child sexual exploitation, child criminal exploitation, absconding, frequent missing episodes, self-harm, violent behaviours, substance misuse and mental health problems (Gyateng et al., 2014).

As of 31 March 2023, there were 14 SCHs in England and Wales (Department for Education, 2023), six for welfare-only, two for Youth Custody Service only and six which have both welfare and MoJ beds. In total, these SCHs provide 230 beds for young people, of which 105 beds are contracted to the Ministry of Justice (MoJ). Although 105 beds are contracted to the MoJ, on 31 March 2023, only 56 of these beds were used

by the Youth Custody Service. This represents 24% of the total capacity of SCH beds.

It is known that young people who are admitted to SCHs often present with complex emotional and behavioural difficulties and co-morbid needs which can result in frequent placement moves (Callaghan et al., 2003). These transitions can provide considerable instability for young people and can be a barrier to meaningful engagement (McKellar & Kendrick, 2013; Smith & Milligan, 2004).

Children considered for secure care display a range of risky behaviours including self-harm, violence to others, sexual exploitation and associations with pro-criminal, dangerous adults (La Valle & Hart, 2016). They often have a lack of awareness around the potential risks and the necessity to keep themselves safe. It is well known that there is an overrepresentation of young people with mental health difficulties, emotional or developmental disorders (Underwood et al., 2004) and these are linked to high-risk behaviours (Dogra et al., 2002; Lescano et al., 2007) and maltreatment and delinquency (Johnson-Reid, 2002; Lemmon, 2006; Underwood et al., 2004).

NHS England are responsible for the commissioning of health services within SCHs. They work alongside the Local Authority for the SCH, who hold operational responsibility, to ensure young people in SCHs can access the same health services available to young people in the community (NHS England, 2023). Since NHS England became the agency responsible for

SCH health commissioning, a national partnership agreement has been in place to support the commissioning and delivery of healthcare in SCHs, support a whole pathway approach for young people with complex needs, and work towards preventing young people entering welfare or youth justice detention (NHS England, 2023).

Within 10 days of admission to the SCH, the young person will have a comprehensive, formulation-based, holistic healthcare plan which has been co-produced with the young person (Royal College of Paediatrics and Child Health (RCPCH), 2023). The plan represents the whole-system approach taken by the SCHs whereby physical health, mental health and wellbeing, education, substance misuse, neurodevelopmental needs and speech and language needs are integrated into one plan. The SCHs work to the principles of the Framework for Integrated Care (SECURE STAIRS)(NHS England, 2016; Anna Freud National Centre for Children and Families, 2022) to ensure the young person receives care and treatment that is consistent, trauma-informed, formulation driven and evidence-based. SECURE STAIRS aims to improve the quality of care and outcomes for young people in the secure estate through fostering a culture which promotes consistent, trauma-informed, formulation-driven and evidence-based care delivered within a whole-systems approach (NHS England, 2016).

In 2023, the most frequent length of stay for children accommodated in SCHs was between 1 and 3 months with 29% of the SCHs population

having an admission this length (Department for Education, 2023). Over the last five years, most young people who were accommodated in SCHs had admissions lasting between 1 and 6 months (Department for Education, 2023).

Theoretical Framework

Transitional care is defined as "a set of actions designed to ensure the coordination and continuity of care received by patients as they transition between different locations or levels of care" (Parry et al., 2008, p. 317). In this research, the quality of the young person's discharge from the SCHs is assessed using the Ideal Transition of Care Model (ITC) proposed by Burke, Kriplani, Vasilevskis and Schnipper (2012). This good practice model of transitional care proposes 10 key components of an ideal transition from care. Burke et al. (2012) states that the framework is applicable to any healthcare-led system which aims to improve transitions or reduce readmissions. The ITC model provides insight for healthcare systems, such as SCHs, to improve transitions in care for their patient population (Burke et al., 2012). The model is often conceptualised as the patient crossing a bridge from one care environment to another whereby if a domain is lacking, the 'bridge' becomes weaker and therefore the quality of the transition decreases. The principles of the model are derived from the Transitional Care Model (Naylor, 2000) which describes several important components of a safe transition in care environments to improve

quality and manage risk during care handovers such as between a SCH and a community placement.

Burke et al. (2012) states that interventions should be designed to incorporate as many of the domains of an 'ideal transition' as possible however they acknowledge that barriers to implementing the model in real-world clinical practice may limit the number of domains which can be met. They suggest that care practices can be used to measure the extent to which each domain is met and a composite score can demonstrate quality of care (Burke et al., 2012).

Burke et al. (2014) conducted a systematic review aiming to evaluate which of the ITC domains have been targeted in prior interventions and examine the effect these domains had on reducing readmissions. From 66 studies, an average of 3.5 domains were addressed by interventions and the most frequently addressed domains were 'monitoring and managing symptoms after discharge', 'educating patients to promote self-management' and 'coordinating care among team members'. No intervention addressed the domain 'advance care planning'. Burke et al. (2014) concluded that increasing the number of domains targeted within the ITC was associated with significantly increased success in reducing readmissions. However, not all domains had the same effect on reducing readmissions; 'monitoring and managing symptoms after discharge', 'enlisting help of social and community supports' and 'educating patients to promote self-management' were most effective.

This research focuses on five domains from the ITC model. A working definition for this research is as follows; if all five domains are met by the SCHs, this indicates a high-quality discharge. In line with Burke et al.'s (2012) recommendation, this research uses care practices to measure the extent to which each domain is met, and a total composite score is generated to demonstrate overall quality of discharge.

It is important to note that from the 66 studies included in the review, no study included all 10 domains therefore any conclusions the review has drawn in relation to the relative influence of the inclusion of one domain versus another is impacted.

The current practice of the SCHs will be used to measure the extent to which the following five ITC model domains are met:

1. Discharge Planning
2. Educating Patients to Promote Self-Management
3. Enlisting Help of Social and Community Supports
4. Advance Care Planning
5. Coordinating Care among Team Members

The theoretical underpinning of this model can be understood through a combination of Attachment Theory (Bowlby, 1969) and Self-Efficacy Theory (Bandura, 1977). Attachment theory (Bowlby, 1969) can help to explain the underlying importance of domains three, four and five and the self-efficacy theory (Bandura, 1977) can help explain the underlying importance of domain one and two. These will be discussed further in the paragraphs below along with literature supporting each domain in the model.

Attachment theory (Bowlby, 1969) is a theory of development that focuses on relationships and what a primary caregiver can give to a child, or how that child develops when they have a carer who meets their needs. Attachment is an adaptive evolutionary process and a means of survival (Bowlby, 1969). Having secure attachments facilitates many areas of cognitive, social, emotional, psychological, and behavioural development and functioning (Malekpour, 2007; Meins, 2013; Walker et al., 2022). If a child feels safe, they will explore their environment and learn however if they do not, their learning may be inhibited. The population of young people admitted to SCHs have mostly experienced chaotic childhoods (as outlined in chapter 4) which often relate to parenting and parenting styles and therefore their attachments (Zvara et al., 2020). Attachment theory is therefore key to consider when trying to improve practice within SCHs. Notable for this group of young people is the lack of early intersubjective experience (Golding, 2015). Instead, they focus their attention on staying safe, using coercive or self-reliant behaviours to stay in control in their relationship with their caregivers. Their way of relating can sometimes push staff into taking on the role of an abusive/neglectful parent.

The attachment the child forms in their early life to their caregiver gives them a model for how they see themselves, how they see others and how they see the world around them (Bowlby, 1969). They develop a model of their own internal personal factors and judgments about their own skill set, as discussed in self-efficacy theory (Bandura, 1977).

Briggs et al. (2021) noted that good quality practice is tied to the availability of ongoing support and follow-up services after discharge, particularly enabling the young person to access mental health services, substance abuse interventions, housing support, and other community-based resources. Along with community supports, the role of family and social support is crucial for promoting positive outcomes (Kalmakis & Chandler., 2015). This family support underpins good practice in relation to discharge planning when the young person still resides within the SCH; families should be involved in the care and treatment process throughout (Shah et al., 2020). This should include educating them on the needs of the young person and facilitating the repair of family relationships. Briggs et al. (2021) outlined that family and social support provides a sense of safety and comfort for the young person during their transition to community living and this is a critical factor in a successful discharge process. Relationships which bridge this transition provide continuity for the young person especially at a time of significant change.

Self-efficacy theory (Bandura, 1977) can help explain the underlying importance of discharge planning (domain 1) and educating patients to promote self-management (domain 2). Self-efficacy theory refers to someone's belief in their capabilities to achieve something (Bandura, 1977). It looks at judgements of ability rather than actual ability. The young person needs to have high self-efficacy to believe that they have the capabilities to have a successful discharge and positive outcomes. They also need to believe that they have the skills to progress, manage their own

difficulties and make changes within their lives to reduce the chance of returning to secure care. During the admission, it is suggested that staff should be working with the young person to increase their self-efficacy and the skills needed for self-management.

Drawing from research by Panisch et al. (2020) and Schure et al. (2020) it can be suggested that educating young people about how to promote their own health and wellbeing and empowering them to take an active part in their own care, treatment and recovery can constitute good quality practice. Mathur et al. (2018) established that this should include teaching the young people coping skills, self-care strategies and stress management techniques, all of which can be used post-discharge. This can help to build resilience and increase the chance that the young person remains in the community. As previously outlined, having a secure attachment facilitates learning and exploration for the young person. These attachments may support the development of emotional regulation skills and appropriate coping strategies when faced with challenging emotionally driven situations.

Considering domain 3, enlisting the help of social and community supports, Goddard (2021) and Zhang et al. (2022) found that involving family members, other caregivers and educating these individuals on how to provide support post-discharge can provide young people with a sense of comfort and safety. From attachment theory (Bowlby, 1969) it is clear that fostering secure relationships and making the young person feel safe

is crucial when meeting their needs and ensuring progress is made. Supporting the development of secure relationships with new placement staff whilst the young person is in a familiar, safe environment is important. This also provides a sense of control for the young person as they feel involved in the planning of their discharge. As well as family members, Cohrdes and Mauz (2020) established that the availability of community-based resources and support systems, such as mental health services and peer support groups play a significant role in supporting the young person's transition into the community. It is suggested that building a network of social and community supports around the young person whilst in the SCH is critical to the success of their discharge. This will ensure the resources and support that they require after discharge are already in place at the point of leaving.

Advance care planning (domain 4) requires the integration of the young person and their family members into the decision-making process. Research has highlighted the importance of including the patient in their own care planning for positive outcomes (Kuusisto et al., 2020; Rose & O'Connor, 2022).

Both advance care planning (domain 4) and enlisting the help of social and community supports (domain 3) are crucial to the discharge process. Building attachments and secure relationships may be especially difficult for young people given the high rates of ACEs highlighted in chapter 4. Therefore, if staff can build up the skills needed for community living

prior to discharge through visits to their next placement, this may make the discharge easier for the young person. In line with attachment theory, they will hopefully associate the new placement with a sense of safety and security due to the increased familiarity with staff and the environment. Feeling safe will increase the likelihood that the young person will settle into their new environment and having visits to this placement pre-discharge will reduce the number of unknown factors.

Domain 5, coordinating care among team members, highlights the need for coordinated care among professionals. Xiao et al. (2019) highlighted the need for interdisciplinary teamwork to ensure comprehensive care is provided for the young people. Poor communication and disjointed services and working practices can interfere with the delivery of care (Jones et al., 2020) and consequently lead to poorer clinical practice in relation to discharging young people. There are challenges to achieving coordinated care including the lack of shared electronic systems, staff shortages, resource constraints and poor communication practices. Improving information sharing, implementing a shared electronic health system, and running awareness/engagement sessions to ensure staff are aware of available community services may help overcome these barriers.

Drawing from attachment theory, it is important that the SCHs communicate with the new care teams within the community to help them to understand the young person's attachment style and associated behaviours. This will help them to develop positive relationships, be aware

of potential dynamics that the staff may be drawn into and help them to resist responding in an unhelpful manner whilst supporting the young person to develop their interpersonal, relational skills.

Summary of factors which impact on transitions and readmissions

Alongside ACEs, 11 predictor variables were investigated in chapter 4 and 5; gender, family contact, historical risk, current risk to others, risk to self, past engagement, mental health diagnosis, assessments available to care staff, educational attendance, level of instability, length of stay.

Firstly, research (Barker et al., 2010; Fontanella, 2008) has shown that gender is a significant predictor for readmission. Family contact is viewed as a crucial component of the young person's support structure as they transition into the community (Kalmakis & Chandler., 2015) however disengaged parent-child relationships are also a predictive factor of readmission (Blader, 2004; Fontanella, 2008) and are closely related to ACEs.

Offence history, or historical risk, has been shown to be a strong predictor of reoffending and the severity of subsequent offences (Cottle et al., 2001; Mulder et al., 2010). The current risk a young person poses to others is also closely associated with their risk of reoffending (Hempel et al., 2011; Dahl et al., 2018; Miccio-Fonseca & Rasmussen, 2018) and the risk they pose to themselves is important to consider when looking at factors associated or predictive of readmission. Most prominently, suicidality (Blader, 2004; Chung et al., 2008; Fontanella, 2008) and self-

harm (McCarthy et al., 2017) have been identified as significant predictors for readmission.

Past engagement with interventions is not only considered by professionals when looking to discharge a young person to the community (Bombard et al., 2018), it is also a predictive factor for serious and violent reoffending (Mulder et al., 2010). There appears to be limited research into the evaluation of engagement methods. Given engagement is associated with re-offending, it would be beneficial for future research to focus on how best to engage young people in interventions in an attempt to improve clinical practice. The more information that is known about a young person, in this research the number of assessments available to the care staff, the better-informed clinical decisions are (Benner et al., 2008) and the higher the quality of care to the young person (Tierney, 2001).

Multiple mental health diagnoses have been shown to be a predictor for readmission (Fontanella, 2008; Phillips et al., 2018). Despite this, it must be considered that the stability of psychiatric diagnoses in adolescents is poor, and research has found that after a 2-year follow-up after a period of hospitalisation, these diagnoses have reduced construct validity (Mattanah et al., 1995). This may reflect the differing paths for development of psychopathology during adolescence (Mattanah et al., 1995).

Educational attendance (Merians et al., 2019) and achievement scores (Cottle et al., 2001) have both been found to be inversely related to re-offending.

Drawing from The Trauma Recovery Model (Skuse & Matthew, 2015), stability is crucial for psychological growth. Attachment theory (Bowlby, 1969) also states that stability is crucial for developing and maintaining a sense of security, which in turn facilitates recovery and psychological growth. In this research, level of instability is measured by the number of previous care placements the young person had experienced as this has been found to be a static predictor of reoffending (Cottle et al., 2001) and a significant predictor of readmission (Chung et al., 2008; Fontanella, 2008; Phillips et al., 2020). The length of a young person's admission has consistently been found to be a significant predictor of readmission (Fontanella, 2008; McCarthy et al., 2017; Phillips et al., 2020). McCarthy et al's (2017) research was conducted in the wealthiest county of its state in the USA. This may have implications on their sample (98 adolescents) and therefore the generalisability of their results to poorer populations. Other research noted above which has also found the length of admission to be a significant predictor of readmission have significantly larger sample sizes and in Fontanella's (2008) case, included readmissions to three hospitals therefore readers can be confident that length of admission is a predictor of readmission.

Most research investigating factors which impact readmissions adopt a retrospective design and therefore is heavily dependent on the accuracy and completeness of written records. These can be compromised by differing interpretations of clinical events and differing documentation procedures/policies. This area of research also tends to suffer from unmeasured confounding factors due to the limitations of data collection and research design. Confounding factors may include readmissions outside of the geographical study area, adherence to community treatment and medication, death after discharge, and factors relating to the living environment. Both these limitations may cause bias either underestimating the number of readmissions or artificially inflating the number of young people not at risk of readmission.

Adverse Childhood Experiences (ACEs)

The phenomenon of Adverse Childhood Experiences was first described by Felitti et al. (1998). They are defined as stressful or traumatic events that a young person may experience before the age of 18 (Felitti et al., 1998). Research over two decades has consistently shown that ACEs have a significant impact on adult social, behavioural, mental and physical health (Anda et al., 1999; Chapman et al., 2004; Dube et al., 2003; Schilling et al., 2007) and they are known to be significant risk factors for multiple leading causes of death in adults, including alcoholism, severe obesity, depression, cancer, suicide, chronic lung disease, smoking and heart disease. This demonstrates that traumatic, dysfunctional childhoods

have a lasting effect on all aspects of life, whether this be physically, mentally or behaviourally. The World Health Organisation (WHO; 2018) have outlined ten universally accepted adverse childhood experiences:

1. Physical Abuse
2. Emotional Abuse
3. Sexual Abuse
4. Physical Neglect
5. Emotional Neglect
6. Parents being separated or divorced
7. Household members experiencing domestic violence
8. Household members experiencing substance misuse problems
9. Household members experiencing mental illness
10. Household members being incarcerated

As outlined within Attachment Theory (Bowlby, 1969), developing and maintaining secure attachments throughout childhood is important. It is well known that ACEs can act as barriers to a young person's ability to develop healthy attachments (Grady et al., 2017). If a young person experiences abuse within their childhood, this will likely make it very challenging for them to develop secure attachments, especially with the abuser (Raby et al., 2017). Absent parenting and neglect, either due to incarceration, divorce, or substance/alcohol misuse can also lead to poor attachments (Snyder et al., 2024). An environment where ACEs are present such as domestic violence is not conducive to the development of effective, secure attachments. Given the clear link between attachment and ACEs, ACEs were included alongside the factors discussed above when considering factors which may influence the quality of discharge.

Multiple ACEs are common as traumatic experiences tend to co-occur and are interrelated (Dong et al., 2004). This can cause prolonged stress and create cycles of childhood maltreatment in successive generations as those who experience ACEs themselves are more likely to raise their children in homes where ACEs are also present (Bellis et al., 2013).

ACEs are extremely common within the general population with 63.9% people experiencing ≥1 ACE and 12.5% experiencing ≥4 ACEs (Centres for Disease Control and Prevention, 2016). This study used 17,337 young people for their sample. Individuals who had experienced 4 or more ACEs compared to those with none were at an increased risk of displaying mental health issues, suicidal behaviours, physical health issues, criminal justice involvement, illicit substance use and poor socioeconomic outcomes (Felitti et al., 1998; Bellis et al., 2013). Baglivio et al. (2014) found that young offenders from a USA sample were four times more likely to have ACE scores of 4 or over and 13 times less likely to have no adverse childhood experiences in their childhood compared to Felitti et al's (1998) adult sample. Female offenders were found to have significantly higher ACE scores than male offenders (Baglivio & Epps, 2016).

The harmful impact of ACEs often results in young people becoming part of a group termed "high risk, high harm and high vulnerability" (NHS England, 2020). Young people who fall within this category tend to have spent time accommodated in the secure estate, of which SCHs are one aspect, either through welfare or criminal justice routes. Despite the

expansive body of literature on ACEs, only a limited amount of research has been conducted investigating ACEs and SCHs separately (Falshaw & Browne, 1997; Falshaw & Browne, 1999; Pates et al., 2018). Literature has investigated the rates of ACEs within young offender populations however it has not exclusively examined the rates of ACEs within the SCH population, a population characterised with a high level of vulnerability and high risk.

The long-term health and life satisfaction outcomes for individuals who received residential care services during childhood are often poor (Cameron et al., 2018; Refaeli et al., 2019; Cabrera et al., 2020; van IJzendoorn et al., 2020) Consequently, these individuals are widely considered to be vulnerable (Gilligan, 2001; Ellis et al., 2017). They tend to have higher rates of criminal activity, unemployment, poverty, homelessness, mental health problems, substance misuse difficulties, and attempts of suicide (Berlin et al., 2011; Berejena Mhongera & Lombard, 2016; Liabo et al., 2017; Sims-Schouten & Hayden, 2017; Sulimani-Aidan, 2017; Diraditsile & Nyadza, 2018; Palmer et al., 2022; Sekibo, 2020).

It is important to identify factors and experiences which underlie poorer outcomes for young people residing in residential care services, alongside factors which are likely to lead to better outcomes, to ensure services can be improved for the longer-term benefit of young people. Previous research (Melkman & Benbenishty, 2018; Simkiss, 2019) has

indicated that these outcomes could be related to a high prevalence of ACEs and individuals who resided in residential care during childhood have a heightened risk of poor outcomes (Hughes et al., 2017; Melkman & Benbenishty, 2018; Simkiss, 2019; Steptoe et al., 2019; Lund et al., 2020). Individuals who have previously resided in residential care are likely to have a history of insecure attachments, multiple placement moves, abusive or neglectful relationships and multiple relationship breakdowns (Mann-Feder, 2019; Miranda et al., 2019; Refaeli et al., 2022). Research has found that individuals with a history of childhood maltreatment are more likely to present with insecure attachment styles (Baer & Martinez, 2006; Bakermans-Kranenburg & van IJzendoorn, 2009). The literature base indicates that the association between ACEs and health and wellbeing outcomes may be mediated by attachment (Corcoran & McNulty, 2018; Lin et al., 2020).

Current SCH Practice Regulations

SCHs are subject to the "Children's Homes (England) Regulations 2015" (Department for Social Care, 2015). The "Guide to the Children's Homes Regulations including the quality standards" (Department for Education, 2015) provides further explanation of each of the nine Quality Standards outlined in the regulations:

1. The quality and purpose of care standard
2. The children's views, wishes and feelings standard
3. The education standard
4. The enjoyment and achievement standard

5. The health and well-being standard
6. The positive relationships standard
7. The protection of children standard
8. The leadership and management standard
9. The care planning standard'

Each standard has a non-exhaustive set of underpinning, measurable requirements that the home must achieve to meet each standard. These requirements and quality standards should be interpreted and applied in the context of each child's individual needs and the individual setting.

Alongside the regulations, The National Institute for Health and Care Excellence (NICE, 2013) also provide quality standards in line with the Health and Social Care Act 2012 which define best practice in health and wellbeing for looked after children from birth-18 years and care leavers.

Lastly, The Royal College of Paediatrics and Child Health (RCPCH) first published healthcare standards for children and young people in secure settings in 2013. These were refreshed in 2019 and the current standards were finalised in April 2023. The standards (RCPCH, 2023) aim to help healthcare professionals, managers, directors, commissioners and service providers ensure that young people receive high quality healthcare provisions that meets their complex, individual needs and this care and support is equivalent to those living in the community. The standards take a multi-professional approach and apply to young people on both welfare and youth justice placements in secure settings. When the healthcare standards were refreshed in 2023, NHS England collaborated with Peer

Power, a child's voice organisation, to ensure the child's voice shaped the re-development of standards. As a result, the new standards place a greater emphasis on building trusting relationships with young people, listening to their opinions and wishes, continuity of care, and including them in decisions about their care. The standards also incorporate the SECURE STAIRS framework (NHS England, 2016; Anna Freud National Centre for Children and Families, 2022) which emphasises integrated, trauma-informed care. Specific detail in relation to which standards and requirements map onto the five domains within the Ideal Transition of Care Model (Burke et al., 2012) can be found in Chapter 3.

Thesis Aims and Objectives

This thesis investigates the quality of discharge practice and the factors which may predict good quality discharge practice from two SCHs.

Overview of Thesis

After this introduction, Chapter 2 presents a systematic review which explored and identified the factors associated with the readmission of young people before their 18th birthday to non-custodial institutional settings. Factors identified in this review guided the development and construction of variables to be investigated in chapter 4 and 5. Chapter 3 outlines this development and construction of variables alongside the theoretical framework, how data was accessed, coded, cleaned and analysed.

Chapters 4 and 5 presents a study on what factors predict the quality of discharge practice in two SCHs by using secondary data and furthering the knowledge gained in chapter 2 by focusing on system-level and patient-level factors, areas which are sparse in the current literature base. Chapter 4 presents the characteristic profile of young people residing in two SCHs. Chapter 5 presents the in-depth exploration of predictors for quality of discharge within two SCHs. The predictive factors considered included individual and family characteristics as well as ACE history.

The final chapter of this thesis, Chapter 6, provides an overview of the main findings whilst relating these to the wider literature before suggesting improvements for clinical practice. The limitations of the research and the practical implications that can be drawn from the whole thesis were also discussed.

Chapter 2 – What Are the Factors Associated with the Readmission of Young People to Non-Custodial Settings: A Systematic Review

Abstract

Background: Reducing hospital readmissions can save healthcare costs. So far, only one systematic review published in 2020 has investigated predictive factors of readmission of young people to psychiatric inpatient units. It reviewed studies that utilised children and adolescents admitted in psychiatric facilities only and those children must have been admitted and readmitted due to a mental illness diagnosis and deterioration. There is a need to review studies on children and adolescents admitted to non-custodial settings for welfare reasons.

Aim: To explore and identify the factors associated with the readmission of young people under 18 to non-custodial institutional settings.

Methods: Seven bibliographic databases were searched. The eligibility criteria included studies investigating factors associated with readmission of children and adolescents to non-custodial settings for welfare reasons. The quality of the included studies was assessed using the Joanna Briggs Institute checklist. Ten data points, such as population characteristics, research design, readmission rates, and predictive factors, were extracted from the studies. Studies were analysed using descriptive data synthesis.

Results: A total of 8,123 studies were identified. Ten observational studies were retrieved after applying the inclusion/exclusion criteria. Two of the ten studies were at moderate risk of bias. Following descriptive data synthesis, the following predictive factors were identified: (a) age and gender, (b) severe conduct problems and suicidality, (c) harsh parental discipline, disengaged parent-child relations, and level of family risk, (d) maltreatment severity, (e) length of hospital stay, (f) history of self-harming behaviour, (g) internalising profile, (h) history of childhood sexual abuse, (i) medication non-adherence, (j) multiple psychiatric and medical comorbidities, (k) prior psychiatric admission, (l) symptom severity, (m) living arrangements post-discharge and (n) targeted case management services post-discharge.

Conclusion: Readmissions rates can be reduced by deriving interventions targeting predictive factors.

Keywords: Young people, Adolescents, Readmission, non-custodial settings, healthcare.

Introduction

In the United Kingdom, the Care Quality Commission is responsible for regulating the quality of health and social care (Care Quality Commission, 2021). Hospital readmission is considered a critical indicator of the quality of care (QoC) (Psotka et al., 2020). In most cases, readmission is viewed from the perspective of a further admission to a healthcare facility within 30 days after a discharge (Rubin, 2015). Various factors may be associated with elevated risk for readmission, including (a) system factors such as discharge planning, aftercare, length of stay, and poor communication between services (Kripalani et al., 2014; Trask et al., 2016), (b) clinical factors, such as the mental wellbeing of the patients and their clinical history (Fontanella, 2008; Fite et al., 2009), and (c) patient-related factors like demographic variables and poor social support (Feng et al., 2017). Various studies have demonstrated that age is a significant determinant of hospital readmission, whereby older patients are more likely to be readmitted than younger patients (Berry et al., 2018; Hasegawa et al., 2016; Li et al., 2018). Therefore, it is imperative to investigate the risk factors for readmission among young people.

Researchers and hospital administrators focus on reducing hospital readmission as a cost reduction strategy in the healthcare system (Rubin, 2015). According to Healthwatch (2018), data obtained from 70 English health trusts indicated that emergency readmissions had increased by about 21% between 2013/4 and 2017/8 in the UK, costing the NHS approximately £2.4bn per year. Consequently, readmission rates are a vital

outcome in most healthcare settings and research studies conducted within and without the United Kingdom (Boekamp et al., 2017).

Other adverse consequences of high readmission rates include negative mental health consequences (Noyola et al., 2014), likely due to separation from family and a young person's social support, education, and general isolation (Barker et al., 2010; Hajebi et al., 2013). Some of the mental illnesses that have been linked to hospital readmission include post-traumatic disorder (PTSD), low self-esteem, and self-harm behaviours (Barker et al., 2010; Noyola et al., 2014). Despite that young people are at a lower risk than older people for hospital readmission, high readmission rates have been recorded within 180 days post-discharge, resulting in the name of "revolving" services (Noyola et al., 2014). Therefore, reducing readmission rates among young people could also be an interventional strategy to promote their mental wellbeing following hospital admission. Due to the increasing readmission rates since 2010, particularly among young people (Barker, 2010; Healthwatch, 2018; Noyola, 2014), it is imperative to investigate risk factors to help clinicians identify those who are vulnerable and provide them with appropriate care and aid researchers in developing and enhancing treatment modalities for young people as a means of curbing their high readmission rates.

At the centre of this review is young people who were admitted and readmitted to non-custodial settings. Non-custodial settings are broadly split into two categories; a) psychiatric facilitates which focus on mental

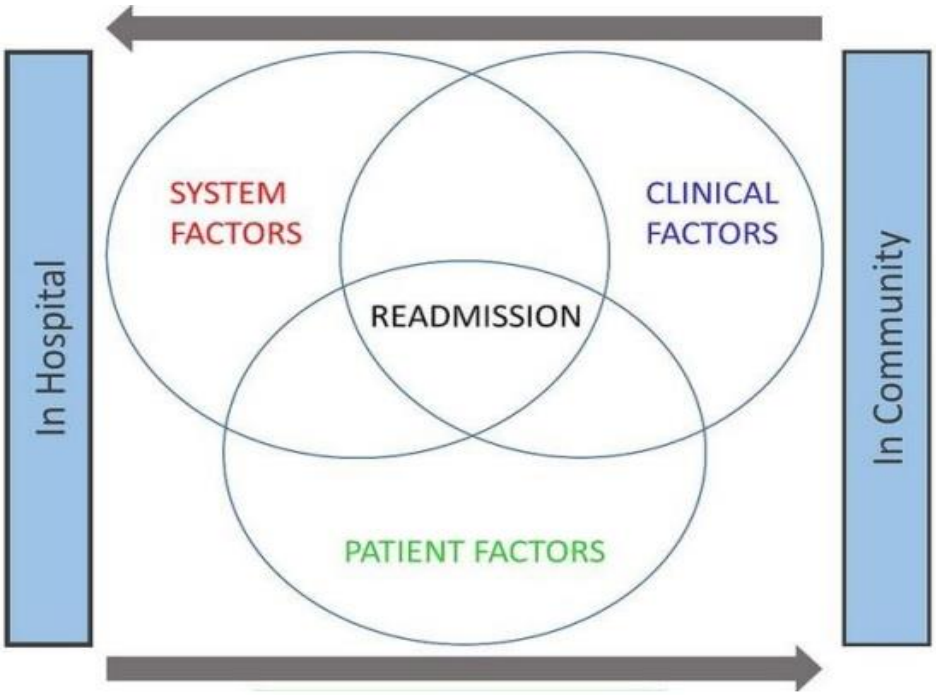
health, including but not limited to inpatient mental health wards and psychiatric intensive care units (PICUs), and b) forensic and secure mental health settings, including but not limited to secure units or secure centres. As the review is not focused on factors relating specifically to reoffending rates, this excluded prison settings and Youth Offending Institutions (YOIs).

So far, only three systematic reviews (SRs) have been conducted on readmission risk factors: two focusing on adults (Donisi et al., 2016; Sfetcu et al., 2017) and one focusing on paediatrics (Edgcomb et al., 2020). However, in Edgcomb et al.'s (2020) inclusion criteria, they stated that they selected studies that utilised paediatrics admitted only in psychiatric facilities and that those children must have been admitted due to a mental illness diagnosis. Also, they restricted the review to only include studies that used participants who were readmitted due to a deterioration of the mental illness, which informed their first admission. The current SR widens the scope by focusing on various non-custodial care settings and reducing the focus/requirement for mental health or neurodevelopmental diagnoses. This review covers forensic and secure settings such as secure units, secure centres and secure inpatient wards as well as psychiatric (mental health) facilities. The current review also does not restrict the reasons for admission and readmission. Some of the reasons for admission and readmission may include but are not limited to absconding, offending behaviours, community sentences, vulnerability to exploitation, and other welfare grounds.

Further, the conceptual framework that guides the execution of the current SR was adopted from Walsh et al.'s (2016) study, which states that there are three broad categories of hospital readmission risk factors: (a) system factors, (b) patient-related, and (c) clinical factors. Figure 2.1 below presents the conceptual framework.

Figure 2.1

Conceptual framework indicating the interaction between system, clinical, and patient-related factors in hospital and community settings (Walsh et al., 2016).



Aim

To explore and identify the factors associated with the readmission of young people under 18 to non-custodial settings. Identifying these factors may provide an increased understanding of what affects readmission. This may allow future researchers to develop interventions, treatment pathways, and aftercare packages to reduce readmissions. These strategies could be trialled, tested and later systematically evaluated in more in-depth studies.

The objective of this review was to explore and clarify the evidence base available in relation to the factors associated with readmissions of

young people to non-custodial settings. This clarification will be made by a systematic review of the evidence base of journals and abstracts in this topic area and will explore all types of study.

Research Question

What factors are associated with the readmission of young people to non-custodial settings?

Methods

Sources of Literature

Seven electronic bibliographic databases, namely PsycInfo, MEDLINE/PUBMED, EMBASE, ERIC, CINAHL, Web of Science, and SocIndex were searched on 24/11/2021. The citation publication dates were between 01/01/1991 and 24/11/2021. The search was performed and the date range for the included/excluded studies was chosen due to the introduction of separate mental health trusts within the NHS and the closure of mental asylums and the associated changes to system practices. The bibliographic databases were preferred in this review because they focus on psychology and behavioural sciences research publications from various scientific journals. The databases were accessed through the Campbell Library. Cochrane Library, specifically CENTRAL, was also used to search for relevant systematic reviews and meta-analyses. The bibliographies of these articles were also searched for relevant primary studies. Finally, key journals, namely the *Journal of Child and Family Studies, Archives of Physical Medicine and Rehabilitation, Journal of*

Hospital Medicine, and *Paediatrics,* were also hand-searched to retrieve any studies that might not have been found on the databases above.

Inclusion/Exclusion Criteria

The inclusion/exclusion criteria (see Table 2.1) was developed using the PICO framework. However, considering the broadness of the subject matter under investigation, there was no specific intervention or comparator. Instead, the criteria focused on the population, exposure, outcome, and study design.

Table 2.1

Inclusion/exclusion criteria using PICO framework

Criterion element	Inclusion	Exclusion
Population	Young people aged below 18 years (before their 18th birthday) admitted to non-custodial settings. Non-custodial settings include: - Psychiatric units, - Psychiatric hospitals, - Mental health inpatient units, - Mental health rehabilitation units, - Secure units, - Secure wards, - Secure centres, - Secure placements, - PICUS	Young people admitted to general physical health hospitals. Young people who have reached their 18th birthday Young people in custodial (non-therapeutic or non-health related) settings – includes: - prisons, - Young offenders centres, - Young offenders institutions/prisons, - Detention centres, - Juvenile justice centres, - Secure training centres, - Immigration detention centres. No information on the reason for initial admission
Exposure	Predictive factors of readmission. Factors associated to readmission.	N/A
Outcome	The readmission of participants. The reason for readmission does not matter.	No information on reasons for readmission. Readmission occurred after the 18th birthday of the participant(s).
Study Design	Both qualitative and quantitative studies	Secondary studies like systematic reviews, literature reviews, and meta-analyses. Case reports will be excluded

Search Strategy

Keywords and search terms were combined using Boolean connectors "AND" and "OR." The search terms and keywords used include hospital admission, hospital readmission, youth/young people/children/adolescents, and non-custodial settings/psychiatric facilities/inpatient wards/PICUs/secure units/wards/placements/centres.

Previous literature was consulted to ensure international variations of terminology that other researchers may use were included. The actual syntax can be seen in Appendix 1.

Study Selection

Titles were screened to identify relevant studies. Duplicate sources were eliminated at this stage. After removing duplicates, the inclusion and exclusion criteria were applied at the title and abstract screening separately. Thirdly, using the full text, the remaining articles were screened against the inclusion and exclusion criteria. The final stage of study selection was the screening done at the data extraction stage using the inclusion and exclusion criteria.

Quality Assessment

All ten studies which met the inclusion criteria were quality assessed by the author, using the Joanna Briggs Institute (2017) critical appraisal tool for cohort studies. The pre-defined criteria covered areas such as sampling, measurement, dealing with bias, follow-up and statistical analysis. Each question was scored as Yes (1), No (0), Unclear (U) or Not Applicable (NA). The quality assessment scores are reported in the results section below. Four (44%) of the nine selected studies were independently assessed by a second reviewer to promote consistency and accuracy. This reviewer was a trainee clinical psychologist independent to the research who had experience of conducting systematic reviews. Any cases of disagreement were resolved through discussion and where necessary, a

qualified forensic psychologist was consulted. The interrater correlation coefficient was 0.88 indicating 'excellent' interrater reliability (Cohen, 1960).

Data Extraction

The data extraction form is presented in Appendix 2. The form has ten columns in the following order: article citation, study purpose/aims, sample (i.e., size and demographics (e.g., gender, age, range, and more)), eligibility criteria, country of study, research design, data sources, measurement of readmission, follow-up period, readmission rates, and factors associated with readmission. Two reviewers (author and trainee clinical psychologist) independently extracted the selected articles based on the above variables. Any disagreements between the two reviewers were resolved through discussion. Study identifiers were used for each study. Any missing information was sought from the primary authors of the articles.

Results

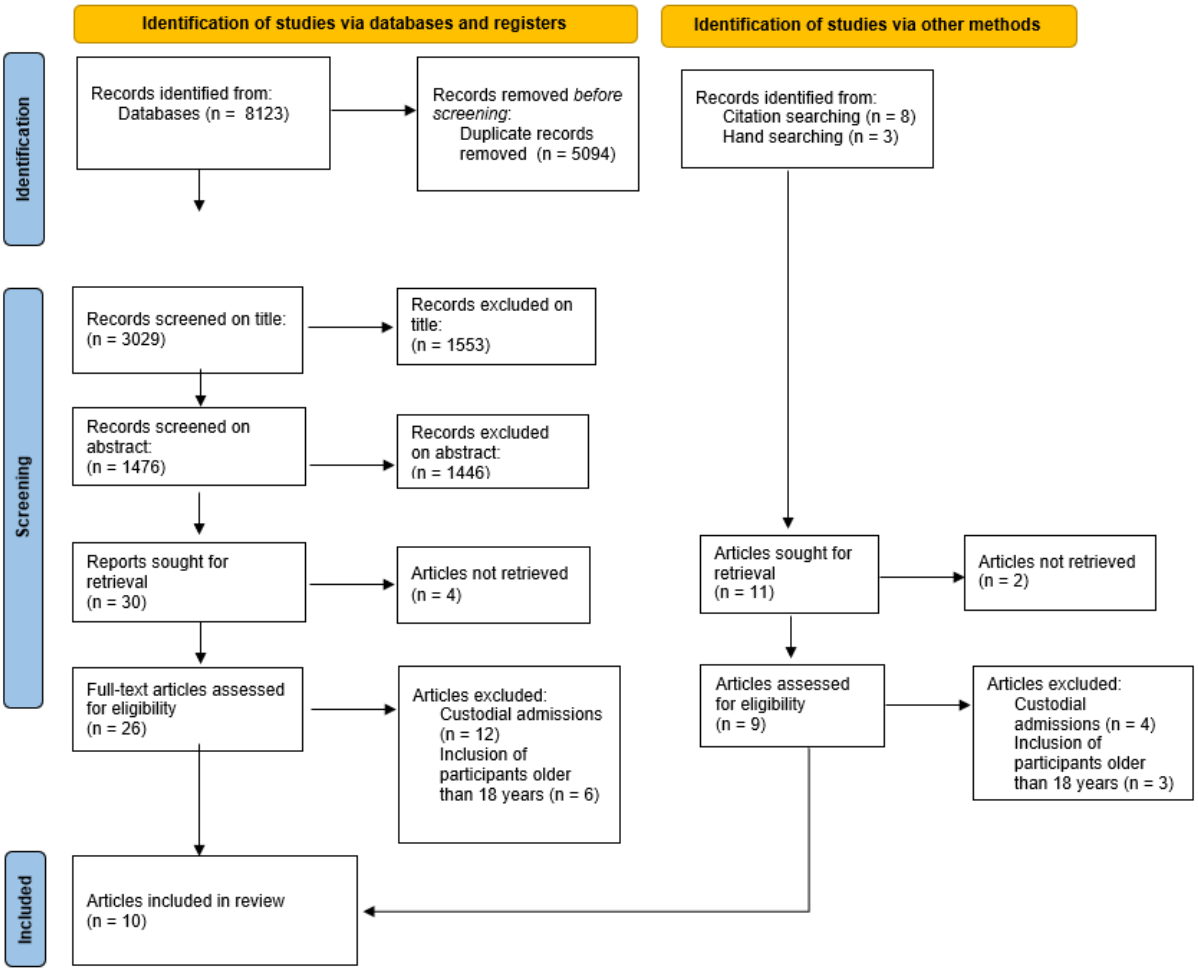
Description of Studies

After applying the search syntax, 8,123 hits were retrieved from the seven databases. 3,223 citations were identified as duplicates. Eight articles were identified from citation searching of relevant studies and three from hand searching. After screening the titles and abstracts, 40 articles remained. These were sought for retrieval. Despite attempts to contact authors directly and access articles through ResearchGate, six articles were

not retrieved due to missing full texts. The remaining 35 articles were assessed for eligibility using the inclusion/exclusion criteria. Twenty-five studies were also eliminated because they were conducted in custodial settings (n = 16) and others included participants older than 18 years (n = 9). Finally, ten articles were selected for review. Appendix 2 shows the data extraction form, which contains the characteristics of the ten studies reviewed. Figure 2.2 below summarises the selection process.

Figure 2.2

PRISMA Flowchart outlining the study selection process



Characteristics of Included Studies

All ten studies were cohort studies; nine were retrospective (Barker et al., 2010; Blader, 2004; Bobier et al., 2005; Chung et al., 2008; Fontanella, 2008; Kagabo et al., 2017; McCarthy et al., 2017; Phillips et al., 2020) and one was prospective (Berona et al., 2017). Totalling the participants in the 10 studies, the total number of participants in this review is 17,242. Apart from Kagabo et al. (2017), all the studies investigated the risk factors of readmission to children and adolescent psychiatric units.

Kagabo et al. (2017) examined the relationship between the length of hospital stay and readmission. Eight of the ten studies were conducted in the United States (Blader, 2004; Chung et al., 2008; Fontanella, 2008; Berona et al., 2017; Kagabo et al., 2017; McCarthy et al., 2017; Phillips et al., 2020; Yampolskaya et al., 2013), one in New Zealand (Bobier et al., 2005), and one in Australia (Barker et al., 2010).

All ten studies used different eligibility criteria when selecting their participants. McCarthy et al. (2017) selected all clients admitted in January 2014 to an adolescent psychiatric hospital in the United States. Barker et al. (2010) included all clients admitted between 1 January 2005 and 31 December 2005 to an adolescent psychiatric unit in Sydney, Australia. Berona et al. (2017) selected adolescents admitted to an adolescent psychiatric hospital due to a suicide attempt or suicidal ideation. Bobier et al. (2005) selected adolescents admitted to a psychiatric unit for more than 48 hours with a diagnosis of major mental illness. Kagabo et al. (2017) included adolescents admitted for mental health reasons and had an admission lasting less than a year. Phillips et al. (2020) included Medicaid-eligible youth (disability, foster care and poverty) with a primary mood disorder diagnosis. Blader (2004) selected all psychiatric inpatient admissions of children aged 5 -12 years within 14 months. Fontanella (2008) included youth with the following characteristics: (a) Medicaid enrolment; (b) admitted to a psychiatric hospital; (c) age limitation. Chung et al. (2008) selected all admissions to an inpatient psychiatry hospital between 1 January 2004 and 31 December 2004. Finally, Yampolskaya et

al. (2013) selected young people admitted to State Inpatient Psychiatric Programmes (SIPP) in Florida between 2004 and 2008. Age limitation was a universal criterion applied by all the ten studies, whereby the maximum age limit was 18 years. Some differences were noted between the studies, as represented in the third column of the table presented in Appendix 2.

The measurement of readmission varied across the ten studies. The most common measurement approach was retrospectively obtaining patient information to determine if they were readmitted to the same hospital within 12 months (McCarthy et al., 2017; Kagabo et al., 2017; Phillips et al., 2020; Fontanella, 2008; Chung et al., 2008). Yampolskaya et al. (2013) included participants who were readmitted within 4 years. Berona et al. (2017) asked participants if they were previously admitted for psychiatric reasons in another facility before admission to the facility used as the research setting. Barker et al. (2010) included readmissions to other psychiatric inpatient facilities in the same geographical area, on top of readmissions to the same facility. Blader (2004) considered readmission to the same facility or any other facility. Bobier et al. (2005) did not report how they measured readmission.

The data source probably directly affected how readmission was measured in various studies. Apart from Berona et al. (2017), all the studies relied on historical records, such as patient medical records and discharge summaries as data sources. Berona et al. (2017) screened and followed up the patients using telephone interviews and one-to-one

screening methods. Kagabo et al. (2017) used patient archives obtained from the University of Utah Health Sciences data warehouse. Philips et al. (2018) sourced their data from Medicaid claims, the Area Resource File, the American Hospital Association survey, the National Survey of Mental Health Treatment Services, and Children's caregivers. Fontanella (2008) used Hospital case records, the Area Resource File and Medicaid claims files. The rest of the studies either used one, two, or all the following data sources: (a) admission records, (b) psychiatric evaluations, and (c) discharge summaries. All studies used a follow-up period of 12 months except Phillips et al. (2020) who used a six-month follow-up period and Yampolskaya et al. (2013) who used a four-year follow-up period.

Due to the heterogeneous nature of the studies, especially in terms of measuring/defining readmission and study designs, factors associated with hospital readmission to non-custodial settings due to welfare reasons differed from one study to another. This is elaborated on further in the discussion section. McCarthy et al. (2017) discovered the following factors: (a) length of stay (more than five days); (b) history of self-harming behaviour. Barker et al. (2010) reported being male as the only associated factor. Berona et al. (2017) discovered the Youth Self-Report internalising profile, characterised by elevated anxiety and depression was the only associated factor. Bobier et al. (2005) reported the following risk factors as associated to readmission: (a) history of childhood sexual abuse; (b) medication non -adherence. Kagabo et al. (2017) discovered the length of hospital stay was associated. Phillips et al. (2020) indicated the following

risk factors: (a) disabled youth/youth in foster care, (b) multiple psychiatric comorbidities, (c) prior psychiatric hospitalisation, and (d) medical comorbidity were associated to readmission. Blader (2004) reported (a) severe conduct problems, (b) harsh parental discipline, and (c) disengaged parent-child relations as significant risk factors for readmission. Fontanella (2008) reported the following: (a) age and gender, (b) clinical (symptom severity; suicidality; comorbidity), and (c) level of family risk. Finally, Chung et al. (2008) reported the following: (a) prior history of psychiatric readmission, (b) lived in a residential treatment facility, and (c) diagnosis of conduct disorder as associated to readmission. Yampolskaya et al. (2013) reported that greater maltreatment severity, shorter length of time spent in SIPP during the initial episode, and longer time to provision of targeted case management services were associated with earlier readmission. They also reported that a shorter length of stay during the second hospitalisation and having more than one mental health diagnosis increased the change of experiencing subsequent readmissions. Apart from Berona et al. (2017), all the studies reported readmission rates, ranging between 16% and 37.9%.

Quality Assessment Findings

An overview of the quality assessment scores for all ten studies can be seen in Appendix 3. Overall, 8 of the 10 studies have a quality score above 70%, with one having a score of 82%. The remaining two studies have scores of 64% and 45%. In cases of contradictory results, the results

produced by Kagabo et al (2017) should be taken with caution due to the lower quality (45%) of the study. Their paper lacked clarity specifically in the methods section. The method and sources for their data collection was not specified therefore the validity and reliability could not be determined. Additionally, they did not report whether they had identified or controlled for any confounding variables, however it should be noted that the majority of the studies lacked in this aspect. They did however have the largest sample of the ten studies and a large age range for their sample.

The quality of reporting was also assessed using the STROBE guideline for all types of observational studies (case-control, cohort, and cross-sectional studies). The main quality of reporting issues of the studies included no reporting of the study design unless the reader/reviewer carefully examined the design based on other methodological aspects reported (Barker et al., 2010; Blader, 2004; Bobier et al., 2005; Kagabo et al., 2017; McCarthy et al., 2017; Yampolskaya., 2013), no reporting of efforts to address potential bias (Blader, 2004; Bobier et al., 2005; Kagabo et al., 2017; McCarthy et al., 2017), and no reporting of other analyses done (e.g., subgroups and interactions, sensitivity analyses) (Barker et al., 2010; Bobier et al., 2005; Chung et al., 2008; McCarthy et al., 2017; Philips et al., 2018). None of the studies reported the source of funding and conflict of interest.

Descriptive Data Synthesis

Table 2.2 summarises the findings of the ten studies based on Walsh et al.'s (2016) conceptual framework used in this review.

Table 2.2

Conceptual Framework summary, based on Walsh et al.'s (2016) framework, of the findings of the nine studies

Category of Factors	**Individual Factors**
Patient-Related	- Age and gender (Barker et al., 2010; Fontanella, 2008) - Severe conduct problems and suicidality (Blader, 2004; Chung et al., 2008; Fontanella, 2008) - Harsh parental discipline, disengaged parent-child relations, and level of family risk (Blader, 2004; Fontanella, 2008) - Maltreatment severity (Yampolskaya et al., 2013)
Clinical	- Length of stay (Fontanella, 2008; Yampolskaya et al., 2013; McCarthy et al., 2017; Phillips et al., 2020) - History of self-harming behaviour (McCarthy et al., 2017) - Internalising profile (Berona et al., 2017) - History of childhood sexual abuse (Bobier et al., 2005) - Medication non-adherence (Bobier et al., 2005) - Multiple psychiatric and medical comorbidities (Fontanella, 2008; Phillips et al., 2020; Yampolskaya et al., 2013) - Prior psychiatric hospitalisation or rehospitalisation (Chung et al., 2008; Philips et al., 2018) - Symptom severity (Fontanella, 2008)
System	- Living arrangements post-discharge (Chung et al., 2008; Phillips et al., 2020) - Targeted case management services (Yampolskaya et al., 2013)

Patient-Related Factors

As shown in Table 2.2, a total of four patient-related factors, eight clinical factors, and two system factors were identified. Age and gender were significant predictors of psychiatric rehospitalisation among children and adolescents (Barker et al., 2010; Fontanella, 2008). Barker et al. (2010) examined various variables, including the age and gender of participants, history of sexual abuse, history of neglect, and living arrangements at discharge. They discovered that none of the ten independent variables examined was statistically significantly associated with readmission (Barker et al., 2010). However, they observed a weak association between being male and readmission (CI=95%; $p<.05$), which they explained in terms of poor engagement with community services or high rates of medical non-adherence among male patients. Fontanella (2008) also examined adolescent characteristics, including age and gender, that can help predict their readmission to non-custodial settings. Like Barker et al. (2010), Fontanella (2008) also discovered that gender was a statistically significant predictor of readmission among children and adults. Unlike Barker et al. (2010), Fontanella (2008) discovered that females were more likely to be readmitted than males when treatment characteristics were controlled. Barker et al. (2010) noted the inconsistency between their findings and prior research, which they attributed to the small sample size and the window for readmission being too short (12 months). The inconsistency could be attributable to how the two studies operationalised the dependent variable (readmission). Barker et al. (2010) acknowledged

that they did not access admission records to two other psychiatric hospitals within the same region, which accept children and adolescents. Hence, they ignored readmissions to the other two facilities or even outside the region. Fontanella (2008) utilised data from all three psychiatric hospitals that accept children/adolescent admissions within Maryland and acknowledged the possibility of readmissions done outside Maryland not accounted for in their study. In that regard, it can be said that the level of bias in Barker et al.'s (2010) study was higher than in Fontanella's (2008) study. Due to these reasons, Barker et al. (2010) discovered that age was not a significant predictor of readmission, but Fontanella (2008) did. Thus, future studies should address these sources of bias to reach more conclusive discoveries about the influence of demographic factors on the readmission rates of children and adolescents who were initially admitted in non-custodial settings for welfare reasons, such as mental illness.

Finally, other studies demonstrated that mental health diagnosis was another significant predictor of young people's readmission to non-custodial settings. However, some may consider this factor as more clinical than patient-related. According to Blader (2004), at a confidence interval of 95%, the severity of conduct problems among young people was a statistically significant ($p<.05$) predictor of readmission, but it was attenuated by high parental stress explained from the perspective of parental emotional engagement. Hence, Blader (2004) implied that the severity of conduct problems reduced with increasing parental stress, indicating that parental emotional engagement of young people can reduce

the severity of conduct problems, consequently reducing their risk of readmission. In agreement, Chung et al. (2008) discovered that a diagnosis of an oppositional or defiant disorder at admission was a significant predictor of readmission (CI=95%; $p<.001$). However, Chung et al. (2008) did not detect any explanation for this trend but only took the opportunity to recommend the need to derive behavioural interventions for conduct disorders among young people at discharge. Fontanella (2008) also discovered that, at a confidence interval of 95%, young people with behavioural symptoms like oppositional behaviour were more likely to be readmitted. At a confidence interval of 95%, Yampolskaya et al. (2013) discovered that youth with multiple mental health diagnoses were two times more likely to experience a second readmission to SIPP within 4 years. Unfortunately, they did not report whether there were differences depending on the diagnoses. They also reported that a higher level of maltreatment severity was a significant predictor of a young person's first readmission, one unit increase in maltreatment score resulted in a 7% increase in odds for readmission. Apart from behavioural symptoms, Fontanella (2008) also discovered that suicidality was a significant predictor of readmission because youth discharged from the hospital are more likely to reattempt suicide in the first few days after discharge, but this risk reduces with time. Berona et al. (2017) performed a psychopathology profile analysis of adolescents admitted to a psychiatric hospital and enrolled in a psychosocial intervention trial. At a confidence interval of 95%, they discovered that an internalising profile characterised by elevated

anxiety and depression was a significant predictor of suicide attempts and readmission at 3 and 12 months post-discharge (Berona et al., 2017). In this regard, they acknowledged that depression and anxiety after discharge following an admission informed by suicidality were the primary reasons for readmission. Thus, it can be said that in a normal psychiatric admission of adolescents, a significant portion of them have an internalising profile that predicts both suicidal attempts and readmission, acting as a mediator or moderator in the relationship between suicidality and readmission.

On the contrary, McCarthy et al. (2017) discovered that suicidality does not predict readmission within one year of discharge. Another explanation for the inconsistency could be that McCarthy et al. (2017) operationalised the variable of readmission based on readmitting clients to the same hospital, neglecting readmissions to other psychiatric hospitals in the area, whereas Fontanella (2008) considered readmission based on readmitting clients to any of the three child and adolescent psychiatric hospitals in Maryland. Hence, bias affected McCarthy et al.'s (2017) study more than Fontanella's (2008) study.

Clinical Factors

First, four studies discovered that length of hospital stay was a significant predictor of readmission. At a confidence interval of 95%, Fontanella (2008) discovered that longer lengths of stay were statistically significant ($p<.05$) predictors of readmission. Fontanella (2008) noted that the findings were contrary to her expectations based on prior studies, such

as Yampolskaya et al. (2013) that shorter rather than longer lengths of stay would be associated with readmission. Specifically, in Yampolskaya's case, shorter initial admissions predicted earlier readmissions compared to those who had longer initial admissions. Fontanella generally acknowledged that these inconsistencies could be attributable to different hospital settings and populations used in various studies. Similarly, McCarthy et al. (2017) discovered a statistically significant association between a longer length of stay (more than five days) and readmission. However, unlike Fontanella (2008), McCarthy et al. (2017) explained this trend in terms of the probability that those who stay longer in hospital are severe cases. Kagabo et al. (2017), who investigated the relationship between the length of stay and readmission, discovered no statistically significant association between the two variables, apart from eating disorders, whereby a shorter length of stay increased adolescents' odds of readmission. The researchers did not explain this trend but recommended future research to investigate how the length of stay interacts with other variables. In agreement with Fontanella (2008) and McCarthy et al. (2017), Phillips et al. (2020) also discovered a statistically significant association between longer length of stay and subsequent readmission (CI=95%; p=.001), arguing that the interaction between the two variables is complex and no definitive explanation can be offered. Consistent with Kagabo et al. (2017), Blader (2004) also discovered a statistically non-significant association between length of stay and readmission (CI=95%; p=.41). The possible explanation for these inconsistencies is that Kagabo et al. (2017) sourced their data from the

University of Utah Health Sciences data warehouse, and Blader (2004) obtained their data from interviewing children's caregivers. On the contrary, the three studies with consistent findings (Fontanella, 2008; McCarthy et al., 2017; Phillips et al., 2020) obtained their data from electronic medical records, discharge summaries, Area Resource File, and Medicaid claims. Therefore, population characteristics could be the possible explanation of the inconsistencies observed, needing further investigation in the future for affirmation. The findings of Yampolskaya et al. (2013) contradicted the findings of these three studies, Fontanella, 2008; McCarthy et al., 2017 and Phillips et al., 2020. This could be explained by the difference in follow-up period, Yampolskaya et al. (2013) used a follow-up period (4 years) that is four times as long as the follow-up period of 12 months used by Fontanella, McCarthy and Phillips.

Second, another clinical predictor of readmission is sexual abuse and self-harm history. Bobier et al. (2005) found a statistically significant association between a history of childhood sexual abuse and relapsing readmission (CI=95%; p=.003). They explained that a history of childhood sexual abuse had been linked to numerous factors, such as the increased prevalence of suicidal attempts and reattempts, depression, anxiety, and many other psychiatric disorders. Their findings are consistent with Barker et al. (2010), who discovered that a history of sexual abuse was positively and statistically significantly associated with previous admissions, which were also statistically significantly associated with readmissions, as discussed further in this section. Apart from sexual abuse, McCarthy et al.

(2017) discovered that a history of self-harming behaviour increased the odds of readmission (CI=95%; p=0.017), which is consistent with Fontanella's (2008) finding that suicidality is a significant predictor of readmission. Therefore, it can be concluded that children and adolescents with a history of sexual abuse and subsequent diagnosis of suicidality and self-harm are at a higher risk of readmission.

Third, multiple psychiatric and medical comorbidities have also been linked to increased odds of readmission. According to Fontanella (2008), symptom severity and comorbid mental retardation were significant predictors of readmission. Youth with moderate and severe behavioural symptoms were up to three times more likely than youth with mild behavioural symptoms to be readmitted (Fontanella, 2008). Two later studies supported these findings. Phillips et al. (2020) discovered that adolescents with two or more psychiatric diagnoses and a chronic medical condition had increased odds of readmission (CI=95%; p<.001) and Yampolskaya et al. (2013) discovered that youth with more than one mental health diagnosis were two times more likely to experience a second readmission to SIPP within 4 years. According to Phillips et al. (2020), comorbidity reflects illness severity, explaining the increased odds of readmission. Of those selected for review, no other study examined psychiatric and medical comorbidity as a predictor of readmission. Fontanella (2008), Phillips et al. (2020) and Yampolskaya et al. (2013) indicated that their findings were consistent with prior adult and adolescent

studies. Hence, psychiatric comorbidity is one predictor of readmission that has attained multiple results.

Finally, some studies also indicated that prior psychiatric admissions and readmissions were significant predictors of subsequent readmissions. According to Chung et al. (2008), a prior history of psychiatric readmission increased the odds of subsequent readmissions (CI=95%; $p<.001$). Chung et al. (2008) indicated that this discovery was consistent with prior studies, and the possible explanation is that prior admission reflects the severity of the illness. Phillips et al. (2020) reported consistent findings, whereby they discovered that prior psychiatric admission was a significant predictor of readmission (CI=95%; $p<.001$). Like Chung et al. (2008), Phillips et al. (2020) also indicated that their findings were consistent with prior studies and that the possible explanation for this trend is the reflection of illness severity. However, Barker et al. (2010) discovered that previous inpatient admission was not a statistically significant predictor of psychiatric readmission. However, Barker et al. (2010) did indicate that the trend in their study could be attributable to the fact that admission to the psychiatric unit resulted in the successful remission of symptoms regardless of illness severity. Similarly, Blader (2004) also discovered that prior psychiatric admission did not significantly predict readmission (CI=95%; $p=.87$). McCarthy et al. (2017) also reported the same findings (CI=95%; $p=.16$). In agreement with Chung et al. (2008) and Phillips et al. (2020), Fontanella (2008) indicated that medication non-adherence and prior psychiatric hospitalisations were also significant predictors of readmission. Fontanella's

findings are consistent with Bobier et al. (2005), who discovered that medication non-adherence was a significant predictor of readmission (CI=95%; p=.0001). A closer look into the inconsistency between studies concerning prior psychiatric admission can be attributed to the fact that they utilised different psychiatric settings, whereby some hospitals might have been more effective in treating clients, some leading to significant remissions. In contrast, other hospitals might have had treatment challenges that resulted in high relapsing rates. However, the consistency between Fontanella (2008) and Bobier et al. (2005) concerning medicine non-adherence affirms that this variable could significantly predict readmission regardless of population and hospital characteristics.

System Factors

Living arrangements post-discharge are a significant predictor of readmission. Phillips et al. (2020) discovered that adolescents who were Medicaid eligible (disability, foster care, and poverty) were more likely than Medicaid ineligible youth to be readmitted. They particularly discovered that disability (CI=95%; $p<.001$) and foster care (CI=95%; $p<.0001$) were statistically significantly associated with single and multiple readmissions within one year after discharge. They explained that this trend is possible because children in foster care are more likely than those with their biological parents to have a history of maltreatment (Phillips et al., 2020). Chung et al. (2008) also indicated that children living in a residential facility were more likely than those living in foster families or biological parents

(CI=95%; $p<.01$) to be readmitted within one year after discharge probably because residential facilities tend to be more restrictive and less engaging than foster families or biological parents. The explains provided by Chung et al. (2008) & Phillips et al. (2020) are consistent with the studies (Blader, 2004; Fontanella, 2008) that discovered that harsh parental discipline, disengaged parent-child relations, and a high family risk profile were also statistically significant ($p<.05$) predictors of readmission at a confidence interval of 95%. Fontanella (2008) further reaffirmed this trend, she discovered that the post-discharge living arrangements, which she considered a clinical factor, were a significant predictor of readmission at a confidence interval of 95%. However, the findings of all these studies were opposed by Barker et al. (2010), who discovered that living arrangements post-discharge was not a significant predictor of readmission. Also, as seen earlier, Barker et al. (2010) is the only study out of those cited in this paragraph that did not report how they addressed potential bias. Thus, the contradicting findings could be due to high bias levels in their study. Otherwise, the consistency between the other studies cited in this paragraph affirms that living arrangements before admission and after discharge could be a potential predictor of readmission to non-custodial settings among children and adolescents.

One study, Yampolskaya et al. (2013), concluded that the involvement of targeted case management services is a significant predictor of readmission, specifically the time between discharge and the involvement of such services significantly predicted earlier readmission.

The study reported that for each day that targeted case management services were not involved, the chance that the young person would be readmitted increased by 0.4% ($p<.001$). Yamapolskaya et al. (2013) used a significantly longer follow-up period (4 years) than the other nine reviewed studies. This is likely to have enabled them to produce results about subsequent readmissions after a young person's first readmission. They found that a greater number of targeted case management services involved with a young person post discharge was associated with increased odds of subsequent readmissions. It may be that the involvement of multiple services reflects the case complexity and difficulties experienced by the young person.

Discussion

Main Findings

The review's main findings are that most studies investigating predictive factors of adolescent/children readmission to non-custodial settings discovered inconsistent findings, owing to differences in quality and population characteristics. Regarding quality, most studies had a biased operationalisation of the variable of readmission, whereby readmissions to other psychiatric units other than the research setting were not accounted for. Only a few studies considered readmissions to other psychiatric units within a given region, but they were still biased because they did not account for readmissions to units outside the area, though rare. This kind of bias resulted in varying findings from one study to another. In relation

to population characteristics, different studies obtained their data using different sources. Studies that used electronic medical records, discharge summaries, Area Resource Files, and Medicaid claims were more likely to record consistent findings, which were somewhat inconsistent with studies that obtained their data from data warehouses and one-on-one interviews with caregivers. Overall, the review found the following significant predictors of readmission: (a) age and gender, (b) severe conduct problems and suicidality, (c) harsh parental discipline, disengaged parent-child relations, and level of family risk, (d) maltreatment severity, (e) length of hospital stay, (f) history of self-harming behaviour, (g) internalising profile, (h) history of childhood sexual abuse, (i) medication non-adherence, (j) multiple psychiatric and medical comorbidities, (k) prior psychiatric admission, (l) symptom severity, (m) living arrangements post-discharge and (n) targeted case management services post-discharge.

Interpretation of the Findings

Despite the bias associated with the operationalisation of the construct of readmission, whereby studies only included readmissions to the same unit, the reviewed studies had some strengths. Apart from Phillips et al. (2020) and Kagabo et al. (2017), all the studies used a sample obtained from all hospital admissions after screening participants for the eligibility criteria. Their findings can be generalised to psychiatric hospitals with similar characteristics. Phillips et al. (2020) and Kagabo et al. (2017) used large sample sizes because they obtained their data from regional and

archival sources, such as the University of Utah Health Sciences data warehouse and the National Survey of Mental Health Treatment Services. Despite their large sample sizes, it must be acknowledged that they did not screen for eligibility therefore they hold limited generalisability further than the populations and services of the study. Most of the studies were conducted in the United States, which means the findings are more generalisable to American adolescent inpatient psychiatric units than to other countries. Also, by including Phillips et al. (2020) and Kagabo et al. (2017), it was possible to overcome the bias of operationalising the construct of readmission because the data covered a large geographic area. However, readmissions were still conceptualised based on same-facility rehospitalisation, leaving out readmissions to other facilities.

Further, most of the studies reviewed included young people aged between 4 and 18. Therefore the findings can be applied to the population of interest (children and adolescents below 18 years). In his review, Edgcomb et al. (2020) identified history of abuse or neglect as a predictive factor of readmission. This review suggests that specifically, a history of childhood sexual abuse (Bobier et al., 2005), predicted readmission. This more specific finding may be due to Edgcomb et al. (2020) only including predictors where at least three studies had reported effect sizes for a given predictor. Due to the scarcity of research in this developing area, this requirement may have caused predictors to have been missed. Nevertheless, it should be noted that the use of descriptive synthesis is not as robust as a meta-analysis therefore these findings should be further

investigated by future research. Meta-analysis was not possible in this review because studies were highly heterogeneous.

Review Limitations

The limitations of the current systematic review must be acknowledged. First, the review is limited to predictors reported in prior research therefore it might be missing specific predictors not reported in previous literature. For example, it was identified that hospital characteristics, such as the standard of care offered, could be influencing the occurrence of specific predictors like prior psychiatric admission or readmission. Another limitation is the inconsistencies between studies for various predictive factors such as gender. These inconsistencies made it difficult to reach conclusive results regarding definitive predictor factors of readmission. The operationalisation of readmission differed between studies; this could partially explain some of the inconsistencies observed. This limitation must be highlighted as this has implications on generalisability further than the populations and services used in the studies. Eight of the ten studies were completed in the United States therefore generalisability of this review's results may be limited to the United States. Another limitation in relation to generalisability is that the results cannot be fully applied to Secure Children's Homes given their mixed population of welfare and Youth Justice children. Lastly, meta-analyses were not possible for this review and descriptive synthesis holds less

robustness and is limited to descriptions of associations between predictors and readmission and no causal inferences can be made.

Practice and Research Implications

Practically, the findings of this review suggest that it may be beneficial for professionals and services to target certain predictive factors, such as medication non-adherence and multiple psychiatric and medical comorbidities in an attempt to reduce readmission rates to adolescent non-custodial facilities. Psychiatrists and other relevant practitioners could devise ways of promoting medication adherence, such as more rigorous patient follow up interventions. Also, children and adolescents with multiple medical and psychiatric comorbidities need to be more closely monitored, especially at the post-discharge stage as this has been highlighted as a critical period relevant to re-admission.

The research implication of the findings of this review is how various interventions based on the predictive factors can or cannot reduce readmission rates. Understanding the effectiveness of such interventions is key to making informed treatment recommendations for children and adolescents admitted to non-custodial settings for welfare reasons, such as mental illness. Deriving interventions and testing for their effectiveness is the leading research implication of this review.

Recommendations for Future Research

Firstly, the inconsistencies observed between studies concerning specific predictive factors is an indication that confounding factors were not adequately controlled in most studies. Most of these studies identified their independent variables based on prior research. Most studies did not account for variables not identified in previous research which could be significant confounders, such as standard of care. Other factors which future research should investigate to account for their confounding effects include but are not limited to multi-dimensional clinical characteristics of the participants and hospital characteristics, such as standard of care.

Secondly, this review included studies that used regionally and nationally representative samples. Inconsistencies were mostly noted between studies that used regionally representative samples, this is most likely due to unmoderated clinical and population characteristics. It is recommended that a future systematic review only use studies with nationally representative samples and possible inconsistencies between studies are noted. Using studies with nationally representative samples may help develop standardised tools for screening the readmission risk of children and adolescents admitted to non-custodial settings.

Finally, most of the studies included had a risk of bias due to how the concept of readmission was operationalised. It was noted that bias probably emerged in studies that operationalised readmission based on the same-facility rehospitalisation. Such studies did not account for readmissions

done in other facilities, therefore, future research should operationalise readmission based on all readmissions, including same-facility rehospitalisation and readmission to other children and adolescent psychiatric units in the country. If this data is not readily available, it is important to establish a database to capture all readmissions regardless of facility or region. The database could be managed by sourcing data from caregivers through follow-up telephone calls and visits.

As highlighted by this review, research has tended to focus on clinical factors relating to readmission and research is sparse in relation to patient-related factors and system-level factors. Chapter 4 and 5 aim to address these gaps. These chapters also aim to investigate whether the factors associated with readmission identified in the review are being targeted in current practice with the aim to reduce the chance of readmission.

Chapter 3 – Methodology Chapter

Introduction

This chapter covers the research and analytical methods of the research whose results are presented in Chapters four and five. In this research, young people are defined as anyone who has been discharged from one of the two Secure Children's Homes (SCHs) before their 18th birthday.

The overall aim of the studies was to:

a) present the characteristics of the young people living in two SCHs,
b) to outline the current quality of discharge of young people from two SCHs using a good practice model, The Ideal Transition of Care model, and,
c) to identify what factors, focusing on the young people's characteristic profile or ACE profile, may predict good quality practice when working towards discharging young people from the two SCHs.

In part one of the study (Chapter Four), ACEs and the characteristic profiles of young people admitted to SCHs were explored. Two research questions were investigated:

1. What is the rate of ACEs within the young people residing in the two SCHs?
2. What are the other individual characteristics of young people living in the two SCHs?

Part two of the study (Chapter Five) focused on the possible predictors of quality of professional practice in relation to discharges from SCHs. Two research questions were explored:

1. What is the current quality of discharges/transitions of young people from the two SCHs?
2. What factors may predict where professionals adopt a higher quality of practice when working towards discharging young people from the two SCHs?

The method used to answer the questions above is secondary data analysis, whereby previously gathered information is replicated or reused to achieve objectives and answer research questions that differ from those of the original researchers (Tripathy, 2013; Cheng & Phillips, 2014). There was an existing database available which conformed with the required attributes of the research (Irgens & McGillivray, 2021) such as the population, setting, content of data and collection of data from the point of admission. Using this database for the research therefore had cost, time and resource benefits (Smith, 2008; Johnston, 2014) as the difficulties relating to obtaining primary data were avoided (David-Kean et al., 2015; Bookstaver, 2021). As the most time-consuming parts of the research process were already completed, secondary data analysis increased the speed at which research was produced (Doolan & Froelicher, 2009) and in the case of this research, this can be important when the research provides insight into clinical developments (Magee et al., 2006). Differing

terminology, undefined acronyms, lack of specificity, and varying definitions for concepts can all pose challenges when using secondary data (Boslaugh, 2007; Johnston, 2014; Stebbins & Ritchie, 2021). The existing database was reviewed to ensure it was clear, detailed and specified all terminology and codes. Secondary data analysis can also facilitate the continuation of research (Stewart, 2012) especially in situations similar to this research where the Covid-19 lockdown restricted the ability to conduct primary research. Considering the advantages and disadvantages, this method was identified as suitable.

This chapter will document the systematic process adopted for this research. This will outline the development and construction of the composite variables, how data was accessed, coded, cleaned and analysed (Irgens & McGillivray, 2021).

Ethics

As with primary research, it is imperative that ethical and professional standards are adhered to when conducting secondary data analysis (Bookstaver, 2021). Ethical approval was granted on 14 July 2020 by the University of Nottingham, Faculty of Medicine & Health Sciences Research Ethics Committee (see Appendix 4, Reference number: FMHS 78-0720). Service evaluation approval was also granted by Cumbria, Northumberland, Tyne & Wear NHS Foundation Trust on 29 April 2020 (see Appendix 5, Reference number: SER-20-007) as they provided the database.

The storage and security remain the responsibility of the researcher (Tripathy, 2013). The data has been securely held and password protected on NHS servers and on a secure dedicated web server, OneDrive used by the University of Nottingham. The data was not in the public domain.

Informed Consent

Upon admission to the Secure Children's Homes, the young people sign a consent form (see Appendix 6) for data to be collected for audit and research purposes from the point of their admission to their discharge. There were no associated repercussions on their care and treatment if the young person did not sign the consent form. The young people are made aware that this data will be anonymised, and it will not be possible to identify them from the database. They are also made aware that the data may be used for future research purposes, but their identity will remain confidential and unknown to anyone accessing the database.

The database also included data collected from staff interviews at the point of the young person's discharge. Staff signed a consent form (see Appendix 7) for data to be collected for audit and research purposes. The questions that staff were asked when a young person was discharged can be seen in Table 3.2.

Consent is subject to change over time however there is no scope for participants to withdraw their consent for specific secondary data analysis (Tripathy, 2013) as they are not aware of the specifics of secondary research at the point that they gave consent (Holman, 2001; CIOMS, 2009;

Sheehan, 2011; Da Silva et al., 2012). For clarity, the British Sociological Association's Statement of Ethical Practice (2004) was consulted however there are no guidelines around when further consent is required.

Anonymity and Confidentiality

This database was already anonymised and had no identifying information.

Recruitment

The data collection period for the database was between 01/12/18 and 31/03/20. All young people who were discharged from one of the two SCHs in this time, who also consented to data collection, were included in the database. These young people were all aged below 18 (before their 18th birthday) at the time of their discharge therefore all participants in the database met the age range required for this research.

Assessing the validity and reliability of secondary research is key however it can be challenging to know the extent to which previous researchers went to ensure validity and quality of data when data was not collected yourself (Boslaugh, 2007, Tripathy, 2013). The researcher had the benefit of a professional relationship with the service where the data originated and was collected. Through this relationship they ensured that they had an understanding of the data collection process to allow a level of assessment in terms of validity, reliability and quality (Boslaugh, 2007). In line with evaluative steps outlined by Johnston (2014), when evaluating the dataset to assess the appropriateness of the data for the research topic,

the researcher sought information about the purpose of the original data collection and had knowledge of the data collection process including who was responsible for data collection and entry. This can go some way to ensuring a level of validity, reliability and quality.

Data was input into the database by assistant psychologists within the service and checked on a monthly basis by their supervisor, a qualified psychologist. The database was used by the service for audit purposes. At the point of admission or the earliest appropriate time point, each young person was asked to complete the ACEs questionnaire. They completed this with support from their named key worker within the SCH to ensure their understanding. Parents were not present during the completion of the questionnaire. Data on the presence/absence of each of the 10 ACEs was entered into the database. Data on characteristic profiles was generated from the electronic patient record database and entered into the database at the point of admission and updated at the point of discharge. SCH case managers are responsible for overseeing and coordinating the care of the young person, they are involved in decision making, notably around the discharge, and they are knowledgeable about each young person under their care. The assistant psychologists conducted structured interviews (questions seen in Table 3.2) with the SCH case managers. Alongside a review of the electronic patient records, their answers were used to assess the quality of discharge.

Target Population

The target population for this research was young people who had been discharged from one of two North East Secure Children's Home before their 18th birthday. Importantly, this criterion matched that of the original database which included young people discharged from one of the two North East Secure Children's Homes between 01/12/18 and 31/03/20. This indicates high credibility (Booth, 2016; Jahan et al., 2016). No primary data was collected, an existing anonymised database was used.

Recruited Sample and Attrition

The data used in this study consisted of data extracted from an existing anonymised database containing information on 118 young people. This database was compiled from two Secure Children's Homes in the North East of England. As the data is from only two sources, the data could be subject to selection bias, however, young people admitted to the two SCHs come from a variety of regions around the UK. It is acknowledged that if data was combined from SCHs around the UK, the quality of the data would have improved due to increased diversity and size of the sample. The practicalities of this method would have been challenging as the data/variables are not routinely collected therefore consistency both across sites and over time could not have been ensured. As is the case with this research, the benefits of using secondary data are that attrition is not a concern (Doolan & Froelicher, 2009; Johnston, 2014), larger sample sizes can be gathered where time constraints would otherwise restrict this

(Johnston, 2014; Branney et al., 2019) and greater quantities of data can be analysed (Panchenko & Samovilova, 2020).

A major benefit to this research was the completeness of the database. Consequently, only seven young people were removed from the database due to not completing the ACEs questionnaire. No young people were excluded due to missing data in relation to their characteristic profile or data relating to the quality of discharge practice. The sample (*N*=111*)* consisted of young people (65 male and 46 female) who were admitted to one of the two SCHs before their 18th birthday and discharged between 01/12/18 and 31/03/20. The mean age of the sample at the point of admission and discharge was 15.211 years old (*SD=1.224)* and 15.684 years old (*SD=1.193)* respectively. A barrier faced by many researchers conducting secondary data analysis is that the data may be insufficient to produce acceptable effect sizes (Tripathy, 2013).

A power analysis calculation was completed to determine the power of the ordinal regression analyses with a sample size of 111. For an ordinal regression analysis using 12 predictor variables with a sample size of 111, a medium effect size of 0.4 and a significance level of α = 0.05, the power of the analyses is calculated as 0.73. Statistical power of 0.73 is just below the 'ideal' power of 0.8 indicated by the literature (Serdar et al., 2021) therefore it can be concluded that the study has a good chance of detecting a true effect (Hauer, 2004) and results are at a lower risk of being distorted by random and systematic error (Button, 2013).

Variables

The original anonymised database contained a significant amount of data therefore careful consideration was taken when developing the composite variables for this research. Previous literature was consulted to determine which factors were relevant to the study area and what data from the database was relevant to these variables.

The raw version of the database used in this research included a significant number of variables therefore careful consideration was given when determining what data was extracted from the database to answer the research questions. It is acknowledged that due to the use of secondary data, there may be some variables/factors relevant to the research questions which have not been included as they were not collected for the original database and therefore not available for this research (Silva Martins et al., 2018; Orsini et al., 2020). However, this does have an advantage; the data is not biased to the secondary researcher values, belief systems or bias (Boslaugh, 2007). The following section will outline the variables extracted and used in this research, how these were constructed and how 'quality of discharge' was operationalised.

Adverse Childhood Experiences (ACEs)

Adverse Childhood Experiences, defined as stressful or traumatic events that a young person may experience before the age of 18, were first described by Felitti et al (1998). Felitti et al (1998) found that exposure to events such as abuse or household dysfunction were significant risk factors

for multiple leading causes of death in adults, including alcoholism, severe obesity, depression, cancer, suicide, chronic lung disease, smoking and heart disease.

The World Health Organisation (WHO; WHO, 2018) outline ten childhood experiences (see Table 3.1) which are considered universally adverse for a young person. ACEs were measured using the ACE questionnaire (Appendix 8; Felitti et al., 1998). This is a 10-item questionnaire which measures childhood trauma. Each question starts with, "While you were growing up, during your first 18 years of life…". The young person must answer either 'Yes' or 'No' and they receive a total ACE score between 0 and 10 which is totalled by the number of questions to which they answered 'Yes'. Higher scores indicate that the person has experienced more adverse childhood experiences and have a higher risk of having social, mental, physical, or wellbeing problems (Felitti et al., 1998). A score of 4 or above is considered clinically significant (Hughes et al., 2017).

Table 3.1

Ten Adverse Childhood Experiences (WHO; 2018)

CHILDHOOD ABUSE	1	Physical Abuse
	2	Emotional Abuse
	3	Sexual Abuse
NEGLECT	4	Physical Neglect
	5	Emotional Neglect
HOUSEHOLD DYSFUNCTION	6	Parents being separated or divorced
	7	Household members experiencing domestic violence
	8	Household members experiencing substance misuse problems
	9	Household members experiencing mental illness
	10	Household members being incarcerated

A systematic review by Cibralic et al. (2022) investigating the ACE screening in clinical practice with individuals from 0-25 years old found that the measure most used to screen for ACEs within clinical and healthcare settings was the ACE questionnaire, with over half of these using the 10-item version which was used in this research. Although the ACE questionnaire is a commonly used and accepted instrument to assess whether individuals have experienced traumatic experiences during childhood and adolescence, there is limited research demonstrating the psychometric properties of the 10-item version of the instrument when used with adolescents. For the 10-item version of the ACE questionnaire (ACE-10) used in this research, to our knowledge, only two studies have investigated its psychometric properties (Wingenfeld et al., 2011) and no study investigating the psychometric properties has used a UK adolescent sample. Using a sample consisting of German adolescent inpatients, students, and adults from the general population, Wingenfeld et al. (2011) found that the ACE-10 demonstrated satisfactory internal consistency and construct validity alongside high correlations with the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994). They concluded that the ACE-10 questionnaire is a reliable, valid and economic tool for the retrospective assessment of ACEs. A more recent study by Kovács-Tóth et al. (2023) assessed the psychometric properties of the ACE-10 questionnaire using a community sample of Hungarian adolescents. They found that the ACE-10 questionnaire showed appropriate internal consistency and reliability (theta coefficient=0.86, Cronbach's alpha=0.64) alongside good internal validity.

Using intercorrelation analysis, they concluded that the items of ACE-10 represent distinct experiences even if these are often cumulative. Kovács-Tóth et al. (2023) correlated Social, Emotional and Behavioural Symptoms (SEB) and Subjective Health Complaints (SHC) with the cumulative ACE score to determine concurrent criterion validity; they found that the cumulative ACE score was correlated to SEB symptoms and SHC therefore demonstrating good concurrent criterion validity.

The literature base shows that young people involved with the criminal justice system have higher rates of experienced trauma compared to the general population (Dierkhising et al., 2013) and a greater likelihood of having experienced multiple types of trauma (Abram et al., 2004). Fox, Perez, Cass, Baglivio and Epps (2015) suggested that a young person's ACE score could be used to identify children likely to become serious, violent, and chronic offenders by the age of 18. The harmful impact of ACEs often results in young people becoming part of a group termed "high risk, high harm and high vulnerability" (NHS England, 2020). Given that research has shown that ACEs can increase the likelihood of future high-risk behaviours, it is important that professionals understand the rates of ACEs within this population. This increased understanding can help to guide care planning and planning towards discharge more effectively. Recognising ACEs during childhood may aid in the prevention and reduction of the chance of negative life outcomes occurring later in adulthood (Chapman et al., 2004).

Quality of Discharge

The quality of the young person's discharge from the SCH was assessed using the Ideal Transition of Care Model proposed by Burke, Kripalani, Vasilevskis and Schnipper (2012). This good practice model proposes 10 key components of an ideal transition in care:

1. Discharge Planning
2. Complete Communication of Information
3. Availability, Timeliness, Clarity, & Organisation of Information
4. Medication Safety
5. Educating Patients to Promote Self-Management
6. Enlisting Help of Social and Community Supports
7. Advance Care Planning
8. Coordinating Care among Team Members
9. Monitoring and Managing Symptoms after Discharge
10. Outpatient Follow-Up

This is often conceptualized as the patient crossing a 'bridge' from one care environment to another. If a domain is lacking, this makes the 'bridge' weaker and therefore the quality of the transition decreases.

For this research, five domains were extracted:

1. Discharge Planning
2. Educating Patients to Promote Self-Management
3. Enlisting Help of Social and Community Supports
4. Advance Care Planning
5. Coordinating Care among Team Members

As outlined by Burke et al. (2013) in the domain descriptions, domains two and three relate to the point of discharge and domains nine and 10 relate to post-discharge. As the planning of the participant's discharge was the area of interest for this research, these domains were not included. Lastly, domain 4 (Medication Safety) was not included as the

database did not include anything about the use of medication. The selection of domains was also limited to the data available in the database, a common disadvantage of database research (Johnston, 2014; Silva Martins et al., 2018). The five domains extracted for this research were selected due to their relevance to the work; planning and the involvement of individuals to prepare the young person for discharge.

To score each domain, information from the database was carefully selected. Burke et al. (2013) provide clear definitions and descriptions of each of the 10 domains in their paper. To determine which data was relevant and would contribute to each domain, the researcher (author) and a Trainee Clinical Psychologist, who was independent to the research, compared and matched questions in the database to these definitions and descriptions for the Ideal Transition of Care model (Burke et al., 2013). These two individuals also consulted the current documentation regarding the quality standards, requirements and regulations which SCHs are subject to; "Children's Homes (England) Regulations 2015" (Department for Social Care, 2015), NICE quality standards (NICE, 2013), and RCPCH Healthcare Standards (RCPCH, 2023), and identified which questions in the database mapped onto these standards/regulations. Disagreements were discussed and where these could not be resolved, a third person (Qualified Forensic Psychologist) was consulted to resolve the disagreement. Table 3.2 outlines the data used to assess each domain and Table 3.3 shows which standards and requirements within the Children's Homes Regulations, NICE quality standards and RCPCH Healthcare

Standards map onto each of the questions within the five Ideal Transition of Care Model domains.

Table 3.2

Table showing the questions/data from the original database which were selected and used in combination to score each domain of quality of discharge

Domain 1: Discharge Planning	**Domain 2: Educating Patients to Promote Self-Management**	**Domain 3: Enlisting Help of Social and Community Supports**	**Domain 4: Advance Care Planning**	**Domain 5: Coordinating Care among Team Members**
Was the young person given time and supported to pack their belongings prior to discharge?	Was the young person supported to say goodbye and exchange contact details prior to discharge?	Was a chronology received prior to admission? If so, was this between 1-7 days before admission or before one week?	What was the level involvement from the Local Authority in the young person's care planning?	What was the quality of the involvement from the Local Authority in the identification and arranging of the placement?
Was a travel plan developed and shared with the young person?	Did the young person engage in a goodbye meal?	Was the SCH provided with details of multi-agency professionals involved with the young person prior to their admission?	Did the young person visit their placement prior to discharge? If so, how long before discharge were visits initiated?	Was the young person's contact information shared prior to discharge?
How long before their discharge was the young person made aware about their placement?	How many mobilities did the young person have before discharge?	Was the SCH given information around risk prior to the young person's admission?	Did the young person have contact with the care staff at their placement prior to discharge? If so, how long before discharge was contact initiated?	Was the contact information of multi-agencies working with the young person shared prior to discharge?
How many days before discharge did the young person commence mobilities?	What was the level of involvement from the young person in their own care planning?	Was the SCH given information in relation to the young person's physical and mental health prior to admission?	Was the young person's education plan and relevant documentation updated and shared with new education providers?	
		What was the quality of the information that was shared with the SCH prior to admission?		

Table 3.3

Table showing the standards/regulations within the Children's Homes Regulations, NICE quality standards and RCPCH Healthcare Standards which map onto each of the questions within the quality of discharge domains.

Domain 1: Discharge Planning	Regulatory/Guidance document	Relevant content within regulatory/guidance document
Was the young person given time and supported to pack their belongings prior to discharge?	Children's Homes Regulations 2015 – The quality and purpose of care standard	"Staff must help each child to prepare for any moves from the home, whether they are returning home, moving to another placement or adult care, or to live independently."
	Children's Homes Regulations 2015 – The care planning standard	"Children— (a) receive effectively planned care in or through the children's home; and (b) have a positive experience of arriving at or moving on from the home, staff should (iii)plan for, and help, each child to prepare to leave the home or to move into adult care in a way that is consistent with arrangements agreed with the child's placing authority". "The home has an important role in supporting each child leaving the home in the period immediately before their departure…and help each child to prepare for leaving both practically and emotionally."
Was a travel plan developed and shared with the young person?	Children's Homes Regulations 2015 – The care planning standard	"The home has an important role in supporting each child leaving the home in the period immediately before their departure. The registered person should work with the placing authority to ensure that each child's transition is planned and help each child to prepare for leaving both practically and emotionally."
	RCPCH Healthcare Standards	"The child's named professional should ensure that the child understands the transition arrangements that are in place."
How long before their discharge was the young person made aware about their placement?	Children's Homes Regulations 2015 – The care planning standard	"The registered person should work with the placing authority to ensure that each child's transition is planned and help each child to prepare for leaving both practically and emotionally." **"**Significant changes to a looked-after child's care, such as a change of placement, should only take place following a statutory review of their care plan chaired by their Independent Reviewing Officer (IRO). The child should be actively involved in these important meetings and supported to express their views, wishes and feelings."

Domain 1: Discharge Planning	Regulatory/Guidance document	Relevant content within regulatory/guidance document
		"Local authority regularly consults the child and the home about the child's relevant plans."
	RCPCH Healthcare Standards	"The child's named professional should ensure that the child understands the transition arrangements that are in place."
How many days before discharge did the young person commence mobilities?	Children's Homes Regulations 2015 – The care planning standard	"The registered person should work with the placing authority to ensure that each child's transition is planned and help each child to prepare for leaving both practically and emotionally."

Domain 2: Educating Patients to Promote Self-Management	Regulatory/Guidance document	Relevant content within regulatory/guidance document
Was the young person supported to say goodbye and exchange contact details prior to discharge?	NICE quality standards (2013)	"Evidence of local arrangements to ensure that looked-after children and young people have continued contact with key professionals when they move to their placement."
	Children's Homes Regulations 2015 – The care planning standard	"The home has an important role in supporting each child leaving the home in the period immediately before their departure…ensure that each child's transition is planned and help each child to prepare for leaving both practically and emotionally."
Did the young person engage in a goodbye meal?	Children's Homes Regulations 2015 – The care planning standard	"The home has an important role in supporting each child leaving the home in the period immediately before their departure…ensure that each child's transition is planned and help each child to prepare for leaving both practically and emotionally."
How many mobilities did the young person have before discharge?	NICE quality standards (2013)	"Evidence of local arrangements to offer ongoing activities to looked-after children and young people to explore and make sense of their identity, including their life story and appropriate health history." "Evidence of local arrangements to coordinate ongoing contact with people that looked-after children and young people value, including former carers, siblings, other family members, friends or professionals, if this is desired and in their best interests."
	NICE quality standards (2013)	Evidence of supportive pathways into creative arts, physical activities and other hobbies and interests that support wellbeing and build self-esteem.

Domain 2: Educating Patients to Promote Self-Management	Regulatory/Guidance document	Relevant content within regulatory/guidance document
	Children's Homes Regulations 2015 – The enjoyment and achievement standard	"Secure children's homes should still offer opportunities for enjoyment and achievement and encourage young people to participate and develop their skills and interests, as part of the plan for their care. This type of activity will be particularly important to their rehabilitation and preparation for living back in the community."
What was the level of involvement from the young person in their own care planning?	NICE quality standards (2013)	"Local arrangements to involve looked-after children and young people in choices and discussions about placement changes."
	Children's Homes Regulations 2015 – The quality and purpose of care standard	"Children receive care from staff who make decisions about the day-to-day arrangements for each child, in accordance with the child's relevant plans, which give the child an appropriate degree of freedom and choice."
	Children's Homes Regulations 2015 – The quality and purpose of care standard	"The child, the social worker and other relevant persons input is sought on the implementation and arrangements for the care."
	Children's Homes Regulations 2015 – The quality and purpose of care standard	"In establishing whether the care meets the child's needs, the child will be appropriately supported throughout the care and given opportunities to discuss the impact of the care, or any changes they feel they might need to it."
	Children's Homes Regulations 2015 – The children's views, wishes and feelings standard	"Children receive care from staff who take their views, wishes and feelings into account in relation to matters affecting the children's care and welfare and their lives."
	RCPCH Healthcare Standards	"Healthcare staff offer children in secure settings, where appropriate, choices about their individual healthcare and how treatment and interventions are delivered." "Healthcare staff should work collaboratively with the child to support them to communicate their views, wishes, and feelings, in line with their level of understanding and competency." "The healthcare plan is developed in collaboration with the child and, where appropriate, with the child's parents/carers/next of kin."

Domain 3: Enlisting Help of Social and Community Supports	Regulatory/Guidance document	Relevant content within regulatory/guidance document
Was a chronology received prior to admission? If so, was this between 1-7 days before admission or before one week?	Children's Homes Regulations 2015 – The care planning standard RCPCH Healthcare Standards	"The home should ensure they have sufficient information from the child's 'placing authority' and other relevant agencies to effectively assess whether they can meet the child's needs before agreeing to the placement." "A child's healthcare information must be obtained when they are admitted to a secure setting…this must be completed within 7 days of the transition." "A child's healthcare information is obtained when they are admitted to a secure setting and key needs shared internally to assist in the integrated approach to formulation-based care planning." "Information shared should be necessary, proportionate, relevant, adequate and accurate, and shared in a timely and secure manner."
Was the SCH provided with details of multi-agency professionals involved with the young person prior to their admission?		
Was the SCH given information around risk prior to the young person's admission?		
Was the SCH given information in relation to the young person's physical and mental health prior to admission?		
What was the quality of the information that was shared with the SCH prior to admission?		

Domain 4: Advance Care Planning	Regulatory/Guidance document	Relevant content within regulatory/guidance document
What was the level involvement from the Local Authority in the young person's care planning?	NICE quality standards (2013)	"The team working with the child or young person to work collaboratively to manage the multidisciplinary care plan, with the named lead social worker taking a lead professional role." "Local arrangements to ensure the placing authority shares relevant information before a child or young person moves to the placement."
	Children's Homes Regulations 2015 – The care planning standard	"The registered person should ensure that they and their staff engage proactively with the placing authority to contribute fully to the relevant plans for the child's care on an ongoing basis."

Domain 4: Advance Care Planning	Regulatory/Guidance document	Relevant content within regulatory/guidance document
	Children's Homes Regulations 2015 – The quality and purpose of care standard	"The child, the social worker and other relevant persons input is sought on the implementation and arrangements for the care."
Did the young person visit their placement prior to discharge? If so, how long before discharge were visits initiated?	NICE quality standards (2013)	"Local arrangements to ensure that the child or young person gets to know their new carers and placement through visits and, where possible, overnight stays before they move to the placement."
Did the young person have contact with the care staff at their placement prior to discharge? If so, how long before discharge was contact initiated?		
Was the young person's education plan and relevant documentation updated and shared with new education providers?	NICE quality standards (2013)	"Evidence of effective local information-sharing protocols between health, social care and educational services." "Evidence of local arrangements to ensure there is agreement between placing and receiving teams about schooling and healthcare arrangements before a child or young person moves to the placement."

Domain 5: Coordinating Care among Team Members	Regulatory/Guidance document	Relevant content within regulatory/guidance document
What was the quality of the involvement from the Local Authority in the identification and arranging of the placement?	NICE quality standards (2013)	"Evidence of local arrangements to ensure pathway planning is responsive to the needs of young people preparing to leave care and equips them with the skills they need to live independently."
	Children's Homes Regulations 2015 – regulation 5	"Engaging with the wider system to ensure children's needs are met - seek to involve each child's placing authority effectively in the child's care, in accordance with the child's relevant plans". The requirement to work with social workers throughout the young person's admission and discharge is repeated throughout the regulations. This reinforces the importance of

Domain 5: Coordinating Care among Team Members	Regulatory/Guidance document	Relevant content within regulatory/guidance document
		a strong working relationship between the SCH and the local authority throughout the young person's admission and discharge.
Was the young person's contact information shared prior to discharge?	NICE quality standards (2013)	"Evidence of local arrangements to ensure that looked-after children and young people have continued contact with key professionals when they are placed across a local authority or health boundary."
Was the contact information of multi-agencies working with the young person shared prior to discharge?	Children's Homes Regulations 2015 – regulation 5	"Homes take the initiative in identifying others who must play a part for their children and engage with those relevant people proactively, advocating for the children in their care."
	Children's Homes Regulations 2015 – The quality and purpose of care standard	"When making a decision about arranging care for children, it is good practice for all the relevant people involved in the child's healthcare to be informed so there is an integrated approach to health and wellbeing."
	Children's Homes Regulations 2015 – The care planning standard	"Any contact details (telephone numbers etc.) must be included in the placement plan agreed between the registered person and the child's placing authority."
	RCPCH Healthcare Standards	"A child's healthcare information must be shared with new providers when they leave the secure setting and are transferred to the community, another secure setting, secure mental health provision or the adult justice setting. This must be completed within 7 days of the transition." "The roles of the agencies involved in any subsequent care are agreed and documented."

Each domain was scored on a 5-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (5) indicating to what extent each domain was achieved. The 'acceptable discharge practice' threshold for each domain was ≥4. Both the researcher and independent trainee scored each participant on all five domains. Once all domains and participants were scored, the researcher's scores and independent trainee's were compared and any disagreements were discussed and resolved. The interrater correlation coefficient was 0.87. The total quality of discharge score for each participant was between 5 and 25 and the 'acceptable discharge practice' threshold for the total quality of discharge was ≥20. This was calculated by adding the scores from the five domains (out of 5) together.

Using two individuals to determine which data contributed to each domain, develop the scoring matrix, and score each domain for all participants helped to reduce researcher bias.

Other Predictor Variables

Gender

As outlined in the systematic review in chapter 2, the gender of a young person has been found to be a significant predictor for readmission (Barker et al., 2010; Fontanella, 2008) therefore as well as providing demographic information about the sample, this variable was included as a predictor in the regression analyses. The gender of each participant was

recorded in the original database. This was recoded as '1' for males and '2' for females.

Family Contact

The role of families during a young person's period in care has often been ambiguous within policy and practice (Pawson et al., 2009). They are viewed as crucial support structures especially during the period of discharge and transition into the community (Kalmakis & Chandler., 2015). However, they are also identified as one of the contributing factors for the young person's difficulties and as highlighted in the systematic review in chapter 2, disengaged parent-child relations are identified as predictive of readmission (Blader, 2004; Fontanella, 2008). Research has highlighted that a 'disrupted' family background is often present for young people involved in the criminal justice system (Barker et al. 2010; Jacobson et al., 2010) alongside a history of ACEs (Boekamp et al., 2017). Literature on desistance (Farrall et al., 2010; Cid & Marti., 2012) and resilience (Abrams, Shannon & Sangalang., 2008) demonstrates the protective nature of supportive family relationships against reoffending alongside increasing the young person's ability to overcome challenges. Family contact has also been shown to increase the young person's emotional well-being (Mooney et al., 2007).

In the current research, the variable 'family contact' was formed using two variables from the original database: 'family contact via phone' and 'family contact face-to-face' which were both recorded as yes or no.

Each participant was given a score of either '1' indicating that they had family contact either in the form of telephone contact or face-to-face contact during their admission or '2' indicating that they did not have either.

Historical Risk

The offence history of each participant was listed in the original database therefore to quantify risk, the Cambridge Crime Harm Index (CCHI; Sherman et al., 2016) was selected to produce a numerical score indicating the historical risk of each participant. The CCHI (Sherman et al., 2016) is an index which measures the seriousness of harm caused to victims by criminal activity. The index uses the sentencing starting points to calculate crime harm; this provides a baseline penalty relative to the crime committed. It provides a score for 738 offences. Where a custodial sentence was the starting point for sentencing, this is converted into the number of days of imprisonment, for example, murder starts at 15 years therefore this holds a CCHI score of 5,464. Where community sentences or fines are the starting point for sentencing, scores are based on the number of hours of unpaid work or how many hours would be needed to be worked to pay the fine.

This index differs from other measures of crime as it focuses on the impact of the crime rather than merely the number of crimes committed. When considering risk, the level of potential harm to others is an important consideration alongside the risk of re-offending. It is argued that a harm index is more informative than indexes which reflect the amount of crime

being committed. Harm indexes allow professionals to identify the most harmful offenders, the most harmed victims, and the highest harm areas/regions. Both for practical and evaluation purposes, this index can help to measure success or failure in relation to the impact on the community/public rather than merely reducing rates of crime. This may help the police to identify areas where more funding or resource is required in line with the harm being caused by offenders.

For this research, historical risk is an important consideration in decisions around discharge planning as it can inform professionals about the risk of future offending. A meta-analysis (Cottle et al., 2001) consisting of 23 studies representing 15,265 young offenders found that offence history was the strongest predictor of reoffending. Mulder et al. (2010) more recently corroborated this finding; they found that past offending was significantly positively related to both general reoffending and the severity of reoffending.

A young person's offence history is sought and documented within the referral form to the SCH. When data was input into the database by assistant psychologists within the service by reviewing the electronic patient record system, they recorded all known offences. The researcher identified the young person's offence which corresponded with the highest score on the CCHI, and this was recorded as a numerical score for historical risk. This removed researcher bias as the researcher did not need to select which offence to score.

Current Risk to Others

The young person's current risk is also important to consider when discharging them as the risk must then be managed in the community.

Organisations including the police, prison service, criminal justice system, youth offending teams and government use frameworks such as the Assessment, Intervention, Moving-On 3 (AIM3; Leonard & Hackett, 2019) and the Risk of Serious Harm Guidance (RoSH; HMPPS, 2020) to assess risk. These categorise individuals presenting risk as either 'low', 'medium', 'high' and sometimes 'very high'.

Risk assessment tools allow for professional judgement to be made on these risk levels after taking account of the presence or absence of a predetermined set of static and dynamic risk and protective factors (Douglas et al., 2017) identified within the literature as associated with the future risk of offending (Hempel et al., 2011; Dahl et al., 2018; Miccio-Fonseca & Rasmussen, 2018).

For this research, current risk to others was formed by two variables: assault towards others and assault towards peers. Data for these variables was input into the database by assistant psychologists within the service by reviewing the electronic patient record system including incident records and clinical notes. From these, details of any assaults on peers or others during the admission was recorded within the database. The researcher and a Qualified Forensic Psychologist independently considered this information and used clinical professional judgement to rate each young

person as presenting a low, medium, or high risk of harm to others. Any disagreements were discussed, and a final rating was agreed. It is acknowledged that the level of detail known by the researcher and Qualified Forensic Psychologist is limited to the detail input by the assistant psychologists. It is also possible that not all information pertaining to a young person's risk to others has been captured; for example, physical violence is likely to be documented in greater detail compared to other risks due to the nature and severity of harm to others.

Past Engagement

Lack of treatment adherence has been identified as a predictive factor for serious and violent reoffending (Mulder et al., 2010). Understanding past engagement can also guide professionals when considering onward referrals into the community (Bombard et al., 2018). Two variables contributed to 'past engagement': a history of Youth Offending Service (YOS) engagement and Children and Adolescent Mental Health Service (CAMHS) engagement. Within the referral document to the SCHs, past service involvement with YOS and CAMHS was outlined alongside whether the young person had engaged in any previous service involvement and what work was completed. When data was input into the database by assistant psychologists within the service by reviewing the electronic patient record system, they recorded both whether the young person had past involvement with YOS or CAMHS and whether they engaged with the services. This was then coded by the researcher as '1' to indicate good past engagement if they were involved and engaged with either YOS and/or

CAMHS and '2' to indicate poor past engagement if they were involved but did not engage with either YOS and/or CAMHS. Twenty-seven young people from the full sample of 111 were not involved with either YOS or CAMHS. In the original database, this was recorded as 'N/A' and this data was not included in the analysis for this research.

Mental Health Diagnosis

The meaning of the term 'clinical complexity' can differ greatly. It can refer to a patient having multiple diagnoses (Katon et al., 2010; Grembowski et al., 2014; McDowell, 2018). Clinically, it would be logical to conclude that professionals will dedicate more time and resource to the planning of a young person's discharge if they are deemed more complex, notably, if they have more mental health diagnoses, than those with fewer diagnoses.

As outlined in the systematic review in chapter 2, having multiple diagnoses has also been found to be a significant predictor for readmission (Fontanella, 2008; Phillips et al., 2018). When data was input into the database by assistant psychologists within the service by reviewing the electronic patient record system, they recorded all known mental health diagnoses. For this research, the number of diagnoses that a young person had was calculated and this represented their numerical score on this variable.

Risk to Self

The risk that a young person poses to themselves is a critical factor considered by staff when their readiness for discharge is assessed. A young person will not be discharged from a SCH if the risk of harm that they pose to themselves cannot be safely managed in the community.

As shown in the systematic review in chapter 2, the risk that a young person poses towards themselves, especially when they present as actively suicidal (Blader, 2004; Chung et al., 2008; Fontanella, 2008) and/or they have a history of self-harming behaviour (McCarthy et al., 2017) has been identified as a significant predictor of readmission.

When data was input into the database by assistant psychologists within the service by reviewing the electronic patient record system, they recorded whether at the point of discharge a young person was presenting as suicidal, presenting with actual self-harm behaviours and whether they had a history of substance misuse. History of substance misuse was included in this variable because substance misuse is widely accepted as a risk factor for re-offending (Bui et al., 2000; Cottle et al., 2001; Ford, 2005; Stoolmiller & Blechman, 2005; D'Amico et al., 2008; Weber & Lynch, 2021).

If a young person was presenting as suicidal, presenting with actual self-harm behaviours or they had a history of substance misuse, the researcher rated this variable as yes (1) to indicate that the young person presented as a risk to themselves. If these factors were not present, the

researcher rated this variable as no (0) to indicate the young person did not present as a risk to themselves.

Assessments available to care staff

The original database held information indicating whether the SCH were given various assessments (criminal vulnerability assessment, social care assessment, educational psychology assessment and psychology/psychiatry assessment) prior to the young person's admission. Clinically, better decisions can be made when richer, more detailed information relating to the decision is available (Benner et al., 2008). When more information is available to staff, the quality of care increases (Tierney, 2001) therefore with more assessments, the quality of practice from SCH staff when making decisions around discharge will likely be higher.

Each participant was given a numerical code for this variable between 1 and 4. This code indicated the totalled number of the assessments outlined above (criminal vulnerability assessment, social care assessment, educational psychology assessment and psychology/psychiatry assessment) which were available to care staff at the point of the young person's admission to the SCH.

Not all young people will have been referred or required to have all of these assessments however, this variable reflects the amount of information available for staff and consequently how informed their decision-making is. Therefore, regardless of whether a young person was referred for such assessments prior to their admission, it remains the case

that the SCH do not have information which could be valuable in informing their decision making.

Educational Attendance

Research shows that young people who have experienced high levels of ACEs often display hyper-vigilance, aggression and problems with attention and impulsivity (Brunzell, Waters & Stoke, 2015) and links have been made to poorer academic attendance and outcomes (Merians, Baker, Frazier & Lust, 2019). A meta-analysis (Cottle et al., 2001) found that family and social domain variables, notably, achievement test scores was inversely related to re-offending.

This variable was formed using data from three variables in the original database which were gathered from the electronic patient record system by assistant psychologists within the service responsible for inputting the data: past poor school attendance, history of exclusions, and attendance in SCH education (reverse scored). Information regarding past school attendance and exclusions was routinely recorded within social care assessment documents and the SCH referral document. Information on the young person's attendance at education within the SCH was documented within the clinical notes during the young person's admission. In the original database, past poor school attendance and history of exclusions was recorded as 'yes' and 'no' and the attendance within SCH education was recorded as either 'above 50%' or 'below 50%', indicating their overall attendance throughout their admission. Each participant was

given a score to indicate the presence (1) or absence (0) of each of these three variables. This was then totalled to produce an overall educational attendance score of either 1, indicating poor attendance, 2, indicating average attendance, or 3, indicating good attendance.

Level of Instability

The Trauma Recovery Model (Skuse & Matthew, 2015) was developed from work with young people serving sentences or subject to secure accommodation orders at Hillside Secure Children's Home. Drawing from this model, level two follows Maslow's hierarchy of needs (Maslow, 1943) which proposes that psychological growth can only be achieved once stability, basic physiological and safety needs are met. As outlined in the presentation/behaviour section, instability forms the foundations of this model. If stability is not achieved, the young person is unable to move further up the pyramid and progress.

When considering the risk of readmission, instability should be considered. This was highlighted in the systematic review in chapter 2 where research (Chung et al., 2008; Fontanella, 2008; Phillips et al., 2008) found that previous psychiatric hospitalisations was a significant predictor of readmission. A meta-analysis (Cottle et al., 2001) identified that among other factors, having a greater number of out-of-home placements was a static predictor of reoffending.

In this research, the number of previous care placements the young person had experienced was used as the measure of instability. When data

was input into the database by assistant psychologists within the service, they recorded all previous care placements. This is required information recorded on the SCH referral document. Previous care placements were identified using two definitions from The Care Planning, Placement and Case Review (England) Regulations 2010 for placement. Firstly, "arrangements made by the responsible authority for a child looked after by the responsible authority to live with a person/authority where the child is in the care of the responsible authority" (Department for Social Care, 2010, p. 4). Secondly, "placement with a local authority foster parent, whether a relative, friend or other of the child looked after by the responsible authority, or, a placement in a children's home" (Children's Act, 1989, p. 72). This variable was coded numerically, where the number of previous care placements was used as the number indicating the level of instability the young person had experienced.

Length of Stay

Current literature uses the terminology 'length of stay' to refer to the length of an admission therefore this was also used in this research. As shown in the systematic review in chapter 2, the length of a young person's stay in non-custodial settings has been found to a significant predictor of readmission (Fontanella, 2008; McCarthy et al., 2017; Phillips et al., 2018).

Logically, it can be assumed that the longer a young person stays within the SCHs, the more knowledgeable the staff become in relation to that young person. With more knowledge and understanding of the young

person's needs, risks, and vulnerabilities, it is suggested that the quality of practice in relation to working towards a discharge should be higher.

This variable was coded numerically whereby the number of days that the young person had been in the SCH represented their numerical score on this variable. This was already recorded in days in the original database.

Treatment of Data

IBM SPSS Statistics software version 28 was used to compile and analyse the data. The dataset was viewed as a whole.

Differing terminology, undefined acronyms, lack of specificity, and varying definitions for concepts can all pose a challenge to the research when using secondary data (Boslaugh, 2007; Johnston, 2014; Stebbins & Ritchie, 2021). The data used for this research was reviewed prior to use to ensure it was detailed and concepts, variables and codes were specified. Although it was time consuming to re-code the dataset into numerical formats, it was beneficial that the database contained mostly words rather than numbers as it increased clarity.

Data cleaning, and transformation

Data cleaning aims to identify and correct errors made during the data collection and entry process to reduce the impact on research results (Van den Broeck et al., 2005). To ensure rigor and quality, a systematic process was followed based on a framework by Van den Broeck et al. (2005) and guidance from Ilyas and Chu (2019). As an existing database

was used for this research, it was particularly important to ensure the data was clean prior to analysis.

Data Screening

The variables of interest were extracted from the database and entered into columns. This ensured each row represented one participant. There were no empty rows to be removed.

Due to the raw nature of the database, four variables (diagnoses, educational qualifications gained, previous care environments and age at admission) required reconfiguration. Diagnoses were listed in the database for each participant. These were appropriately grouped and separated into the following eight variables:

1. Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD)
2. Autism Spectrum Disorder (ASD)
3. Oppositional Defiant Disorder (ODD) or Conduct Disorder (CD)
4. Personality Disorder (PD) or Attachment Disorder
5. Affective Disorder or Dysregulation
6. Psychosis, Mania, or Dissociation
7. Post-Traumatic Stress Disorder (PTSD)
8. Other mental health diagnosis

These variables were coded as '0' if the young person did not have the diagnosis and '1' if they did.

The qualifications that participants gained during their admission at the SCH were listed in the database therefore these were added up and each participant was given a numerical value for this variable. Previous care environments were also dealt with in this manner. Each participant's

age at the time of their admission and the length of their admission were entered as a numerical value.

As outlined above, the offence history of each participant was listed in the original database. This was used to quantify 'historical risk' by using the Cambridge Crime Harm Index (CCHI; Sherman et al., 2016) which measures the seriousness of harm caused to victims by criminal offending. Each participant received a numerical score for their offence which corresponded with the highest score on the CCHI.

Data Diagnosing

The dataset was checked for duplicate records. No duplicates were identified.

As the formatting of the data varied, data standardisation was needed to convert the data across all variables into a uniform format. The database contained text across most variables. Male/M and female/F were changed to 1 and 2 respectively. Variables coded as Yes/Y or No/N were changed to 1 and 2 respectively.

There was no missing data in the original database however for continuous variables, checks were conducted to ensure there was no invalid data. Scatterplots and boxplots were generated to identify possible outliers. Two data points were identified as potential outliers. One participant was recorded as having 49 previous care environments. This was recalculated from the original database and the participant was over 16 years old when they were admitted so this was determined to be a 'true

outlier' and therefore was retained. Another participant was recorded as having a score of 5475 for 'historical risk'. This was rescored against the CCHI from the original database and determined to be correct therefore this was also retained.

Continuous variables which were used to determine the scores for the five domains within quality of discharge were also checked for validity. For data to be deemed valid, participants must have known about their placement for the same time or longer than they had visits/contact with the placement. One participant is recorded to have visited and had contact with their new placement for two weeks longer than they had knowledge of this placement. This data was therefore deemed invalid and removed from the dataset. As young people are limited to one mobility per day, for the data to be valid, the number of mobilities cannot be larger/same as than the number of days before discharge that mobilities commenced. Three participants are recorded to have started mobilities six, two and four days before their discharge but they are also recorded to have had 18, 42 and eight mobilities. This is not possible and therefore this data was deemed invalid and was removed.

Data Analysis

Secondary data research is at risk of "data dredging"; over-analysis of the data in an attempt to produce a desirable result (Orsini et al., 2020; Andrade, 2021; Stebbins & Ritchie, 2021). To avoid this and increase the quality of the research, hypotheses were developed prior to any level of

analysis on the data (Orsini et al., 2020) and specific data analysis methods were outlined and complied with.

Ideally, follow-up data would have been available, and outcomes could have been investigated. Due to the nature of this secondary data research, the scope of the research and possible analysis was bound to the limits of the database being used (Trzeniewski et al., 2011).

Descriptives

To provide the reader with an understanding of the rates of ACEs within the population of young people who are admitted to SCHs, descriptive statistics were gathered for the total ACE score as well as each of the three ACE categories (abuse, neglect, and household dysfunction).

Led by previous literature, for data analysis purposes, this research used a cut-off ACE score of 4 to create two groups; individuals exposed to at least four types of adversity and individuals exposed to less than four. The original ACE study by Felitti et al. (1998) initiated this cut-off as they found that individuals who experienced four or more categories of ACE were significantly more likely to experience health-related difficulties later in life compared to those that had experienced none. A systematic review and meta-analysis conducted by Hughes et al. in 2017 and published in the Lancet Public Health Journal reviewed 37 studies (totalling 253,719 participants) reporting risks of health outcomes associated with multiple ACEs. They found that individuals with at least 4 ACEs were at an increased risk of all 23 health outcomes compared with individuals with no

ACEs. Therefore, supporting the use of a cut-off of 4 ACEs. More recently, the cut-off for ACEs pertaining to health outcomes was specifically investigated in a paper by Alhowaymel et al. (2023). They found that a cut-off point of 4 or more ACEs was significantly associated with increased rates of chronic disease and this association emerged at 4 ACEs. They further proposed that the cut-off could be used regardless of the version of the ACE questionnaire (Alhowaymel et al., 2023).

Descriptive statistics were also gathered to outline the 'quality of discharge' within current practice. Statistics for both the overall quality as well as statistics for each of the five domains.

Independent T-tests, an ANOVA, Mann-Whitney U test and Pearson's correlation were used to identify differences and associations between the total ACE scores and the participant's characteristics, namely their gender, attendance at education, exclusions from educational provisions, extent of family contact, risk rating, previous care placements and their length of admission within the SCH.

Analytical

To further analysis the data, a threshold was determined to assess whether the quality of discharge for each participant was classified as good quality or poor quality. For each of the five domains, the threshold was 4/5, and for the total quality of discharge score, the threshold was 20/25. According to theory, 5/5 and 25/25 would be deemed 'perfect' practice.

Ordinal regression analyses were used to identify factors which may predict good quality practice within each of the five domains and overall when all domains are combined.

Due to multicollinearity with each other and the total ACE score variable, 'ACE: abuse', 'ACE: neglect' and 'ACE: household dysfunction' variables were not included in the regression analysis therefore the 11 predictors detailed above, and the total ACE score were used to run the ordinal regression analyses. Six dependent variables consisting of the five domains and the overall quality of discharge were used.

Chapter 4 – Adverse Childhood Effects and the Quality of Discharges out of Secure Children's Homes: Part 1

Abstract

This chapter sought to present the characteristics of young people living in Secure Children's Homes (SCHs) and the rates of Adverse Childhood Experiences (ACEs). To achieve this aim, a descriptive study was created guided by a positivist paradigm. Quantitative data from an existing anonymised database contained data from 118 young people residing in one of two SCHs, all aged below 18. One hundred and eleven young people were included in this research. Descriptive analysis and deductive interpretation were used. Findings showed that young people in SCHs have experienced higher levels of ACEs compared to the general population and the offender population. 86.5% of the sample had experienced ≤4 ACEs, with females scoring higher than males. Gender and the number of previous care environments experienced were two factors with statistically significant results when comparing ACE scores. Implications for the research focus on the improved understanding of the needs and experiences of this population which will help inform the development of evidence-based interventions to support young people.

***Keywords*:** Adverse childhood experiences, Young adults, Adolescents, Secure children's homes, Quality of discharge, and Transition.

Introduction

Secure homes are intended to provide a safe and secure environment for adolescents and young people with difficulties who are living away from their biological families (Donisi et al., 2016). Developmental trauma refers to the repeated, cumulative exposure of stressful events over a period of time within relationships and contexts (Courtois, 2004). Trauma can have long-lasting effects on a person's physical, mental and emotional wellbeing (Sar, 2011). The homes, according to Kagabo (2017), can be a critical resource for children who are exposed to abuse, neglect, or other categories of trauma, but unfortunately, secure homes can also be sources of further trauma. Children in secure homes are often exposed to high levels of stress, uncertainty, and instability, all of which can result in further trauma and the perpetuation of the effects of previously experienced ACEs.

ACEs can have a profound and lasting impact on a child's health, welfare, and future prospects. Background information on ACEs and the prevalence within the general population and offender populations can be found in Chapter 1. The experience of ACEs can have a significant impact on a child's physical, cognitive, and emotional development, and can increase the risk of a range of negative outcomes, including behavioural problems, poor academic performance, and chronic health issues. Barker et al. (2010) notes that for children living in secure homes, the risk of ACEs is even greater, and their impact can be long-lasting on physical, emotional, and mental health. While different aspects of ACEs have been reviewed within SCHs (Falshaw & Browne, 1997; Gibson, 2020), research has not

purely focused on ACE prevalence and the associations between ACEs and the characteristics of young people below 18 years residing in SCHs.

Exposure to ACEs and the effects of ACEs have been linked to readmissions to mental health and forensic facilities. The perspective of Petruccelli et al. (2019) was consistent with Chapter 2 highlighting the significance of abuse, neglect, household dysfunction, and exposure to violence or substance abuse as major contributing factors to readmission. Phillips et al. (2020) note that ACEs have a marked impact on adolescents and young adults as they transition from secure children's homes to independent living. Adolescents who have experienced ACEs are at a higher risk of presenting with symptoms of anxiety, depression, and post-traumatic stress disorder (PTSD), which as shown in Chapter 2 may also be directly linked to readmission to psychiatric inpatient units (Fialkowski et al., 2022). Moreover, it has been established that ACEs increase the potential risk of mental health problems, which can affect a young person's ability to effectively manage their emotions (Cohrdes and Mauz, 2020), leading to impulsive and risky behaviours (Narayan et al., 2021), such as substance abuse and criminal activity, that can result in readmission (Boullier and Blair, 2018). Phillips et al. (2020) concurred with Boullier and Blair (2018) suggesting that adolescents and young people with a history of ACEs are more likely to experience difficulties in forming and maintaining healthy relationships, which can further increase the risk of readmission.

As highlighted in Chapter 2, a history of ACEs in adolescents and young adults can be especially problematic in non-custodial settings where there is often limited structure and support. To mitigate the impact of ACEs, Shah et al. (2020) noted the importance of SCHs and other organisations to provide support and resources during the transition to community placements or independent living. Briggs et al. (2021) expanded on the views of Shah et al. (2020) asserting the need to provide access to mental health services, education, job training, employment support, and life skills training. It is suggested that the provision of safe and stable housing, as well as access to education and training opportunities, are indispensable opportunities for ACE-exposed young adults. Importantly, the literature suggests that SCHs play a central role in addressing the negative effects of ACEs by providing a stable and supportive environment for children and adolescents in a bid to decrease the rate of readmission (Pates et al., 2021). Whiteside-Mansell et al. (2019) argued that the transition from SCHs to independent living can be difficult for many young people necessitating the need for increased support and resources to increase the success of this transition. It was suggested that support services need to increase access to mental health services, job training, employment support, and life skills training should be provided.

Clinically, understanding what ACEs are prevalent within the SCH population is important because research has shown that ACEs can increase the likelihood of future high-risk behaviours. An increased understanding can help guide professionals in their care planning and plan towards

discharge more effectively. Recognition of ACEs during childhood may aid in preventing or reducing the change of negative life outcomes occurring later on in adulthood (Chapman et al., 2004).

Professionals need to identify ACEs within this population and understand the impact of these on their risk and future behaviours. This is important both during the admission when identifying and providing effective interventions but also in the planning of the young person's discharge with the aim to reduce the harmful impact of ACEs upon the young person in the future.

Chapter Aims

a) To present the characteristic and ACE profile of the young people living in the two SCHs

Research Questions

a) What is the rate of ACEs within the young people residing in the two SCHs?
b) What are the other individual characteristics of young people living in the two SCHs?

Hypotheses

H_a1. Gender differences: Female participants will have higher total ACE scores.

H_a2. Family involvement: Young people without family contact during their SCH admission will have higher total ACE scores.

H_a3. Education: There will be a significant difference in total ACE scores between young people with poor, average and good educational attendance records.

H_a4. Risk Level: There will be a significant difference in total ACE scores between young people rated high risk, young people rated medium risk and young people rated low risk.

H_a5. Past professional involvement: As total ACE scores increase, the number of previous care placements will also increase.

H_a6. Length of admission: As total ACE scores increase, the length of admission will also increase.

Data Analysis

The sample consisted of 111 young people (65 male and 46 female) aged between 11 and 18 at the time of their discharge from one of two SCHs. The mean age of the total sample at the point of admission and discharge was 15.211 years old (*SD=1.224)* and 15.684 years old (*SD=1.193)* respectively. The median age of the total sample at the point of admission and discharge was 15.417 years old (*IQR=1.750)* and 15.833 years old (*IQR=1.802)* respectively.

Table 4.1 shows further detail regarding the demographic characteristics of the sample. The findings are presented in the next section.

Table 4.1

Demographic characteristics of the sample, separated by gender.

	Males		Females		Full sample	
Sample	N	%	N	%	N	%
	65	(59)	46	(41)	111	(100)
Legal Status						
Welfare	56	(86)	46	(100)	102	(92)
Criminal Justice	9	(14)	0	(0)	9	(8)
Age at Admission/ACE recorded						
11	0	(0)	1	(2)	1	(1)
12	2	(3)	1	(2)	3	(3)
13	8	(12)	4	(9)	12	(11)
14	17	(26)	10	(22)	27	(24)
15	21	(32)	14	(30)	35	(32)
16	14	(22)	13	(28)	27	(24)
17	3	(5)	3	(7)	6	(5)
Age at Discharge						
12	2	(3)	2	(4)	4	(4)
13	4	(6)	2	(4)	6	(5)
14	12	(18)	8	(18)	20	(18)
15	19	(29)	12	(26)	31	(28)
16	21	(32)	16	(35)	37	(33)
17	7	(11)	6	(13)	13	(12)
Family Contact						
Yes	12	(18)	37	(80)	49	(44)
No	53	(82)	9	(20)	62	(56)
Educational Attendance						
Poor	30	(46)	19	(41)	49	(44)
Average	25	(38)	16	(35)	41	(37)
Good	10	(15)	11	(24)	21	(19)
Current Risk to Others						
Low	8	(12)	10	(22)	18	(16)
Medium	20	(31)	11	(24)	31	(28)
High	37	(57)	25	(54)	62	(56)
No. of care placements						
0	18	(28)	12	(26)	30	(27)
1-5	21	(32)	19	(41)	40	(36)
6-10	14	(22)	8	(17)	22	(20)
11-15	9	(14)	3	(7)	12	(11)
16+	3	(4)	4	(9)	7	(7)
Length of Stay (days)						
>30	3	(4)	0	(0)	3	(3)
31-90	10	(15)	7	(15)	17	(15)
91-180	21	(32)	28	(61)	49	(44)
181-270	20	(31)	7	(15)	27	(24)
271-360	5	(8)	3	(7)	8	(7)
361+	6	(10)	1	(2)	7	(7)
Mental Health Diagnosis						
None	11	(17)	20	(43)	31	(28)
Behaviour Disorders (ADHD/ADD/ODD/OD)	21	(32)	8	(17)	29	(26)
ASD	6	(9)	2	(4)	8	(7)
Trauma-related disorders (PD/Attachment/PTSD)	6	(9)	10	(22)	16	(14)
Affective Disorder/Dysregulation	10	(15)	4	(9)	14	(13)
Psychosis/Mania/Dissociation	5	(8)	2	(4)	7	(6)
Other	6	(9)	0	(0)	6	(5)

Data Distribution and Assumption Testing

To select the appropriate statistical test, the Shapiro-Wilk test was used to test for normality within ACE scores. A Shapiro-Wilk test was performed and showed that the distribution of total ACE scores across the sample departed significantly from normality ($W(111) = 0.93$, $p \leq 0.001$). As seen in Table 4.2, this was also the case when the sample was split according to gender (Male $p \leq 0.001$, Female $p \leq 0.001$), and current risk to others (Low $p = 0.021$, Medium $p = 0.034$, High $p = 0.003$). Total ACE scores for each level of educational attendance except 'good' departed significantly from normality (Poor $p = 0.004$, Average $p = 0.005$, Good $p = 0.143$) and total ACE scores for both individuals who had family contact ($p \leq 0.001$) and those who did not have family contact ($p = 0.034$) did not show evidence of non-normality.

Table 4.2

Tests of normality (Shapiro-Wilk) showing the distribution of total ACE scores by gender, family contact, educational attendance, and current risk to others.

	N	W	p
GENDER			
Male	65	0.922	≤ 0.001
Female	46	0.809	≤ 0.001
FAMILY CONTACT			
Yes	90	0.920	≤ 0.001
No	21	0.899	0.034
EDUCATIONAL ATTENDANCE			
Poor	49	0.923	0.004
Average	41	0.915	0.005
Good	21	0.931	0.143
CURRENT RISK TO OTHERS			
Low	18	0.874	0.021
Medium	31	0.926	0.034
High	62	0.936	0.003

Note. Significant results suggest a deviation from normality.

The Shapiro-Wilk test was also used to test for normality within the number of care placements and the length of stay variables. Both tests showed that the distribution of the number of care placements ($W(111) = 0.741$, $p \leq 0.001$) and length of stay in days ($W(111) = 0.917$, $p \leq 0.001$) departed significantly from normality.

Based on the outcomes of these tests, non-parametric tests were used to analyse the data.

Results

Adverse Childhood Experiences

The number of participants and percentage of the sample who experienced each ACE is shown in Table 4.3. This information is also separated by gender.

Table 4.3

Percentage and number of participants, separated by gender, who had experienced each ACE.

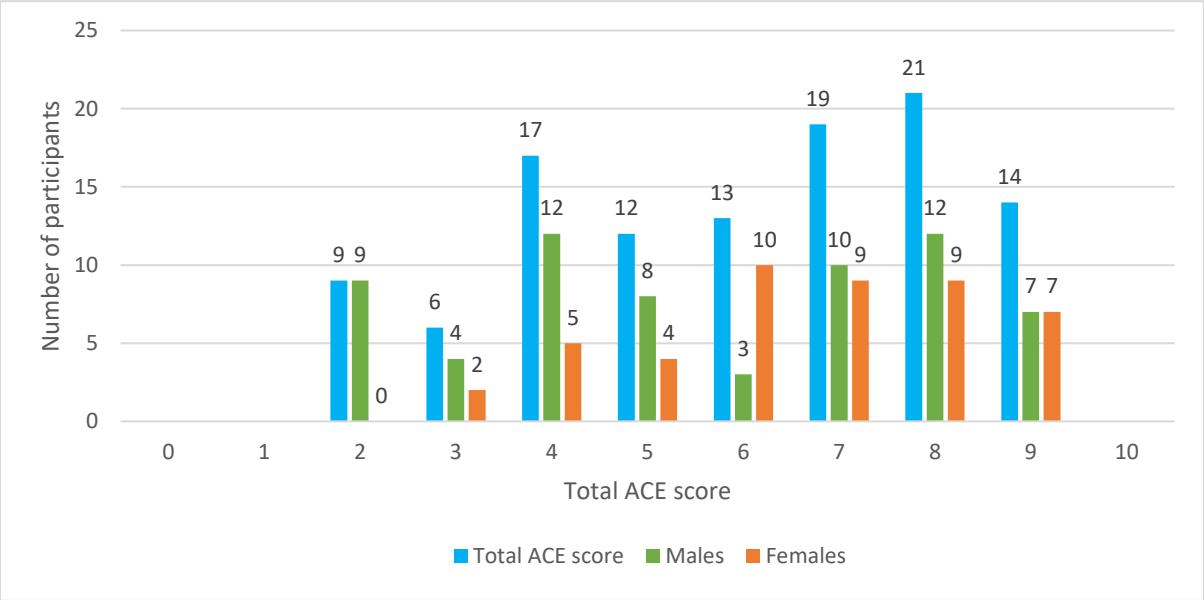
ACE	Males		Females		Full sample	
ABUSE	N	%	N	%	N	%
Emotional Abuse	36	(55.38)	34	(73.91)	70	(63.06)
Physical Abuse	29	(44.62)	30	(65.22)	59	(53.15)
Sexual Abuse	21	(32.31)	32	(69.57)	53	(47.75)
NEGLECT						
Emotional Neglect	42	(64.62)	37	(80.43)	79	(71.17)
Physical Neglect	44	(67.69)	38	(82.61)	82	(73.87)
HOUSEHOLD DYSFUNCTION						
Parental Separation/Divorce	39	(60.00)	33	(71.74)	72	(64.86)
Exposure to Domestic Violence	38	(58.46)	31	(67.39)	69	(62.16)
Exposure to Substance Misuse	43	(66.15)	30	(65.22)	73	(65.77)
Exposure to Mental Health Problems	24	(36.92)	17	(36.96)	41	(36.94)
Exposure to Criminality	49	(75.38)	22	(47.83)	71	(63.96)

Table 4.3 highlights that the overall sample experienced neglect (both emotional and physical) more than any other single ACE, while 'exposure to mental health problems' was least experienced. When the sample was split by gender, this pattern was maintained for females however this was not the case for males. Of all 10 ACEs, more males experienced 'exposure to criminality' while 'sexual abuse' was least experienced.

Figure 4.1 shows the total ACE scores for the sample. Within the sample, total ACE scores ranged from 2 to 9, the mean total number of ACEs experienced was 6.06 ACEs (*SD* = 0.20*)* with the median as 6 ACEs and mode as 8 ACEs. No participant had a total ACE score of 0, 1, or 10. Female participants had a higher mean total number of ACEs (*M* = 6.69 ACEs, *SD* = 0.25) than male participants (*M* = 5.67 ACEs, *SD* = 0.29). 86.5% of the total sample (96/111 young people) had experienced 4 or more ACEs. When separated by gender, 95.65% of females and 80% of males within the sample experienced 4 or more ACEs.

Figure 4.1

Bar chart depicting the total ACE scores for the whole sample and by gender



Statistical analysis was conducted to test all six hypotheses and examine whether there were significant differences between the total ACE scores of participants dependent on their gender, whether they had family contact or not, their educational attendance, current risk to others, the number of previous care placements they had been in, and their length of stay in the SCH. The results of this analysis can be seen in Table 4.4 where significant relationships are also highlighted.

Table 4.4

Results of statistical analysis testing the six hypotheses examining whether there were significant differences in total ACE scores depending on the young person's demographic characteristics.

	Statistical Score	***p***
Mann Whitney U Test	***U***	***a***
Gender	2946	≤0.001*
Family Contact	847	0.728
Kruskall Wallis Test	***H***	
Educational Attendance	3.84	0.147
Current Risk to Others	0.174	0.916
Spearman Correlation	r_s	
No. of care placements	0.350	≤0.001*
Length of stay	-0.149	0.118

*significant at *p<0.05 level*

A Mann-Whitney U test was run to determine if there were differences in total ACE scores between males and females. ACE scores of males (Median = 5) were lower than those of females (Median = 7). This difference was statistically significant, $U(N_{males} = 65, N_{female\ s} = 46) = 2946.0$, $z = 8.778$, $p \leq 0.001$.

Equally, as shown in Table 4.3, the percentage of female participants who had experienced neglect was higher than the percentage of male participants (81.52% vs 66.15%). Unlike levels of abuse and neglect, a higher percentage of the male sample (33.80%) compared to female (34.80%) experienced an average level (3 of 5 household dysfunction ACEs) of household dysfunction.

Characteristic Profiles

A Mann-Whitney U test was performed to evaluate whether total ACE scores differed by family contact during admission. The results indicate that there was no significant difference between the total ACE scores of young people who had family contact during their admission (Median = 7) and those who did not (Median = 6), U= 847, z = 0.73, p = 0.728.

A Kruskal-Wallis test was performed on the total ACE scores of young people who had poor, average, or good educational attendance. The differences between the average ranks of 50.99 (poor), 56.22 (average), and 67.26 (good) were not significant, H (2, N = 111) = 3.84, p = 0.147.

A Kruskal-Wallis test also showed that the differences between the total ACE scores were not significantly different depending on the young person's current risk to others, average ranks of 58.69 (low), 54.81 (medium), and 55.81 (high), H (2, N = 111) = 0.174, p = 0.916.

Spearman's correlation showed that there was a significant positive correlation between total ACE scores and the number of previous care placements that a young person had had (r_s = 0.35, $p \leq 0.001$). It must be noted that the strength of the association is medium. There was no significant correlation between total ACE scores and the length of the young person's admission (r_s = - 0.149, p = 0.118).

In summary, the rate of ACEs was higher among females as opposed to males, while total ACE scores were associated with some aspects of the characteristic profiles of young people in SCHs. For instance, the analysis

demonstrated the statistical significance of two profile domains, gender and the number of previous care placements that the young person had experienced.

Discussion

Firstly, this chapter aimed to describe the characteristics, including ACEs, of young people residing in the two SCHs. The two research questions are answered below.

Rate of ACEs Within the Young People Admitted to SCHs

In the evaluation of the rate of ACEs, females were exposed to more ACEs than males and the average number of ACEs experienced by a young person residing in the SCH was 6.06. Physical and emotional neglect were the two most common, respectively, and exposure to mental health problems and sexual abuse were least common, respectively. These results were similar to that of Gibson (2020) who also found that physical and emotional neglect were within the three most common ACEs and sexual abuse was second least common. Our findings contradicted that of Vaswani (2018) however this may be due to sample differences; Vaswani used a community sample whereas Gibson (2020) used a more similar sample to this research, young people residing in Scottish secure units. This may suggest young people admitted to secure care have different experiences to those who remain in the community. When split by gender, exposure to criminality was most common and sexual abuse was least common for males, whereas, for females, physical neglect was most common and

exposure to mental health problems were least common. Gender differences in specific ACEs tend to be small and inconsistent across studies (Walker et al., 2004; Bellis et al., 2014). It is possible that the males felt shame about any sexual abuse that they experienced, and this acted as a barrier to them disclosing it on the ACE questionnaire (Hlavka, H. R., 2017; MacGinley, Breckenridge, & Mowll., 2019; O'Leary., 2020). Disclosure could also be negatively affected by societal and cultural attitudes around masculinity and sexuality (Levenson et al., 2016).

Females appear to be more susceptible to experiencing ACEs; exposure to substance misuse and criminality were the only two ACEs where higher percentages of the male sample had experienced them compared to the female sample. This finding is in line with the observation of Boekamp et al. (2017) noting that gender plays a role in the rates of ACEs experienced by young people in SCHs. The findings are also supported by a systematic review by Petruccelli et al. (2019). It is suggested that with the differences in ACE rates, especially with gender differences, the level and type of support and service that the young people needs should be tailored in line with their past trauma. Reasons for these sex differences should be explored by future research however this was not within the scope of this research.

Compared to research on the general population (Centers for Disease Control and Prevention, & Permanente, 2016), the young people residing in SCHs appear to have experienced more ACEs with 86.5% of our sample

experiencing ≤4 ACEs compared to 12.5% in the general population sample from the CDC research (CDC & Permanente., 2016). From these numbers, it is understood that the SCH population are 6.92 times more likely than the general population to have an ACE score of 4 or more. These results suggest that the SCH population experience more ACEs than the young offender population who were found to be four times more likely than the general population to experience ≤4 ACEs (Baglivio et al., 2014). Findings support the opinion of Whiteside-Mansell et al. (2019) that elevated rates of neglect and abuse define the need for early intervention and comprehensive support for these young people.

ACEs and the Characteristic Profiles of Young People Within SCHs

The findings demonstrated a statistical difference in total ACE scores between young men and women, with females having higher total ACE scores (Medians: Females: 7 vs Males: 5), therefore hypothesis 1 is accepted. The finding was consistent with the observation of Cohrdes and Mauz (2020) who noted that young females in SCH are often disadvantaged due to early exposure to sexual activities, substances, poverty, and homelessness, more than young males of comparable age leading to social exclusion. It also supported previous research conducted with the offender population; Baglivio and Epps (2016) found that females offenders have significantly higher ACE scores than males.

Interestingly, findings showed that as the number of past care environments that the young person had experienced increased, as did

their total ACE score, therefore hypothesis 5 is accepted. Although this correlation had high significance ($p \leq 0.001$), it should be noted that the strength of the association was $r = 0.35$ and therefore falls at the low end of the 'medium' association strength boundary.

No significant differences were found in total ACE scores depending on the young person's educational attendance, therefore hypothesis 3 is rejected. These findings are in conflict with previous research (Boullier & Blair., 2018) which stated that poor academic outcomes are a key consequence of exposure to ACEs. Due to low power (caused by a small sample of young people with good educational attendance, N =21), the analysis may have been distorted by random or systematic errors.

Family contact was not found to produce significant differences in the total ACE scores of young people, therefore hypothesis 2 is rejected. The findings also did not show a statistical difference in ACE scores depending on the young person's risk rating, therefore hypothesis 4 is rejected. However, the results may have been impacted due to the sample generally having high levels of ACEs. Shah et al. (2020) demonstrating that ACE-exposed children may engage in delinquent and/or antisocial behaviour, such as truancy, vandalism, or theft. This is supported by a wide array of literature outlining the link between trauma and ACEs and offending (Amato, 2001; Hamilton, Falshaw & Browne, 2002; Teague, Mazerolle, Legosz & Sanderson, 2008) alongside evidence that young people involved with the criminal justice system have higher rates of experienced trauma

compared to the general population (Dierkhising et al., 2013). Therefore, it is suggested that ACEs should be considered alongside the risk profile of young people to determine the best interventions to reduce the risk of reoffending.

Lastly, there was no significant correlation between total ACE scores and the length of a young person's admission, therefore hypothesis 6 is rejected. Although research (Ford, Butler, Hughes, Quigg & Bellis, 2016; Fiddler, Jackson, Kapur, Wells & Creed, 2004) has demonstrated a positive association between ACEs and health service use including more reports of poor physical and mental health, to my knowledge no research has investigated whether there is an association between ACEs and length of admission.

Findings relating to the characteristic profile of young people in SCHs partially supports the suggestion from Phillips et al. (2020) that the behavioural profile of a person is a consequence of combined ACE exposure and therefore a collaborative approach in the management should be taken to decrease future ACE exposure, reduce the length of admission, and readmission rate.

Implications

The findings of the research have particular implications in practice for understanding the needs and experiences of this population, especially in informing the development of evidence-based interventions to support

young people impacted by ACEs who are residing within SCHs, as well as improve the quality of discharge and transitions from these two homes.

Given the findings highlighting the complex histories, exposure to childhood adversity and vulnerabilities of young people residing within SCHs, it is important that SCHs train staff working within the SCHs to increase their understanding and awareness of the impact of trauma on a young person's presentation, attachment style, engagement and response to interpersonal/social situations. Given the diverse diagnostic presentations of the young people in these two SCHs, it may be beneficial for SCHs to employ staff with experience of working with young people with mental health and neurodevelopmental difficulties/diagnoses.

Chapter 5 -What are the predicting factors for high quality practice in relation to discharges of young people from SCHs

Abstract

This chapter sought to outline the current quality of discharge of young people from two SCHs and identify factors, focusing on the young person's characteristic profile or ACE profile, which may predict good quality practice when working towards discharging young people from SCHs. To achieve this aim, a quantitative study was undertaken using data from 111 young people residing in one of two SCHs, all aged below 18. A good practice model, the Ideal Transition of Care Model, was used to assess the quality of practice across five domains, and thresholds determined whether practice met the threshold for 'acceptable discharge practice'. Fifty percent of the sample met the 'acceptable discharge practice' threshold in three domains and a third met this threshold for the total quality of discharge practice. The data was scored and tabulated for analysis via ordinal regression analysis. From the findings, all regression models were significant with the exception of the model for domain 5: 'coordinating care among team members'. The analysis identified three significant predictors of good quality discharge practice on domains 1-4 and the total quality of discharge when the domains were combined. These significant predictors are the number of mental health diagnoses a young person has, their total ACE score, and the level of instability they have experienced prior to their admission to the SCH. These all, individually, had a negative influence on

the quality of discharge practice whereby young people with more mental health diagnoses, young people who had experienced more ACEs, and more changes in previous care placements, therefore more instability, received a lower quality of discharge practice. The research implies that a quality discharge strategy should be developed, and discharge practices should be tailored for young people based on their individual characteristics and experiences to improve the quality of their discharge. It also implies that discharge plans should be collaboratively developed, regularly reviewed and updated with young people and their families, starting from the point of admission.

***Keywords*:** Discharge, Discharge planning, Transition, Care planning, Self-management, Coordinated care, Social and community support, and best practice, Secure Children's Homes, Quality of Practice.

Introduction

This chapter seeks to examine factors which may predict good quality practice in relation to discharging young people from SCHs. The factors of interest within the research were drawn from the characteristic profiles and ACEs profiles of the young people residing in the SCHs.

This chapter is a continuation of chapter 4, which explored the characteristic profile of young people residing in SCHs alongside the rates of ACEs. This chapter furthers the knowledge gained in chapter 4 by exploring factors which may predict good quality practice as guided by a good practice model, The Ideal Transition of Care.

Chapter Aims

a) To outline the current quality of discharge of young people from the two SCHs using a good practice model, the Ideal Transition of Care model.
b) To identify what factors, focusing on the young person's characteristic profile or ACE profile, may predict good quality practice when working towards discharging young people from the two SCHs.

Research Question

a) What is the current quality of discharges/transitions of young people from the two SCHs?

b) What factors may predict where professionals adopt a higher quality of practice when working towards discharging young people from the two SCHs?

Null Hypotheses

$H_0$1. Discharge Planning domain: There will be no significant relationship between the 12 predictor variables and the dependent variable, quality of practice on the discharge planning domain. I.e., the young person's predicted score on the discharge planning domain is no closer to the true score than if it were by chance.

$H_0$2. Educating patients to promote self-management domain: There will be no significant relationship between the 12 predictor variables and the dependent variable, quality of practice on the educating patients to promote self-management domain. I.e., the young person's predicted score on the educating patients to promote self-management domain is no closer to the true score than if it were by chance.

$H_0$3. Enlisting help of social and community supports domain: There will be no significant relationship between the 12 predictor variables and the dependent variable, quality of practice on the enlisting help of social and community supports domain. I.e., the young person's predicted score on the enlisting help of social and community supports domain is no closer to the true score than if it were by chance.

$H_0$4. Advance care planning domain: There will be no significant relationship between the 12 predictor variables and the dependent variable,

quality of practice on the advance care planning supports domain. I.e., the young person's predicted score on the advance care planning domain is no closer to the true score than if it were by chance.

$H_0$5. Coordinating care among team members domain: There will be no significant relationship between the 12 predictor variables and the dependent variable, quality of practice on the coordinating care among team members domain. I.e., the young person's predicted score on the coordinating care among team members domain is no closer to the true score than if it were by chance.

$H_0$6. Total quality of discharge: There will be no significant relationship between the 12 predictor variables and the dependent variable, total quality of discharge framework score. I.e., the young person's predicted score on the total quality of discharge framework is no closer to the true score than if it were by chance.

Background

Typically, at the point of admission to the SCH, young people have been leading extremely chaotic lives (La Valle & Hart, 2016) and secure accommodation can provide structure and an opportunity to break destructive cycles of behaviour (Sinclair & Geraghty, 2008). However, the longer-term outcomes are more varied, where progress is not necessarily maintained following discharge. There is often pressure associated with planning a young person's discharge because they should be released as soon as the S.25 criteria of the Children's Act (1989) are no longer met,

even if the order has not yet expired (La Valle & Hart, 2016). This can be damaging if the young person is not prepared for discharge or a discharge placement has not been sought (Ofsted, 2010) and the transition can be abrupt, unplanned and based on population pressures rather than the young person's needs (Hart, 2009).

It is widely acknowledged that effective discharge planning from a SCH is essential (Walker et al, 2005; Sinclair & Geraghty, 2008; Hart, 2009; Ofsted, 2010). It is also recognised that the work needed to support a smooth transition back into the community or to another placement should begin on the young person's admission to secure accommodation (Hart, 2009). SCHs tend to utilise mobility, which is authorised leave outside of the secure unit to allow the young person to gradually transition to their next placement or to the community (Warner et al., 2018). Young people commonly report that this is helpful, especially if mobility included visits to their next placement (Morgan, 2009).

It is known that from the young person's perspective, the uncertainty of their next placement contributed to feelings of powerlessness, demonstrated by the following quote: "They're arguing about where I'll go, they didn't listen to me" (Hart, 2009, p.16). The importance of having an identified placement and a well-planned transition is vital. A good, coordinated plan should ideally let the young person know where the placement is, the expected timescales for the transition and which professionals are accountable. With the known pressures and instability,

this can be challenging for the SCHs. Young people are expected to adapt to a huge amount of change and they should be involved in the transition process to ensure it is a self-validating experience (Hart, 2009).

Other barriers to resettlement can include substance misuse, disrupted family life problems with education, training and employment and mental health concerns (Youth Justice Board, 2006). Hence, a good resettlement package will ensure that suitable accommodation is provided and that education, training and employment is offered, where the emotional and psychological needs of young people are being recognised (Hart, 2009). Given the likely attachment difficulties for these young people, the importance of developing trusting relationships between young people and professionals and encouraging quality interactions during transitions is also emphasised (La Valle & Hart, 2016).

Research focusing on the direct experiences of young people transitioning from secure institutions often reflects the fact that their voices are rarely elicited and that they are seen as powerless as a group (Lane et al., 2007; Freed & Smith, 2014).

Studies have shown that young people with a history of ACEs are more likely to experience a wide range of negative outcomes, including poor physical health, behavioural and mental health problems, and social and economic difficulties (Kalmakis & Chandler, 2015; Panisch et al. 2020). Phillips et al. (2020) noted that ACE exposure in young people has been associated with an increased predisposition to substance abuse,

depression, and anxiety. Similarly, McDonnell and Valentino (2016) affirmed that the discharge of young people who have experienced ACEs is often flawed by barriers to accessing and receiving adequate health care and support services at the point of discharge and post-discharge. Pates et al. (2021) shared the view of McDonnell and Valentino (2016) stating that ACE-exposed young people may experience stigma, discrimination, and difficulties navigating complex healthcare systems post-discharge. It is suggested that many young people who have experienced ACEs have presentations consistent with young people who have had disrupted and/or unstable childhoods. This can make it difficult for them to trust or engage with service providers.

Further studies have found that young people in SCHs have limited opportunities to form positive relationships and engage in positive activities and this can lead to a lack of positive role models and a higher risk of readmission (Pates et al. 2021). Briggs et al. (2021) affirmed that this can also lead to a vicious cycle of offending behaviour, increasing the rate of readmission among young people. Contrary to this research, Panisch et al. (2020) suggested that young people in SCHs are highly resilient, with many possessing strengths and abilities corresponding to a strong sense of loyalty to their families, friends, and communities, and a strong motivation to improve their lives. Importantly, the conclusions of Piotrowski (2020) and Panisch et al. (2020) suggest that irrespective of the expressed challenges, secure care can elicit positive outcomes when a supportive, structured, and

nurturing environment is combined with tailored education and therapeutic support.

Jones et al. (2020) shared the observations of Cohrdes and Mauz (2020) asserting that the process of discharging ACE-exposed young people is a critical point in their lives as it determines their readiness for community or independent living and their ability to access ongoing support and services. Literature suggests that the young person's level of engagement and involvement in their own care directly impacts upon their quality of discharge (McDonnell & Valentino, 2016). Pates et al. (2021) affirmed that young people who are actively involved in the discharge planning process and who feel empowered to make decisions about their own care are more likely to experience a successful discharge. Overall, it is suggested that the likelihood of a successful discharge is increased in cases where young people are at the centre of their own treatment planning, they have a voice in their care, and they are provided with clear, concise information about their treatment options and the resources/support available to them. This will allow them to make informed choices.

Moreover, Piotrowski (2020) established that the availability and quality of aftercare and follow-up services can influence the quality of discharge. Phillips et al. (2020) augmented the view of Piotrowski (2020) noting that young people who have access to ongoing support and resources after leaving residential care are more likely to experience

positive outcomes and maintain any progress over time. According to Kalmakis and Chandler (2015), the quality of relationships with staff and peers in the residential setting is a key factor in the quality of a discharge. Phillips et al. (2020) recognized the role of young people in forming strong, positive relationships with staff and peers in their placement as a tool to ensure they feel confident to maintain and develop existing or new relationships in the community. These relationships will create opportunities for interaction and connection for peer support.

While Chapter 2 demonstrated various predictive factors linked to the readmission of young people in non-custodial settings, literature paucity remains around the factors that predict the quality of discharge from these secure residential facilities to ensure all young people receive the individualised care and support they need. Moreover, literature is scarce on best practices underpinning investment in discharge planning and support programs to warrant successful quality discharge and transition into community living and continuity of care. This chapter explores the factors (characteristic profiles and ACE profiles) which may predict good quality practice in relation to discharging young people from SCHs.

Data Analysis

The data was scored and tabulated into an SPSS spreadsheet to build scores and thresholds were used to assess whether the quality of discharge practice was classified as good/acceptable or poor/unacceptable. Ordinal regression analyses were designed to determine which, if any, factors

predicted good discharge practice. Five domains of quality of discharge were examined in the analysis:

Domain 1: Discharge Planning
Domain 2: Educating patients to promote self-management
Domain 3: Enlisting the help of social and community supports
Domain 4: Advance care planning
Domain 5: Coordinating care among team members

Assessing the five domains of quality of discharge, a score between 1 and 5 was given for each domain, where 5 denoted 'ideal/perfect' practice according to theory, and a score between 5 and 25 was given for the total quality of discharge, with 25 denoting 'ideal/perfect' overall discharge practice. As scores decreased, the quality of practice decreased. For the five domains, a threshold of 4 out of 5 was used to classify practice as 'good/acceptable' and a score of 3 or under was classified as 'poor/unacceptable' practice. For the total quality of discharge score, a threshold of 20 out of 25 was used to classify practice as 'good/acceptable' and a score of 19 or under was deemed 'poor/unacceptable' practice.

According to Arkes (2019), regression analysis is implemented on data to examine the relationship between the independent variable(s) and a dependent variable. Montgomery et al. (2021) agreed with Arkes (2019) asserting that regression analysis is used to build an understanding of the direction and strength of the relationship between the assessed variables, while making predictions, and identifying factors that are most influential

in explaining the variability in the dependent variable. In the present analysis, ordinal regression analysis on the tabulated data was conducted.

The 11 predictors and the total ACE score detailed in Chapter 3 were the independent variables. Each of the five domains and the total quality of discharge were the dependent variables. Explanations regarding the construction of these variables can be found in Chapter 3. A single score for each predictor/independent variable was given for each participant.

The findings from the analysis are outlined in the next section.

Results

In the assessment of the quality of discharges/transitions of young people from these two SCHs, the analysis examined five discharge domains and the total quality of discharge with respect to the proportion of the total sample of 111 participants who scored above and below the 'acceptable discharge practice' threshold as illustrated in Table 5.1. Each participant was given a score between 1 and 5 for each domain and the 'acceptable discharge practice' threshold was ≥4. This produced a total quality of discharge score between 5 and 25 and the 'acceptable discharge practice' threshold for the total quality of discharge was ≥20.

Table 5.1

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold on each domain and the total quality of discharge score. 'Acceptable discharge practice' threshold for individual domains is ≥4 and for the total quality of discharge, the threshold is ≥20.

Quality of Discharge domain	Above 'acceptable discharge practice' N	%	Below 'acceptable discharge practice' N	%
Discharge planning	50	(45.05)	61	(54.95)
Educating patients to promote self-management	67	(60.36)	44	(39.64)
Enlisting help of social and community supports	56	(50.45)	55	(49.55)
Advance care planning	33	(29.73)	78	(70.27)
Coordinating care among team members	67	(60.36)	44	(39.64)
Total quality of discharge	37	(33.33)	74	(66.67)

Over half of the sample met the threshold for 'acceptable discharge practice' on three domains; 'educating patients to promote self-management', 'enlisting help of social and community supports', and 'coordinating care among team members'. 'Acceptable discharge practice' for the domain 'advance care planning' was only met by 29.73% of the sample. When considering the total quality of discharge score, only a third of the sample scored above the 'acceptable' threshold, demonstrating that improvements in clinical practice relating to discharges are required in these two SCHs.

The findings suggest that the quality of discharge within this research is mainly determined by the clinical practice in relation to educating patients to promote self-management, enlisting the help of social and community supports and coordinating care among teams, as these domains had the highest proportions of sample meeting the threshold for 'acceptable' discharge practice.

The proportion of the total sample of 111 participants, who scored above and below the 'acceptable discharge practice' threshold on individual domain scores, across 11 predictor variables, is illustrated in Tables 5.2, 5.3, 5.4, 5.5, and 5.6 for domains 1-5 respectively. The same is shown in Table 5.7 for the total quality of discharge score.

Table 5.2

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 1: discharge practice.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	50	(45.05)	61	(54.95)
Gender				
Male	31	(62.00)	34	(55.74)
Female	19	(38.00)	27	(44.26)
Level of Family Contact				
Yes	41	(82.00)	49	(80.33)
No	9	(18.00)	12	(19.67)
Current Risk to Others				
Low	9	(18.00)	9	(14.75)
Medium	14	(28.00)	17	(27.87)
High	27	(54.00)	35	(57.38)
Level of Past Engagement with services				
Good	25	(50.00)	29	(47.54)
Poor	25	(50.00)	32	(52.46)
Number of Mental Health Diagnoses				
0	34	(68.00)	30	(49.18)
1	9	(18.00)	14	(22.95)
2	4	(8.00)	16	(26.23)
3	1	(2.00)	0	(0.00)
4	0	(0.00)	1	(1.64)
5+	2	(4.00)	0	(0.00)
Risk to Self				
Yes	12	(24.00)	11	(18.03)
No	38	(76.00)	50	(81.97)
No. of assessments available to care staff				
1	13	(26.00)	23	(37.70)
2	7	(14.00)	12	(19.67)
3	17	(34.00)	13	(21.31)
4	7	(14.00)	13	(21.31)
Level of Educational Attendance				
Poor	23	(46.00)	26	(42.62)
Average	18	(36.00)	23	(37.70)
Good	9	(18.00)	12	(19.67)
Length of stay (days)				
>30	2	(4.00)	1	(1.64)
31-90	7	(14.00)	10	(16.39)
91-180	19	(38.00)	30	(49.18)
181-270	14	(28.00)	13	(21.31)
271-360	6	(12.00)	2	(3.28)
361+	2	(4.00)	5	(8.20)
Level of instability (no. of prev. care placements)				
0	15	(30.00)	15	(24.59)
1-5	16	(32.00)	24	(39.34)
6-10	8	(16.00)	14	(22.95)
11-15	7	(14.00)	5	(8.20)
16+	4	(8.00)	3	(4.92)
Total ACE score				
0-3	8	(16.00)	7	(11.48)
4-10	42	(84.00)	54	(88.52)

Table 5.3

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 2: educating patients to promote self-management.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	67	(60.36)	44	(39.64)
Gender				
Male	40	(59.70)	25	(56.82)
Female	27	(40.30)	19	(43.18)
Level of Family Contact				
Yes	52	(77.61)	38	(86.36)
No	15	(22.39)	6	(13.64)
Current Risk to Others				
Low	13	(19.40)	5	(11.36)
Medium	20	(29.85)	11	(25.00)
High	34	(50.75)	28	(63.64)
Level of Past Engagement with services				
Good	34	(50.75)	20	(45.45)
Poor	33	(49.25)	24	(54.55)
Number of Mental Health Diagnoses				
0	42	(62.69)	22	(50.00)
1	10	(14.93)	13	(29.55)
2	13	(19.40)	7	(15.91)
3	0	(0.00)	1	(2.27)
4	0	(0.00)	1	(2.27)
5+	2	(2.99)	0	(0.00)
Risk to Self				
Yes	16	(23.88)	7	(15.91)
No	51	(76.12)	36	(81.82)
No. of assessments available to care staff				
1	21	(31.34)	19	(43.18)
2	13	(19.40)	19	(43.18)
3	23	(34.33)	0	(0.00)
4	10	(14.93)	6	(13.64)
Level of Educational Attendance				
Poor	32	(47.76)	17	(38.64)
Average	22	(32.84)	19	(43.18)
Good	13	(19.40)	8	(18.18)
Length of stay (days)				
>30	2	(2.99)	1	(2.27)
31-90	12	(17.91)	5	(11.36)
91-180	26	(38.81)	23	(52.27)
181-270	16	(23.88)	11	(25.00)
271-360	5	(7.46)	3	(6.82)
361+	6	(8.96)	1	(2.27)
Level of instability (no. of prev. care placements)				
0	20	(29.85)	10	(22.73)
1-5	19	(28.36)	21	(47.73)
6-10	12	(17.91)	10	(22.73)
11-15	10	(14.93)	2	(4.55)
16+	6	(8.96)	1	(2.27)
Total ACE score				
0-3	11	(16.42)	4	(9.09)
4-10	57	(85.07)	39	(88.64)

Table 5.4

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 3: enlisting help of social and community supports.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	55	(49.55)	56	(50.45)
Gender				
Male	33	(60.00)	32	(57.14)
Female	22	(40.00)	24	(42.86)
Level of Family Contact				
Yes	44	(80.00)	46	(82.14)
No	11	(20.00)	10	(17.86)
Current Risk to Others				
Low	9	(16.36)	9	(16.07)
Medium	16	(29.09)	15	(26.79)
High	30	(54.55)	32	(57.14)
Level of Past Engagement with services				
Good	31	(56.36)	23	(41.07)
Poor	24	(43.64)	33	(58.93)
Number of Mental Health Diagnoses				
0	34	(61.82)	30	(53.57)
1	10	(18.18)	13	(23.21)
2	9	(16.36)	11	(19.64)
3	0	(0.00)	1	(1.79)
4	1	(1.82)	0	(0.00)
5+	1	(1.82)	1	(1.79)
Risk to Self				
Yes	12	(21.82)	11	(19.64)
No	43	(78.18)	45	(80.36)
No. of assessments available to care staff				
1	15	(27.27)	20	(35.71)
2	10	(18.18)	22	(39.29)
3	20	(36.36)	5	(8.93)
4	10	(18.18)	9	(16.07)
Level of Educational Attendance				
Poor	25	(45.45)	24	(42.86)
Average	19	(34.55)	22	(39.29)
Good	11	(20.00)	10	(17.86)
Length of stay (days)				
>30	1	(1.82)	2	(3.57)
31-90	8	(14.55)	9	(16.07)
91-180	24	(43.64)	25	(44.64)
181-270	13	(23.64)	14	(25.00)
271-360	5	(9.09)	3	(5.36)
361+	4	(7.27)	3	(5.36)
Level of instability (no. of prev. care placements)				
0	16	(29.09)	14	(25.00)
1-5	19	(34.55)	21	(37.50)
6-10	14	(25.45)	8	(14.29)
11-15	5	(9.09)	7	(12.50)
16+	1	(1.82)	6	(10.71)
Total ACE score				
0-3	7	(12.73)	8	(14.29)
4-10	48	(87.27)	48	(85.71)

Table 5.5

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 4: advance care planning.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	33	(29.73)	77	(69.37)
Gender				
Male	21	(63.64)	44	(57.14)
Female	12	(36.36)	34	(44.16)
Level of Family Contact				
Yes	29	(87.88)	61	(79.22)
No	4	(12.12)	17	(22.08)
Current Risk to Others				
Low	7	(21.21)	11	(14.29)
Medium	6	(18.18)	25	(32.47)
High	20	(60.61)	42	(54.55)
Level of Past Engagement with services				
Good	17	(51.52)	37	(48.05)
Poor	16	(48.48)	41	(53.25)
Number of Mental Health Diagnoses				
0	21	(63.64)	43	(55.84)
1	7	(21.21)	16	(20.78)
2	3	(9.09)	17	(22.08)
3	0	(0.00)	1	(1.30)
4	0	(0.00)	1	(1.30)
5+	2	(6.06)	0	(0.00)
Risk to Self				
Yes	8	(24.24)	15	(19.48)
No	25	(75.76)	63	(81.82)
No. of assessments available to care staff				
1	10	(30.30)	32	(41.56)
2	11	(33.33)	9	(11.69)
3	8	(24.24)	27	(35.06)
4	4	(12.12)	15	(19.48)
Level of Educational Attendance				
Poor	14	(42.42)	35	(45.45)
Average	11	(33.33)	30	(38.96)
Good	8	(24.24)	13	(16.88)
Length of stay (days)				
>30	2	(6.06)	1	(1.30)
31-90	5	(15.15)	12	(15.58)
91-180	11	(33.33)	38	(49.35)
181-270	11	(33.33)	16	(20.78)
271-360	3	(9.09)	5	(6.49)
361+	1	(3.03)	6	(7.79)
Level of instability (no. of prev. care placements)				
0	11	(33.33)	19	(24.68)
1-5	10	(30.30)	30	(38.96)
6-10	5	(15.15)	17	(22.08)
11-15	5	(15.15)	7	(9.09)
16+	2	(6.06)	5	(6.49)
Total ACE score				
0-3	7	(21.21)	8	(10.39)
4-10	26	(78.79)	70	(90.91)

Table 5.6

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 5: coordinating care among team members.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	67	(60.36)	44	(39.64)
Gender				
Male	38	(56.72)	27	(61.36)
Female	29	(43.28)	17	(38.64)
Level of Family Contact				
Yes	51	(76.12)	39	(88.64)
No	16	(23.88)	5	(11.36)
Current Risk to Others				
Low	12	(17.91)	6	(13.64)
Medium	20	(29.85)	11	(25.00)
High	35	(52.24)	27	(61.36)
Level of Past Engagement with services				
Good	35	(52.24)	19	(43.18)
Poor	32	(47.76)	25	(56.82)
Number of Mental Health Diagnoses				
0	41	(61.19)	23	(52.27)
1	10	(14.93)	13	(29.55)
2	13	(19.40)	7	(15.91)
3	0	(0.00)	1	(2.27)
4	1	(1.49)	0	(0.00)
5+	2	(2.99)	0	(0.00)
Risk to Self				
Yes	13	(19.40)	10	(22.73)
No	54	(80.60)	34	(77.27)
No. of assessments available to care staff				
1	15	(22.39)	18	(40.91)
2	19	(28.36)	18	(40.91)
3	22	(32.84)	8	(18.18)
4	11	(16.42)	0	(0.00)
Level of Educational Attendance				
Poor	30	(44.78)	19	(43.18)
Average	22	(32.84)	19	(43.18)
Good	15	(22.39)	6	(13.64)
Length of stay (days)				
>30	1	(1.49)	2	(4.55)
31-90	12	(17.91)	5	(11.36)
91-180	24	(35.82)	25	(56.82)
181-270	20	(29.85)	7	(15.91)
271-360	4	(5.97)	4	(9.09)
361+	6	(8.96)	1	(2.27)
Level of instability (no. of prev. care placements)				
0	20	(29.85)	10	(22.73)
1-5	19	(28.36)	21	(47.73)
6-10	16	(23.88)	6	(13.64)
11-15	8	(11.94)	4	(9.09)
16+	4	(5.97)	3	(6.82)
Total ACE score				
0-3	8	(11.94)	7	(15.91)
4-10	59	(88.06)	37	(84.09)

Table 5.7

Proportion of sample scoring above and below the 'acceptable discharge practice' threshold (total score ≥20) on total quality of discharge score.

	Above 'acceptable discharge practice'		Below 'acceptable discharge practice'	
Domain 1: Discharge Planning	**N**	**%**	**N**	**%**
Sample				
	36	(32.43)	75	(67.57)
Gender				
Male	19	(52.78)	46	(61.33)
Female	17	(47.22)	29	(38.67)
Level of Family Contact				
Yes	30	(83.33)	60	(80.00)
No	6	(16.67)	15	(20.00)
Current Risk to Others				
Low	8	(22.22)	10	(13.33)
Medium	7	(19.44)	24	(32.00)
High	21	(58.33)	41	(54.67)
Level of Past Engagement with services				
Good	20	(55.56)	34	(45.33)
Poor	16	(44.44)	41	(54.67)
Number of Mental Health Diagnoses				
0	24	(66.67)	40	(53.33)
1	8	(22.22)	15	(20.00)
2	3	(8.33)	17	(22.67)
3	0	(0.00)	1	(1.33)
4	0	(0.00)	1	(1.33)
5+	1	(2.78)	1	(1.33)
Risk to Self				
Yes	9	(25.00)	14	(18.67)
No	27	(75.00)	61	(81.33)
No. of assessments available to care staff				
1	4	(11.11)	34	(45.33)
2	4	(11.11)	26	(34.67)
3	14	(38.89)	15	(20.00)
4	4	(11.11)	0	(0.00)
Level of Educational Attendance				
Poor	14	(38.89)	35	(46.67)
Average	15	(41.67)	26	(34.67)
Good	7	(19.44)	14	(18.67)
Length of stay (days)				
>30	1	(2.78)	2	(2.67)
31-90	7	(19.44)	10	(13.33)
91-180	14	(38.89)	35	(46.67)
181-270	8	(22.22)	19	(25.33)
271-360	4	(11.11)	4	(5.33)
361+	2	(5.56)	5	(6.67)
Level of instability (no. of prev. care placements)				
0	13	(36.11)	17	(22.67)
1-5	11	(30.56)	29	(38.67)
6-10	6	(16.67)	16	(21.33)
11-15	5	(13.89)	7	(9.33)
16+	1	(2.78)	6	(8.00)
Total ACE score				
0-3	7	(19.44)	8	(10.67)
4-10	29	(80.56)	67	(89.33)

Alongside frequencies, for all individual domains and the total quality of discharge score, descriptive statistics including the mean (M), standard deviation (SD), median (Mdn) and inter-quartile range (IQR) have been calculated for the following predictor variables:

- Historical risk
- Number of mental health diagnoses
- Number of assessments available to care staff
- Length of stay
- Level of instability
- Total ACE score

These are illustrated in Tables, 5.8, 5.9, 5.10, 5.11, 5.12 for domains 1-5 respectively, and Table 5.13 for the total quality of discharge score.

Table 5.8

Descriptive statistics for five predictor variables split by the proportion of the sample which scored above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 1: discharge planning.

Domain 1: Discharge Planning	***M***	***SD***	***Mdn***	***IQR***
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	325.92	889.82	5.00	182.38
Below 'acceptable discharge practice'	327.28	603.99	5.00	365.00
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.60	1.15	0.00	1.00
Below 'acceptable discharge practice'	0.82	0.93	1.00	2.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.62	0.72	0.00	1.00
Below 'acceptable discharge practice'	0.77	0.76	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	174.46	91.70	176.00	102.75
Below 'acceptable discharge practice'	169.20	104.89	145.00	125.00
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	6.16	8.24	4.00	8.75
Below 'acceptable discharge practice'	5.08	4.78	5.00	7.00
Total ACE score				
Above 'acceptable discharge practice'	5.62	2.20	6.00	4.00
Below 'acceptable discharge practice'	6.36	2.02	7.00	3.00

Table 5.9

Descriptive statistics for five predictor variables split by the proportion of the sample that scored above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 2: educating patients to promote self-management.

Domain 2: Educating patients to promote self-management	***M***	***SD***	***Mdn***	***IQR***
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	324.6	605.75	5.00	365.00
Below 'acceptable discharge practice'	329.82	920.19	5.00	106.63
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.69	1.10	0.00	1.00
Below 'acceptable discharge practice'	0.77	0.95	0.50	1.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.70	0.77	1.00	1.00
Below 'acceptable discharge practice'	0.70	0.69	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	174.12	101.84	148.00	136.50
Below 'acceptable discharge practice'	167.68	94.90	150.00	95.50
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	6.25	7.78	5.00	9.50
Below 'acceptable discharge practice'	4.52	3.96	4.00	5.00
Total ACE score				
Above 'acceptable discharge practice'	5.81	2.31	6.00	4.00
Below 'acceptable discharge practice'	6.36	1.78	7.00	3.00

Table 5.10

Descriptive statistics for five predictor variables split by the proportion of the sample that scored above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 3: Enlisting help of social and community supports.

Domain 3: Enlisting help of social and community supports	***M***	***SD***	***Mdn***	***IQR***
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	315.44	839.50	5.00	365.00
Below 'acceptable discharge practice'	337.69	641.80	5.00	363.25
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.67	1.06	0.00	1.00
Below 'acceptable discharge practice'	0.77	1.02	0.00	1.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.73	0.75	1.00	1.00
Below 'acceptable discharge practice'	0.68	0.73	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	178.13	105.13	165.00	132.00
Below 'acceptable discharge practice'	165.13	92.56	147.50	97.75
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	4.64	4.54	4.00	8.00
Below 'acceptable discharge practice'	6.48	8.01	5.00	9.25
Total ACE score				
Above 'acceptable discharge practice'	5.71	2.10	6.00	4.00
Below 'acceptable discharge practice'	6.34	2.12	7.00	3.25

Table 5.11

Descriptive statistics for five predictor variables split by the proportion of the sample that scored above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 4: Advance care planning.

Domain 4: Advance care planning	***M***	***SD***	***Mdn***	***IQR***
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	358.58	990.81	18.75	363.00
Below 'acceptable discharge practice'	313.16	613.16	5.00	364.00
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.70	1.27	0.00	1.00
Below 'acceptable discharge practice'	0.73	0.93	0.00	1.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.58	0.70	0.00	1.00
Below 'acceptable discharge practice'	0.76	0.75	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	168.45	88.30	177.00	107.00
Below 'acceptable discharge practice'	172.88	103.44	147.50	125.25
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	6.18	9.40	3.00	8.00
Below 'acceptable discharge practice'	5.31	4.92	5.00	7.00
Total ACE score				
Above 'acceptable discharge practice'	5.18	2.26	5.00	3.00
Below 'acceptable discharge practice'	6.38	1.98	7.00	3.00

Table 5.12

Descriptive statistics for five predictor variables split by the proportion of the sample that scored above and below the 'acceptable discharge practice' threshold (domain score ≥4) on domain 5: Coordinating care among team members.

Domain 3: Enlisting help of social and community supports	***M***	***SD***	***Mdn***	***IQR***
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	362.39	832.41	5.00	364.50
Below 'acceptable discharge practice'	272.27	587.78	7.50	51.50
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.75	1.16	0.00	1.00
Below 'acceptable discharge practice'	0.68	0.82	0.00	1.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.66	0.74	0.00	1.00
Below 'acceptable discharge practice'	0.77	0.73	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	178.57	106.73	172.00	138.00
Below 'acceptable discharge practice'	160.91	85.39	147.50	70.25
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	5.94	7.58	4.00	8.00
Below 'acceptable discharge practice'	5.00	4.65	4.50	4.25
Total ACE score				
Above 'acceptable discharge practice'	6.01	2.21	6.00	4.00
Below 'acceptable discharge practice'	6.05	2.02	7.00	2.25

Table 5.13

Descriptive statistics for five predictor variables split by the proportion of the sample that scored above and below the 'acceptable discharge practice' threshold (domain score ≥20) on the total quality of discharge score.

Total quality of discharge	*M*	*SD*	*Mdn*	*IQR*
Historical Risk (CCHI score)				
Above 'acceptable discharge practice'	338.90	952.16	11.88	363.50
Below 'acceptable discharge practice'	320.80	623.93	5.00	364.00
Number of mental health diagnoses				
Above 'acceptable discharge practice'	0.53	0.99	0.00	1.00
Below 'acceptable discharge practice'	0.81	1.05	0.00	2.00
Number of assessments available to care staff				
Above 'acceptable discharge practice'	0.61	0.68	0.50	1.00
Below 'acceptable discharge practice'	0.75	0.77	1.00	1.00
Length of stay (days)				
Above 'acceptable discharge practice'	169.44	96.09	168.50	124.75
Below 'acceptable discharge practice'	172.59	100.64	148.00	114.50
Level of instability (no. of prev. care placements)				
Above 'acceptable discharge practice'	5.47	8.55	3.50	7.25
Below 'acceptable discharge practice'	5.61	5.40	5.00	7.00
Total ACE score				
Above 'acceptable discharge practice'	6.08	2.36	6.50	4.00
Below 'acceptable discharge practice'	6.00	2.02	6.00	3.50

Results for each of the five domains and the total quality of discharge will be discussed in turn in this section. For all ordinal regression analyses, the following 12 predictor variables were entered into the model:

1. Gender
2. Family contact
3. Historical risk
4. Current risk to others
5. Past engagement with services
6. Mental health diagnosis
7. Risk to self
8. Assessments available to care staff
9. Educational attendance
10. Level of instability
11. Length of stay
12. Total ACE score

Assumption testing was conducted for the six regression analyses to ensure all four of the assumptions for ordinal regression were met. Due to multicollinearity with each other and the total ACE score variable, 'ACE: abuse', 'ACE: neglect' and 'ACE: household dysfunction' variables were removed from the regression analysis. For all six regression models, the assumption of proportional odds was met.

For each of the six regression models, univariate analyses were conducted to determine which predictor variables were entered into the regression model. Any significant relationships identified through univariate analyses were entered into the regression model and if significance was upheld, these predictor variables remained in the final regression model.

Domain 1: Discharge Planning

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the quality of practice on the discharge planning domain (indicated by the young person's domain score). From univariate analysis (see Table 5.14), 'number of mental health diagnoses' and 'total ACE score' were entered into a regression model. Only total ACE score was a significant negative predictor of the quality of practice (indicated by the young person's score) on the discharge planning domain. For every one unit increase on total ACE score, there is a predicted decrease of 0.172 in the log odds of a young person having a higher score on the

discharge planning domain, (B=-0.172 (95% CI, -0.332 to -0.012), Wald $x^2(1) = 4.459$, $p = 0.035$). The model did not significantly deviate from goodness of fit using Pearson chi-squared statistic, $x^2(1) = 27.14$, $p = 0.456$, indicating the model is a good fit for the data.

Table 5.14

Univariate analysis for predictor variables of quality of practice within the discharge planning domain

	β^1	$\beta^2 SE$	95% CI		*p*
Predictor variables			**LL**	**UL**	
Gender	-0.238	0.347	-0.918	0.443	0.493
Level of Family Contact	-0.225	0.436	-1.079	0.630	0.607
Historical Risk	≤0.001	≤0.001	≤0.001	≤0.001	0.984
Current risk to others	0.320	0.483	-0.627	1.266	0.508
Level of past engagement with services	0.011	0.342	-0.659	0.680	0.975
Number of mental health diagnoses	-0.316	0.166	-0.642	0.010	0.058
Risk to self	-0.081	0.421	-0.907	0.745	0.848
No. of assessments available to care staff	-0.370	0.232	-0.826	0.085	0.111
Level of Educational Attendance	0.648	0.473	-0.278	1.574	0.170
Length of stay	0.001	0.002	-0.003	0.004	0.650
Level of instability	0.010	0.026	-0.041	0.061	0.703
Total ACE score	-0.172	0.082	-0.332	-0.012	0.035

Domain 2: Educating patients to promote self-management

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the quality of practice on the educating patients to promote self-management domain (indicated by the young person's domain score). From univariate analysis (see Table 5.15), 'historical risk' and 'number of mental health diagnoses' were entered into a regression model. Only number of mental health diagnoses was a

significant negative predictor of the quality of practice (indicated by the young person's score) on the educating patients to promote self-management domain. For every one unit increase in the number of mental health diagnoses that a young person has, there is a predicted decrease of 0.281 in the log odds of a young person having a higher score on the educating patients to promote self-management domain, (B=-0.281 (95% CI, -0.604 to -0.042), Wald $x^2(1) = 3.932$, $p = 0.047$). The model did not significantly deviate from goodness of fit using Pearson chi-squared statistic, $x^2(71) = 78.78$, $p = 0.246$, indicating the model is a good fit for the data.

Table 5.15

Univariate analysis for predictor variables of quality of practice within the educating patients to promote self-management domain

	β[1]	**β[2]*SE***	**95% CI**		***p***
Predictor variables			**LL**	**UL**	
Gender	0.138	0.347	-0.542	0.818	0.691
Level of Family Contact	0.210	0.438	-0.648	1.069	0.631
Historical Risk	≤0.001	≤0.001	≤0.001	≤0.001	0.088
Current risk to others	0.602	0.490	-0.357	1.562	0.219
Level of past engagement with services	0.015	0.341	-0.654	0.684	0.966
Number of mental health diagnoses	-0.281	0.165	-0.604	0.042	0.047
Risk to self	0.126	0.420	-0.697	0.950	0.763
No. of assessments available to care staff	0.024	0.230	-0.426	0.475	0.916
Level of Educational Attendance	0.358	0.467	-0.557	1.272	0.444
Length of stay	-0.002	0.002	-0.005	0.001	0.274
Level of instability	0.012	0.026	-0.039	0.064	0.636
Total ACE score	-0.128	0.081	-0.287	0.030	0.113

Domain 3: Enlisting the help of social and community supports

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the quality of practice on the enlisting the help of social and community supports domain (indicated by the young person's domain score). From univariate analysis (see Table 5.16), 'number of mental health diagnoses', 'level of instability' and 'total ACE score' were entered into a regression model. Both number of mental health diagnoses and level of instability were significant negative predictors of the quality of practice (indicated by the young person's score) on the enlisting the help of social and community supports domain. For every one unit increase in the number of mental health diagnoses that a young person has, there is a predicted decrease of 0.528 in the log odds of a young person having a higher score on the enlisting the help of social and community supports domain, (B=-0.528 (95% CI, -0.866 to -0.191), Wald $x^2(2) = 9.818$, $p = 0.002$). For every one unit increase in the level of instability, there is a predicted decrease of 0.057 in the log odds of a young person having a higher score on the enlisting the help of social and community supports domain, (B=-0.057 (95% CI, -0.111 to -0.004), Wald $x^2(2) = 4.795$, $p = 0.029$). The model did not significantly deviate from goodness of fit using Pearson chi-squared statistic, $x^2(162) = 151.33$, $p = 0.715$, indicating the model is a good fit for the data.

Table 5.16

Univariate analysis for predictor variables of quality of practice within the enlisting the help of social and community supports domain

	β[1]	β[2]*SE*	95% CI		*p*
Predictor variables			**LL**	**UL**	
Gender	-0.071	0.342	-0.740	0.599	0.836
Level of Family Contact	-0.185	0.429	-1.027	0.657	0.667
Historical Risk	≤0.001	≤0.001	≤0.001	≤0.001	0.926
Current risk to others	0.648	0.482	-0.297	1.593	0.179
Level of past engagement with services	0.028	0.337	-0.632	0.688	0.935
Number of mental health diagnoses	-0.528	0.172	-0.866	-0.191	0.002
Risk to self	-0.716	0.424	-1.547	0.114	0.091
No. of assessments available to care staff	0.247	0.228	-0.200	0.694	0.280
Level of Educational Attendance	0.280	0.477	-0.654	1.215	0.557
Length of stay	0.001	0.002	-0.002	0.004	0.505
Level of instability	-0.057	0.027	-0.111	0.004	0.035
Total ACE score	-0.137	0.080	-0.294	0.019	0.086

Domain 4: Advance care planning

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the quality of practice on the advance care planning domain (indicated by the young person's domain score). From univariate analysis (see Table 5.17), 'total ACE score' was entered into a regression model. Total ACE score remained a significant negative predictor of the quality of practice (indicated by the young person's score) on the advance care planning domain. For every one unit increase in the total ACE score, there is a predicted decrease of 0.277 in the log odds of a young person having a higher score on the advance care planning domain, (B=-0.277 (95% CI, -0.441 to -0.113), Wald $x^2(1)$ =10.998, p ≤0.001). The model did not significantly deviate from goodness of fit using Pearson

chi-squared statistic, $x^2(27) = 20.11$, $p = 0.826$, indicating the model is a good fit for the data.

Table 5.17

Univariate analysis for predictor variables of quality of practice within the advance care planning domain

	β[1]	β[2]*SE*	95% CI		*p*
Predictor variables			**LL**	**UL**	
Gender	-0.184	0.346	-0.861	0.494	0.595
Level of Family Contact	-0.387	0.437	-1.242	0.469	0.376
Historical Risk	≤0.001	≤0.001	≤0.001	≤0.001	0.977
Current risk to others	0.219	0.480	-0.721	1.159	0.647
Level of past engagement with services	-0.055	0.340	-0.722	0.611	0.871
Number of mental health diagnoses	-0.266	0.166	-0.591	0.060	0.110
Risk to self	0.174	0.420	-0.649	0.998	0.678
No. of assessments available to care staff	-0.297	0.231	-0.750	0.156	0.198
Level of Educational Attendance	0.151	0.468	-0.765	1.067	0.996
Length of stay	≤0.001	0.002	-0.003	0.004	0.851
Level of instability	0.019	0.026	-0.032	0.070	0.464
Total ACE score	-0.277	0.084	-0.441	-0.113	≤0.001

Domain 5: Coordinating care among team members

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the quality of practice on the coordinating care among team members domain (indicated by the young person's domain score). From univariate analysis (see Table 5.18), there were no significant predictors of the quality of practice (indicated by the young person's score) on the coordinating care among team members domain. The model also significantly deviated from goodness of fit using Pearson

chi-squared statistic, $x^2(27) = 45.41$, $p = 0.015$, indicating the model is not a good fit for the data.

Table 5.18

Univariate analysis for predictor variables of quality of practice within the coordinating care among team members domain

	β[1]	β[2]*SE*	95% CI		*p*
Predictor variables			**LL**	**UL**	
Gender	0.116	0.349	-0.569	0.801	0.739
Level of Family Contact	0.122	0.440	-0.740	0.985	0.781
Historical Risk	≤0.001	≤0.001	≤0.001	≤0.001	0.926
Current risk to others	0.507	0.494	-0.461	1.475	0.305
Level of past engagement with services	-0.294	0.345	-0.971	0.382	0.394
Number of mental health diagnoses	-0.119	0.165	-0.442	0.204	0.470
Risk to self	-0.335	0.428	-1.175	0.505	0.434
No. of assessments available to care staff	-0.163	0.232	-0.617	0.219	0.482
Level of Educational Attendance	-0.124	0.471	-1.046	0.798	0.792
Length of stay	-0.001	0.002	-0.004	0.002	0.552
Level of instability	-0.002	0.026	-0.053	0.049	0.947
Total ACE score	-0.123	0.082	-0.283	0.037	0.133

Total Quality of Discharge

An ordinal regression analysis was conducted to investigate whether the 12 predictor variables predict the total quality of discharge framework score (indicated by the young person's total framework score). From univariate analysis (see Table 5.19), 'number of mental health diagnoses', and 'total ACE score' were entered into a regression model. Both number of mental health diagnoses and total ACE score were significant negative predictors of the total quality of discharge practice (indicated by the young person's total framework score). For every one unit increase in the number

of mental health diagnoses that a young person has, there is a predicted decrease of 0.409 in the log odds of a young person having a higher score on the total quality of discharge practice framework, (B=-0.409 (95% CI, -0.728 to -0.090), Wald $x^2(2) = 6.415$, $p = 0.011$). For every one unit increase in the total ACE score, there is a predicted decrease of 0.218 in the log odds of a young person having a higher score on the total quality of discharge practice framework, (B=-0.218 (95% CI, -0.374 to 0.062), Wald $x^2(2) = 8.057$, $p = 0.005$). The model did not significantly deviate from goodness of fit using Pearson chi-squared statistic, $x^2(414) = 451.80$, $p = 0.497$, indicating the model is a good fit for the data.

Table 5.19

Univariate analysis for predictor variables of quality of practice for the overall quality of discharge practice

	β[1]	**β[2]*SE***	**95% CI**		***p***
Predictor variables			**LL**	**UL**	
Gender	0.043	0.335	-0.613	0.700	0.897
Level of Family Contact	-0.121	0.421	-0.947	0.705	0.774
Historical Risk	≤0.001	≤0.001	≤-0.001	≤0.001	0.447
Current risk to others	0.097	0.383	-0.653	0.846	0.801
Level of past engagement with services	-0.071	0.330	-0.719	0.576	0.829
Number of mental health diagnoses	-0.409	0.163	-0.728	-0.090	0.012
Risk to self	-0.224	0.408	-1.022	0.575	0.583
No. of assessments available to care staff	-0.081	0.222	-0.517	0.355	0.716
Level of Educational Attendance	0.222	0.454	-0.668	1.112	0.625
Length of stay	≤0.001	0.002	-0.004	0.003	0.851
Level of instability	-0.008	0.025	-0.057	0.041	0.738
Total ACE score	-0.218	0.079	-0.374	0.062	0.006

Discussion

This chapter aimed to identify factors which may predict good quality practice when working towards discharging young people from SCHs. The young person's characteristic profile and ACE profile constituted the 12 factors of interest. The factors association and predictive power was explored against the five domains from The Ideal Transition of Care Model (Burke et al., 2012).

Current Quality of Discharge

Across all domains, the 'acceptable discharge practice' threshold was met by at least 50% of the sample in three domains; 'educating patients to promote self-management', 'enlisting help of social and community supports', and 'coordinating care among team members'. Only a third of the sample met the 'acceptable discharge practice' threshold for the total quality of discharge practice framework score out of 25 therefore it can be concluded that overarching improvements are required. Scores for the quality of discharge did not differ depending on gender suggesting the SCHs are already making effective adjustments in discharge practice depending on the young person's gender. It can be concluded that improvements in practice would be useful across all domains however the area where the lowest proportion of the sample (29.73%) met the 'acceptable discharge practice' threshold, and therefore the domain requiring the most improvement was domain 4: Advance Care Planning. The two domains where the highest proportion of the sample (60.36%) met the 'acceptable

discharge practice' threshold was domain 2: Educating patients to promote self-management, and domain 5: Coordinating care among team members. Briggs et al. (2021) outlined that advance care planning practices promote patient-centred care and enhance patient satisfaction ultimately reducing hospital readmission. Moreover, Kuusisto et al. (2020) established that advance care planning builds a sense of control and reassurance for the patient, reduces unnecessary interventions, and facilitates communication between patients, families, and other services. As this domain was identified as requiring improvement from the two SCHs, it is recommended that two SCHs consider ways to further increase the engagement of patients in their own care planning. It would also be useful to integrate the child and their family members into decision-making processes. When developing discharge plans, it is suggested that the SCHs carefully consider post-discharge care, services which meet the individual's needs and consider contingency plans for potential breakdowns and challenges. Drawing from the literature, focusing on these aspects of clinical practice is likely to increase the quality of discharge practice and facilitate patient-centred care.

Pates et al. (2021) suggested that discharges where the relevant support systems are not in place can lead to negative outcomes in adulthood, such as poor health, substance abuse, and increased risk for mental health problems. Although this research did not include follow-ups with the young people to assess outcomes, they indicate that a well-planned and high-quality discharge can have a positive impact on future

outcomes for the young person. It is therefore important for professionals to invest time and resource into the planning of a discharge from the point of admission. It is suggested that SCHs that provide adequate resources and support to young people are more likely to see positive outcomes, such as improved mental health, reduced substance abuse, and increased success in education and employment. It is suggested that the communities that the young people enter after discharge play an important role by providing positive role models and opportunities for social connection, especially coupled with increased access and coordination of mental health services.

Factors predicting good quality discharge practice

In the assessment of factors which may predict quality of practice, ordinal regression analyses were used where the quality of discharge domain was the dependent variable, and 12 factors were entered as independent variables.

From this analysis, all regression models were significant apart from the model relating to domain 5, 'coordinating care among team members'. Therefore, all the null hypotheses outlined earlier in the chapter were rejected apart from hypothesis 5 as no significant predictors of quality of practice on domain 5 were identified. The findings showed that there are three key predictors of good quality practice across the remaining domains and total quality of discharge when all domains are combined. These are the number of mental health diagnoses a young person has, their total ACE

score and the level of instability they have experienced prior to their admission to the SCH.

Number of mental health diagnoses

The number of mental health diagnoses a young person had was a significant predictor of good practice with regards to educating patients to promote self-management, enlisting the help of social and community supports and the total quality of discharge practice when all domains are combined. Findings showed that the number of mental health diagnoses a young person had negatively influenced the quality of discharge practice whereby young people who had fewer mental health diagnoses received a higher quality of discharge practice in relation to educating patients to promote self-management, enlisting the help of social and community supports and the total quality of discharge practice when all domains are combined.

Total ACE score

A young person's total ACE score was a significant predictor of good practice with regards to discharge planning, advance care planning and the total quality of discharge practice when all domains are combined. Findings showed that the number of ACEs that a young person had experienced negatively influenced the quality of discharge practice whereby young people who had experienced fewer ACEs received a higher quality of discharge practice in relation to discharge planning, advance care planning and the total quality of discharge practice when all domains are combined.

Level of Instability

Lastly, the level of instability, indicated by the number of previous care placements a young person had experienced, was a significant predictor of good practice with regards to enlisting the help of social and community supports. Findings showed that the level of instability experienced negatively influenced the quality of discharge practice whereby young people who had experienced fewer changes in previous care placements, therefore less instability, received a higher quality of discharge practice in relation to enlisting the help of social and community supports.

Conclusion

These findings highlight the importance of professionals understanding the mental health of young people, their ACE history, and the level of instability they have experienced within the care system when considering the discharge process. Results suggested that the effectiveness of discharge is in part defined by adopting a systemic approach, educating young people, and involving them in their care planning. It is suggested that the results indicate that an integrated and collaborative approach involving the young person themselves, their families, and the systems supporting them is crucial for a safe and successful transition from SCHs. This process should begin from the point that the young person is admitted to the SCHs as it is shown that an increased knowledge about the young person can lead to a higher quality of practice in relation to planning their discharge.

Despite domain 5: Coordinating care among team members, having the highest proportion of the sample achieving 'acceptable discharge practice', the regression model did not induce a statistically significant effect on the quality of discharge practice as predicted by any of the 12 factors; gender, level of family contact, historical risk, current risk to others, level of past engagement with services, number of mental health diagnoses, risk to self, number of assessments available to care staff, level of educational attendance, length of stay, level of instability and the total ACE score.

Limitations of the Study

The main limitation to this research was the inability to conduct follow-up research to assess the outcomes of the young people post-discharge. The research is unable to provide insight into factors which are associated to outcomes or readmission. The research is also limited to commenting on areas of poor and good practice and factors which may predict this practice.

Implications

Alongside the implications already mentioned, the findings from this research imply that young people with more mental health diagnosis, who experience more ACEs and a greater number of care placements are likely to experience poorer quality discharges from SCHs compared to their counterparts. This could lead to negative outcomes such as re-offending, deteriorations in mental health and readmission.

Chapter 6 – Discussion

Ideally, young people should experience positive outcomes post-discharge from a Secure Children's Home, and they should not require readmission. Chapter 2 has highlighted factors known to be associated with the readmission of young people to non-custodial settings, including SCHs, but more knowledge is required in relation to the predictors of good quality discharge practice and the areas requiring more focus, time, support and resource. Chapter 2 highlighted that research has tended to focus more on clinical factors rather than system-level or patient-related factors. This thesis focused on these areas with the aim to address the gaps in the literature base.

Chapter 4 aimed to establish the characteristics and ACE history of young people living in the two SCHs. Further, chapter 5 aimed to outline the current quality of discharge of young people from two SCHs and identify factors, focusing on the young person's characteristic and ACE profile, which may predict good quality practice when working towards discharge.

Key Findings

Chapter 2

The systematic review aimed to explore and identify factors associated with the readmission of young people before their 18th birthday to non-custodial settings. Overall the review found the following significant predictors of readmission: (a) age and gender, (b) severe conduct problems and suicidality, (c) harsh parental discipline, disengaged parent-child

relations, and level of family risk, (d) maltreatment severity, (e) length of hospital stay, (f) history of self-harming behaviour, (g) internalising profile, (h) history of childhood sexual abuse, (i) medication non-adherence, (j) multiple psychiatric and medical comorbidities, (k) prior psychiatric admission, (l) symptom severity, (m) living arrangements post-discharge and (n) targeted case management services post-discharge.

The studies included in the review included young people aged between 4 and 18 years old therefore the findings can be applied to the population of interest in this thesis. However, most of the studies (8/10) were conducted in the United States therefore the findings may be more generalisable to American populations than other counties. Secondly, as meta-analyses were not possible for this review, descriptive synthesis was used which holds less robustness and is limited to descriptions of associations between predictors and readmission and no causal inferences can be made.

Chapter 4

Both research questions in chapter 4 were answered. Whilst aspects of ACEs have been explored within SCHs (Falshaw & Browne, 1997; Gibson, 2020), Chapter 4 filled a gap in the literature base by providing an understanding of the rate of ACEs and the other characteristics of young people under 18 years old residing in the two SCHs. Within the sample of young people residing in the two SCHs, the average number of ACEs was 6.06 with 86.5% of the sample having experienced 4 or more ACEs. When

compared to research on the general population where it is reported that 12.5% of the general population have experienced 4 or more ACEs, it is apparent that young people in these two SCHs are more likely to experience ≤4 ACEs (CDC & Permanente, 2016). It must be noted however that this general population sample consisted of mostly well-educated adults, of which 46.4% were over 60 years old. Therefore, when making comparisons, readers should be mindful that differences in other characteristics may make direct comparisons challenging.

The experience of ACEs in this research's sample is also higher than a male young offender institution population who went on to spent time in a Welsh adult prison (Ford et al., 2019) where 45.4% experienced ≤4 ACEs. Ford et al's (2019) sample was all male therefore it must be noted that comparisons between chapter 4 and Ford et al's (2019) sample are limited to the male component of this research's sample. In addition, the proportion of females within this research's sample who experienced ≤4 ACEs was significantly higher (95.65%) than Ford et al's (2019) sample. This suggests that young people, who are admitted to these two SCHs have heightened vulnerabilities and greater levels of experienced trauma than those residing in custodial settings.

The most commonly experienced ACEs when considering the whole sample were physical and emotional neglect and the least experienced was sexual abuse. The findings differed from Vaswani (2018) however they were similar to Gibson (2020) who used a more similar sample to the

sample in the current study. This suggests that young people who remain in the community and do not get admitted to a SCH differ in terms of their childhood experiences and exposure to trauma. On all 10 ACEs except exposure to substance misuse and criminality, a higher percentage of the female sample experienced the ACE. For males, the least common ACE was sexual abuse however disclosure may have been negatively affected by shame (O'Leary., 2020).

Findings showed significant gender differences in total ACE scores; females had significantly higher total ACE scores. Findings also showed that the number of past care environments experienced by a young person and their total ACE score were positively correlated. This relationship was highly significant ($p \leq 0.001$) however the strength of the association fell at the low end of the 'medium' association threshold ($r = 0.35$).

Findings show the importance of understanding the ACE profile of a young person upon admission to guide their intervention plans. Although the cumulative impact of ACEs has been highlighted in the literature base (Schilling et al., 2007), viewing the ACE profile purely on a quantitative basis, categorising people and making generalised decisions in line with these categories would be unwise. Rather, understanding the ACE history and impact on the young person's presentation alongside considering their individual needs to develop a psychological formulation may prove more useful when developing individualised intervention and care plans.

Chapter 5

Literature paucity was identified in relation to the factors that predict the quality of discharge practice by staff in SCHs. Using a theoretical framework guided by the Ideal Transition of Care model (Burke et al., 2012), this research filled this gap by answering two research questions. Findings showed that the 'acceptable discharge practice' threshold (≤4/5) was met by at least 50% of the sample in three domains; 'educating patients to promote self-management', 'enlisting help of social and community supports', and 'coordinating care among team members'. For the total quality of discharge practice score out of 25, only a third of the sample met the 'acceptable discharge practice' threshold (≤20/25). From these results, it can be concluded that overarching improvements are required.

The highest proportion of the sample (60.36%) met the 'acceptable discharge practice' threshold on 'educating patients to promote self-management' and 'coordinating care among team members'. The area of practice where the lowest proportion of the sample (29.73%) met the 'acceptable discharge practice' threshold was 'advance care planning'. No gender differences were found regarding the quality of discharge scores suggesting the two SCHs are already implementing appropriate adjustments for gender.

This research suggests that the quality of discharge practice is mainly determined by practice displayed in relation to educating patients to

promote self-management, enlisting help of social and community supports and coordinating care among team members. Despite this, it can be concluded that these two SCHs would benefit from improvements in the quality of discharge practice across all domains.

In relation to the second research question, the investigation into predictors of good quality practice identified three key predictors of good quality practice across the remaining domains and the total quality of discharge when all domains are combined. These are the number of mental health diagnoses a young person has, their total ACE score and the level of instability they have experienced prior to their admission to the one of the two SCHs.

The number of mental health diagnoses a young person had was a significant predictor of good practice with regards to educating patients to promote self-management, enlisting the help of social and community supports and the total quality of discharge practice when all domains are combined. The total ACE score of a young person was also a significant predictor of good practice with regards to the total quality of discharge practice as well as good practice with regards to discharge planning and advance care planning. Lastly, the level of instability experienced by the young person was a significant predictor of good practice with regards to enlisting the help of social and community supports.

In summary, having more mental health diagnoses, experiencing more ACEs and more instability prior to being admitted to one of the two SCHs negatively influenced the quality of discharge practice they received.

Considering the findings in line with the theoretical framework, attachment theory, where safety and secure attachments are central, involving community support services at the point of admission and during the admission to better educate professionals on how to support the young person can provide a sense of comfort and safety for the young person. It is clear from attachment theory that fostering secure relationships and making the young person feel safe is crucial when meeting their needs and ensuring progress throughout the admission is made. Having a better knowledge of the young person will likely assist in the development of these secure relationships and involving the young person in the planning of their discharge will also provide a sense of control for the young person. Communicating with social and community supports throughout the admission and post-discharge will help new care teams understand the young person's attachment style and therefore be aware of how to best develop relationships and manage potential dynamics that the staff may be drawn into.

These findings highlight the importance of professionals understanding the mental health of young people, their ACE history and history of previous care experiences when considering the discharge process. A systemic approach which focuses on educating young people

and advocating for their involvement in their own care planning from the point of admission may be helpful to support the adoption of an integrated and collaborative approach to discharge practices from those working within these two SCHs.

Improvements in Practice

Literature was also consulted to draw conclusions on areas that the SCHs should focus on to improve practice. Drawing from literature (Mathur et al., 2018; Cohrdes & Mauz, 2020; Phillips et al., 2020), it is suggested that the quality of discharge and chance of successful transition is mediated by effective discharge planning. SCHs should ensure there is regular communication between the care team and the young person, their family, or caregivers. They should also aim to empower the young person to take an active role in their care and recovery, ensure their voice is heard and they are an integral part of the decision-making processes around discharge.

Research has shown that young people with an inadequate knowledge and skill level to manage their own emotions, conditions and other difficulties in a community setting are at a higher risk of readmission (Herrenkohl et al., 2019). Promoting self-management skills can improve the quality of the young person's discharge (Panisch et al., 2020). SCHs should therefore incorporate skill-based interventions into the young person's care plan to increase their skills in relation to coping strategies and management strategies specific to their risk formulation. These skills

may help to build resilience within the young person and improve their outcomes post-discharge. It is acknowledged that these interventions may already be offered but engagement from the young people may be low.

Poor care coordination can result in uneven transitions, increases in care errors, and limits the ability of patients to engage in their own care (Jones et al., 2020). With adequate resources, interdisciplinary teamwork and good, effective communication, research suggests that effective care coordination can ensure the delivery of appropriate services, improve health outcomes, and decrease the risk of further adverse events (Xiao et al., 2019).

Drawing from the literature (Kalmakis & Chandler, 2015; Phillips et al., 2020) it is suggested that the quality of the relationships that the young person develops both with staff and peers within the SCH is a key factor in moderating the quality of their discharge. This is because, in line with attachment theory, these relationships can act as supportive tools to connect the young people to the community and nurture their confidence which in turn will enable them to maintain supportive secure relationships within the community without requiring the support of SCH staff. It is acknowledged that staff within the SCHs are aware that building rapport and relationships with the young people is crucial however it should be acknowledged that these relationships may have a wider utility than purely to provide support within the SCH.

Literature (Shah et al., 2020) has highlighted the importance of working with social and community support services as a form of intervention, such as involving family members, community resources, and social workers as this directly enhances patient outcomes, reduces healthcare costs, and improves patient satisfaction. Similarly, good social and community support has been shown to facilitate post-discharge outcomes, reduce social isolation, and provide emotional support all of which can lead to improved health outcomes and quality of life (Cohrdes & Mauz., 2020). While a lack of resources and limited access to community resources can sometimes hamper the implementation of social and community support interventions, it is suggested that professionals should begin exploring community support at the point of admission. It is also recommended that professionals endeavour to keep families involved in care throughout the young person's admission as this may help increase their understanding of the young person's needs and consequently, they may be better equipped to provide support post-discharge.

Following on from chapter 4, it is suggested that employing trauma-informed care practices across all areas of the SCHs may be beneficial to effective discharge practices. Trauma-informed care recognises the impact of ACEs on the young people and seeks to create a safe, supportive, and empowering environment conducive to recovery. From chapter 4, it is clear that rates of ACEs within SCH populations are higher than those in the general population and offender populations therefore this is even more important.

The systematic review seen in Chapter 2 focused on identifying factors associated with the readmission of young people before their 18th birthday to non-custodial settings, SCHs is one of these settings. SCHs are part of the children and young people secure estate (CYPSE) in England. Of the 12 factors identified in this review, five relate to ACEs; 'harsh parental discipline' (Blader, 2004), 'disengaged parent-child relations' (Blader, 2004), 'level of family risk' (Fontanella, 2008), 'maltreatment severity' (Yampolskaya et al., 2013), and 'history of childhood sexual abuse' (Bobier & Warwick., 2005). Another seven factors in this review relate to characteristic variables investigated in this research; 'gender' (Fontanella, 2008), 'severe conduct problems and suicidality' (Blader, 2004), 'length of hospital stay' (Fontanella, 2008; Yampolskaya et al., 2013; McCarthy et al., 2017; Phillips et al., 2020), 'history of self-harming behaviour' (McCarthy et al., 2017), 'internalising profile' (Berona et al., 2017), 'multiple psychiatric and medical comorbidities' (Fontanella, 2008; Phillips et al., 2020) and 'prior psychiatric hospitalisation or rehospitalisation' (Chung et al., 2008; Phillips et al., 2020). As these factors are known to be associated with a higher risk of readmission, it is suggested that identifying any young people with these characteristics or historical factors at the point of admission could be helpful when planning and making decisions in relation to discharge, especially if professionals are aware of the predisposition to readmission.

It is suggested that in line with the Ideal Transition of Care Model (Burke et al., 2012), to improve the quality of discharge, SCHs must adopt

a multifaceted approach and develop interventions that incorporate as many of the domains as possible. It is also suggested that discharge practices should recognise the individual needs, risks, strengths, and goals of the young person and consider the appropriate and available community supports which can meet these needs following discharge. Discharge plans should be developed at the point of admission and viewed as a working document to be regularly reviewed and updated to ensure it is relevant and meeting all the needs of the young person to increase the quality of their discharge.

Limitations

This research was based on data from two Secure Children's Homes; further research is required to explore whether these findings are representative of the national SCH population. Exposure to ACEs has been shown to be strongly influenced by ethnicity (Karamanos et al., 2022). Regrettably, the original database did not include information on the ethnicity of the young people included in the sample. Further research should endeavour to use a diverse sample and explore whether ethnicity has links to the quality of discharge practice from staff.

Prospective data collection was not possible due to Covid-19 lockdown restrictions therefore the study adopted a retrospective design. Subsequently, the data was not collected with this research in mind. As the database used information from the electronic patient record system, it is reliant on, and limited by the detail provided by other professionals

both in documentation and the recording of clinical notes throughout the young person's admission. This may also mean the database does not include all variables which may contribute to the quality of discharge. Ideally the database would have included information on medication adherence as this was identified in chapter 2 as a predictor for readmission and it would have allowed a sixth domain to be included in the framework used to assess the quality of discharge. The factors investigated in chapters 4 and 5 were identified from the systematic review in chapter 2. Unfortunately, a limitation of the review was that meta-analyses were not possible therefore descriptive synthesis was conducted. This holds less robustness and is limited to descriptions of associations between predictors and readmission and no causal inferences can be made.

The ACEs data within the database was collected via self-report methods therefore this relied upon the honesty and accuracy of the young people. The risk of response bias must be acknowledged as a limitation, especially where their experiences elicit feelings of shame. Recall bias, where the young person may not be able to recall experiences accurately, could also lead to inaccurate data. Research shows that the accuracy of a person's memory of an event is dependent on the impact of the event (Smith, Bibi, & Sheard., 2004). Given the impact of ACEs is known to be significant, this could suggest that recall bias is somewhat reduced however, where a person experiences trauma symptoms, this could result in poor memory recall and memory disjointedness (Sachschal, Woodward, Wichelmann, Haag, & Ehlers., 2019).

This research uses the ten universally accepted ACEs outlined by CDC and Permanente (2016) however research (Weems et al., 2021) has suggested the need to expand the current inclusion of ACEs to also include 'expanded ACEs' (Cronholm et al., 2015) and traumatic stress events (Taylor & Weems., 2009). Cronholm et al. (2015) outline five 'expanded ACEs': having witnessed violence, lived in foster care, experienced a subjective feeling of discrimination (racism), lived in an unsafe environment. Taylor and Weems (2009) define five further trauma-stress events: experiencing a motor vehicle/other accident, natural disasters, explosions/war, entertainment violence, separation/loss of family/non-family member. It is argued that future research should explore the rates of these additional ACEs and the influence of them on the quality of discharge practice within SCHs. This is especially important since these events were identified as traumatic by young people in the case of Taylor and Weems (2009).

Implications

Importantly, by understanding the characteristic profile and rates of ACEs for young people residing within the two SCHs, the findings can inform the development of evidence-based interventions to support this population. Cohrdes and Mauz (2020) suggested that positive outcomes can be stimulated given the right support using evidence-based programs and therapies, such as Dialectical Behaviour Therapy (DBT), and Cognitive Behavioural Therapy (CBT) to promote mental health and well-being. It is suggested that to reduce readmission rates and improve outcomes, it is

important to address the impact of ACEs through evidence-based programs and therapies, as well as provide education and employment opportunities which meet the young person's needs. These findings and previous literature also suggest a need for tailored support and discharge planning for young people based on their individual characteristics and experiences to improve the quality of their discharge.

Consistent with the Ideal Transition of Care model (Burke, Kripalani, Vasilevskis & Schnipper., 2013), the analysis suggests that there is a need to involve young people in the creation of individualised transition plans, ensure timely and effective communication between different agencies, provide access to appropriate support and services, and monitor and evaluate the process to identify areas for improvement.

When considering these findings and the findings in the systematic review in chapter 2, it may be useful to identify young people at the point of admission who have characteristics or historical factors which have been shown to increase their risk of poorer quality discharge practices or an increased predisposition to readmission.

Future research should be conducted with larger sample sizes to investigate whether there are other factors which predict good quality discharge practices. Crucially, longitudinal follow-up studies are also required whereby researchers maintain contact with young people after their discharge from SCHs and collect follow-up data at regular intervals such as 1, 3, 6, 9, and 12 months. This data could be focused on a wide

range of outcomes and could include the recording of any readmissions. This research would inform the field and clinical practice about factors which predict better outcomes post-discharge alongside highlighting areas where more time and resource is needed to achieve better quality discharges and outcomes for young people leaving secure care. It could also contribute to the literature about factors which may predict readmission and inform ongoing improvements in clinical practice and intervention development.

Conclusion

This research brings new insights and understanding to the field that previous studies have not explored, particularly in addressing gaps in the literature regarding the rates of ACEs among young people specifically residing in these two SCHs.

The research identified that there are areas for improvement within the clinical practice of these two SCHs contributing to the discharge of a young person. While previous studies have explored the experiences of young people leaving SCHs and the factors associated with readmission, this research specifically examined the role of ACE scores and their characteristic profiles in shaping the quality of practice in relation to discharges from SCHs. The findings provide a new perspective on understanding the factors that contribute to the quality of the discharge for vulnerable young people. This can inform the development of more effective and targeted clinical practices. Further, the findings highlighted the need for a more coordinated, collaborative, and integrated approach to

discharge practices alongside an individualised approach based on the unique characteristics and experiences of each young person when working on discharging young people from these two SCHs.

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Appendices

Appendix 1

Systematic review full search terms

Hospital readmission	Hospital readmission Psychiatric readmission Psychiatric rehospitalisation	Readmit OR readmittance OR readmitted OR Re-admit OR re-admittance OR re-admitted OR readmission OR readmissions OR re-admission OR re-admissions OR "hospital readmission" OR "hospital readmissions" OR "hospital re-admission" OR "hospital re-admissions" OR "Psychiatric readmission" OR "psychiatric readmissions" OR "psychiatric re-admission" OR "psychiatric re-admissions" Rehospitalisation OR rehospitalisations OR re-hospitalisation OR re-hospitalisations OR rehospitalization OR rehospitalizations OR re-hospitalization OR re-hospitalizations OR rehospitalised OR rehospitalized OR re-hospitalised OR re-hospitalized OR rehospitalise OR re-hospitalise OR rehospitalize OR re-hospitalize "Psychiatric rehospitalisation" OR "Psychiatric rehospitalisations" OR "Psychiatric re-hospitalisation" OR "Psychiatric re-hospitalisations" OR "Psychiatric rehospitalization" OR "Psychiatric rehospitalizations" OR "Psychiatric re-hospitalization" OR "Psychiatric re-hospitalizations"
Population	Young people Youth Adolescents Children	"young people" OR "young person" OR "young adult" OR "young adults" OR "young adulthood" OR "emerging adult" OR "emerging adults" OR "emerging adulthood" youth OR youths OR juvenile OR juveniles OR teen OR teens OR teenager OR teenager OR adolescent OR adolescents OR adolescence OR child OR children OR childhood OR minor OR minors OR pediatric OR pediatrics OR paediatric OR paediatrics
Setting	Non-custodial Psychiatric unit Psychiatric hospital Secure Children's Home Inpatient unit Secure unit Secure ward Secure placement Secure centre PICU Mental health	Noncustodial OR non-custodial OR Psych OR psychiatric OR psychiatry OR Inpatient OR Secure OR "secure unit" OR "secure units" OR "secure ward" OR "secure wards" OR "secure placement" OR "secure placements" OR "secure centre" OR "secure centres" OR "secure center" OR "secure centers" OR PICU OR "paediatric intensive care unit" OR "pediatric intensive care unit" Mental OR "mental health" OR "mental disease"

Truncated search terms:

readmit* OR re-admit* OR readmission* OR re-admission* OR hospital readmission* OR hospital re-admission* OR psychiatric re-admission* OR rehospitalis* OR re-hospitalis* OR rehospitaliz* OR re-hospitaliz*
Young adult*, emerging adult*, youth*, juvenile*, teen*, adolescen*, child*, minor*, pediatric*, paediatric*
Psych* OR secure* OR mental*

Appendix 2

Extracted data from ten studies included in the systematic review

Articles Authors	Study Purpose/Aims	Sample	Eligibility Criteria	Country of Study	Research Design	Data Sources	Measurement of Readmission	Follow-up Period	Readmission Rates	Factors Associated with Readmission
(McCarthy et al., 2017)	To identify the risk factors for adolescents' rehospitalisation to an acute child and adolescent psychiatric hospital	98 adolescents; 30 males and 68 females; aged 13-18;	All clients admitted in January 2014 were included	United States	Retrospective Cohort study	Patient discharge summaries and electronic medical records	Extracting data from electronic medical records on whether the participant was readmitted to the hospital within 12 months after discharge	12 months	26.5%	(a) Length of stay (more than five days); (b) History of self-harming behaviour
(Barker et al., 2010)	To determine potentially modifiable risk factors for readmission to adolescent psychiatric units	112 adolescents; 32 males and 80 females; aged 11-17	All clients admitted between 1 January 2005 and 31 December 2005 were included	Australia	Retrospective Cohort study	Patient electronic medical records	12 months of discharge date; included readmissions to other psychiatric inpatient facilities in the area	12 months	31%	Being male
(Berona et al., 2017)	To compare adolescent profiles in post-discharge rates of psychiatric rehospitalisation	433 adolescents; 310 females; 123 males; aged 13-17 years	Adolescents admitted to an adolescent psychiatric hospital due to a suicide attempt or suicidal ideation.	United States	Prospective Cohort study	One on one patient screening	Participants were asked if they were previously admitted for psychiatric reasons in another facility before admission to the facility used as the research setting	12 months	Not reported	Youth Self-Report internalising profile, which was characterised by elevated anxiety and depression

Articles Authors	Study Purpose/Aims	Sample	Eligibility Criteria	Country of Study	Research Design	Data Sources	Measurement of Readmission	Follow-up Period	Readmission Rates	Factors Associated with Readmission
(Bobier et al., 2005)	To investigate factors associated with readmission to an adolescent psychiatric unit	71 adolescents aged 16-18.	Adolescents admitted to a psychiatric unit for more than 48 hours and for a major mental illness	New Zealand	Retrospective Cohort study	Patients' electronic clinical files	Not reported	12 months	31%	(a) History of childhood sexual abuse; (b) Medication non-adherence
(Kagabo et al., 2017)	To examine the relationship between the length of stay and psychiatric admission among adolescents	7,265 adolescents aged 3-17.	Adolescents admitted for mental health reasons and stayed for less than a year in the hospital	United States	Retrospective cohort study	University of Utah Health Sciences data warehouse	Readmission to the same facility within one year of discharge	12 months	22%	Length of stay
(Phillips et al., 2020)	To investigate factors associated with multiple psychiatric readmissions among the youth	6,797 adolescents; aged 3-17; 3,776 females and 3,021 males	(a) Medicaid eligible youth; (b) primary diagnosis of mood disorder	United States	Retrospective longitudinal cohort study	Medicaid claims; the Area Resource File; American Hospital Association survey; National Survey of Mental Health Treatment Services	Readmission to the same facility within one year of discharge	6 months	20.8%	(a) Disabled youth/youth in foster care; (b) multiple psychiatric comorbidities; (c) prior psychiatric hospitalisation; (c) medical comorbidity
Blader (2004)	To examine predictors of readmission to a psychiatric inpatient unit among children	109 children; aged 5-12;	All psychiatric inpatient admissions of children aged 5-12	United States	Retrospective cohort study	Children's caregivers	Readmission to the same facility or any other facility	1 year	33.9%	(a) Severe conduct problems; (b) harsh parental discipline; (c) disengaged

Articles Authors	Study Purpose/Aims	Sample	Eligibility Criteria	Country of Study	Research Design	Data Sources	Measurement of Readmission	Follow-up Period	Readmission Rates	Factors Associated with Readmission
			years within a 14-month period.							parent-child relations
(Fontanella, 2008)	To investigate predictors of readmission to a psychiatric inpatient unit among children	522 adolescents; aged 11-17.99;	(a) Medicaid enrolment; (b) admitted to a psychiatric hospital; (c) age limitation;	United States	Retrospective cohort study	(a) Hospital case records; (b) the Area Resource File; (c) Medicaid claims files	Readmission within one year after discharge	1 year	37.9%	(a) Age and gender; (b) clinical (symptom severity; suicidality; comorbidity); (c) level of family risk
(Chung et al., 2008)	To explore factors associated with the readmission of children and adolescents to psychiatric inpatient units.	403 children and adolescents; aged 4-18; 211 females and 192 males	Admission to an inpatient psychiatry hospital between 1 January, 2004 and 31 December, 2004	United States	Retrospective Cohort study	(a) Admission records; (b) psychiatric evaluation records; (c) discharge summary	Readmission to the same hospital within one year	1 year	16%	(a) Prior history of psychiatric readmission; (b) lived in a residential treatment facility; (c) diagnosis of conduct disorder
(Yampolskaya et al., 2013)	To examine factors associated with time to first and subsequent readmissions of youth to one of Florida's residential mental health treatment programs, known as State Inpatient Psychiatric Program (SIPP).	1432 youths under the age of 18; 57% male and 43% female.		United States	Retrospective Cohort study		Readmission to any SIPP within 4 years	4 years	19%	Associated with earlier readmission: (a) greater maltreatment severity, (b) shorter length of stay in SIPP during initial episode, and (c) longer time to provision of targeted case management services. Associated with chance of

Articles Authors	Study Purpose/Aims	Sample	Eligibility Criteria	Country of Study	Research Design	Data Sources	Measurement of Readmission	Follow-up Period	Readmission Rates	Factors Associated with Readmission
										experiencing subsequent readmission; (a) length of stay during second admission and (b) >1 mental health diagnosis.

Appendix 3

Scoring for all ten studies included in the systematic review using the Quality Assessment Form, Joanna Briggs Institute (JBI; 2017)

JBI Item No.[i]	Barker et al. (2010)	Berona et al. (2017)	Bobier et al. (2005)	McCarthy et al. (2017)	Chung et al. (2008)	Kagabo et al. (2017)	Phillips et al. (2020)	Blader (2004)	Fontanella et al. (2008)	Yampolskaya et al. (2013)
1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	U	1	1	1	0
4	0	1	1	1	1	0	1	0	0	1
5	0	0	0	0	0	0	1	0	0	0
6	1	1	1	1	1	0	0	1	0	1
7	0	1	1	0	0	U	1	0	1	1
8	1	1	0	1	1	1	1	1	1	1
9	1	0	1	1	1	1	1	1	1	1
10	N/A	0	0	0	N/A	N/A	N/A	1	1	N/A
11	1	1	1	1	1	1	1	1	1	1
TOTAL SCORE	**7**	**8**	**8**	**8**	**8**	**5**	**9**	**8**	**8**	**8**
SCORE (%)	**64%**	**73%**	**73%**	**73%**	**73%**	**45%**	**82%**	**73%**	**73%**	**73%**

The Joanna Briggs Institute quality assessment checklists can be accessed here: https://jbi.global/critical-appraisal-tools

Quality Assessment Items:

1. Were the two groups similar and recruited from the same population?
2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?
3. Was the exposure measured in a valid and reliable way?
4. Were confounding factors identified?
5. Were strategies to deal with confounding factors stated?
6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?
7. Were the outcomes measured in a valid and reliable way?
8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?
9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?
10. Were strategies to address incomplete follow up utilized?
11. Was appropriate statistical analysis used?

Appendix 4

Ethical approval from Faculty of Medicine & Health Sciences Research Ethics Committee at University of Nottingham

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences Research Ethics Committee
Faculty Hub
Room E41, E Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH
Email: FMHS-ResearchEthics@nottingham.ac.uk

27 July 2020

Miss Laura Pearson
Trainee Forensic Psychologist/Doctorate Student
Centre for Forensic and Family Psychology
School of Medicine
B Floor, Yang Fujia Building
Jubilee Campus, University of Nottingham
Wollaton Road, Nottingham
NG8 1BB

Dear Miss Pearson

Ethics Reference No: 78-0720 – **please always quote** **CNTW Service Evaluation approval ref: SER-20-007**	
Study Title: An investigation into the association between ACEs and the characteristic profiles of young people leaving Secure Children's Homes and the quality of transitions out of secure care.	
Chief Investigator/Supervisor: Dr Shihning Chou, Associate Professor of Forensic Psychology, Centre for Forensic & Family Psychology, School of Medicine	
Lead Investigators/student: Laura Pearson, Doctorate Student in Forensic Psychology, Centre for Forensic & Family Psychology, School of Medicine	
Other Key investigators: Dr Jack Kennedy, Clinical & Forensic Psychologist, Cumbria Northumberland, Tyne and Wear (CNTW) NHS Foundation Trust	
Proposed Start Date: 01/07/2020	**Proposed End Date:** 31/12/2020

Thank you for submitting this well written and straightforward application which was reviewed by a sub-committee on 14 July 2020 and the following documents were received:

- FMHS REC Application form and supporting documents version 1.0: 05/07/2020
- Service evaluation approval confirmation dated 29/04/2020

These have been reviewed and are satisfactory and the project is approved.

Approval is given on the understanding that:

1. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
2. The Chair is informed of any serious or unexpected event.
3. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Dr Bethan E Phillips, Associate Professor
Clinical, Metabolic & Molecular Physiology, Medical Sciences & Graduate Entry Medicine
Acting Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

Appendix 5

Service Evaluation approval from Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust

Pearson, Laura (Specialist Children & Young Peoples Services CBU)

From:	Douglas, Simon
Sent:	29 April 2020 13:38
To:	Pearson, Laura (Specialist Children & Young Peoples Services CBU); ServiceEvaluation; Goldsmith, Dave
Cc:	Kennedy, Jack (Specialist Children & Young Peoples Services CBU); [redacted] (Specialist Children & Young Peoples Services CBU)
Subject:	Service Evaluation Approval SER-20-007 An Evaluation of the resettlement and transition outcomes of young people residing in Local Authority Secure Children's Homes.

Dear Laura

RE: SER-20-007 An Evaluation of the resettlement and transition outcomes of young people residing in Local Authority Secure Children's Homes.

I have now logged the service evaluation and given it the following reference: **SER-20-007**, please quote this reference in all correspondence.

I can confirm that Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust are happy to support and approve the above service evaluation. Please accept this email as verification of conditional Trust approval.

Approval is granted with the condition that the R&D Department are notified of:

- Commencement and completion of the evaluation
- Any significant changes to the evaluation
- Suspension or abandonment of the evaluation
- All publications and/or conference presentation of the evaluation findings

In addition it is crucial that any publications or presentations of this evaluation or of any data from it ensure that no individual patient is identifiable. If in any doubt please discuss with either the R&D Department or Information Governance in the Trust.

All the best with your evaluation

Simon Douglas
Joint Director of Research, Innovation and Clinical Effectiveness
Cumbria, Northumberland, Tyne & Wear NHS Foundation Trust
St Nicholas Hospital
Gosforth
Newcastle upon Tyne
NE3 3XT

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simon.douglas@cntw.nhs.uk
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Appendix 6

Consent form given to each young person upon admission to the SCH

NHS
Northumberland, Tyne and Wear
NHS Foundation Trust

[redacted]
(Community Adolescent Forensic Service)

[redacted]

Young Person Consent Form for Routine Data Collection – completed upon admission

I, (Young Person's Name:.....), Date of Birth (..../..../.....), give my consent for [redacted] to have access to my patient records held by Northumberland, Tyne and Wear NHS Foundation Trust. I give consent for The [redacted] to collect routine data about me and my admission throughout my time in the Secure Children's Home and understand that this may be used for research purposes. I understand all data will be anonymised, it will not contain my name or any information that could identify me.

Please put a tick next to the sentence if you agree:

I have been given the opportunity to ask questions about my data being collected.	
I understand that if I don't want my data to be collected, I do not have to sign this form.	
I understand that the record of my data will not have my name on it.	
I understand that my information will be kept safely following the rules of The Data Protection Act (1998).	
I know that I can ask for my information to be destroyed at any point during my admission.	
I understand that if my data is used for research it will not contain my name or any information which could identify me.	

You do not have to sign this form. If you do not want your data to be collected then do not sign this form. There will be no impact on your care and treatment.

Print Name:.....

Signed:.....

Dated:.....

Appendix 7

Consent form given to staff members for the collection of data for the routine database.



Northumberland, Tyne and Wear NHS Foundation Trust

[redacted]

(Community Adolescent Forensic Service)

Staff Consent Form for Routine Data Collection

I, (Staff member's name:.....), give my consent for [redacted] to collect data about me and my clinical practice within the Secure Children's Home through the use of interviews and understand that this may be used for research purposes. I understand all data will be anonymised, it will not contain my name or any information that could identify me.

Please put a tick next to the sentence if you agree:

I have been given the opportunity to ask questions about my data being collected.	
I understand that my participation is voluntary and if I don't want my data to be collected, I do not have to sign this form.	
I understand that the record of my data will not have my name on it.	
I understand that my information will be kept safely following the rules of The Data Protection Act (1998).	
I know that I can ask for my information to be destroyed at any point.	
I understand that if my data is used for research it will not contain my name or any information which could identify me.	

You do not have to sign this form. If you do not want your data to be collected then do not sign this form. There will be no impact on your employment.

Print Name:.....

Signed:.....

Dated:.....

Appendix 8

ACE Questionnaire (Felitti et al., 1998)

Adverse Childhood Experience (ACE) Questionnaire

Finding your ACE Score ra hbr 10 24 06

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** …
   Swear at you, insult you, put you down, or humiliate you?
   or
   Act in a way that made you afraid that you might be physically hurt?
   Yes No If yes enter 1 _____

2. Did a parent or other adult in the household **often** …
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?
   Yes No If yes enter 1 _____

3. Did an adult or person at least 5 years older than you **ever**…
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Try to or actually have oral, anal, or vaginal sex with you?
   Yes No If yes enter 1 _____

4. Did you **often** feel that …
   No one in your family loved you or thought you were important or special?
   or
   Your family didn't look out for each other, feel close to each other, or support each other?
   Yes No If yes enter 1 _____

5. Did you **often** feel that …
   You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
   or
   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
   Yes No If yes enter 1 _____

6. Were your parents **ever** separated or divorced?
   Yes No If yes enter 1 _____

7. Was your mother or stepmother:
   Often pushed, grabbed, slapped, or had something thrown at her?
   or
   Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
   or
   Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
   Yes No If yes enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
   Yes No If yes enter 1 _____

9. Was a household member depressed or mentally ill or did a household member attempt suicide?
   Yes No If yes enter 1 _____

10. Did a household member go to prison?
    Yes No If yes enter 1 _____

Now add up your "Yes" answers: _____ This is your ACE Score