ASSESSING RISK AND OUTCOMES IN OFFENDERS DETAINED IN INTELLECTUAL DISABILITY AND MENTAL HEALTH MEDIUM SECURE UNITS IN THE UNITED KINGDOM

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ABSTRACT

The thesis examined the assessment of risk and outcomes in offenders with a mental disorder detained in medium secure units in the United Kingdom. Chapter 1 contains an introduction to the thesis. Chapter 2 presents a systematic literature review investigating factors associated with reoffending in this group of offenders. A younger age, a diagnosis of personality disorder, previous offending history, a shorter length of admission, and a history of substance misuse were all associated with a higher risk of reoffending. Implications for service development and future risk management are presented. Chapter 3 contains a piece of empirical research examining whether perception of quality of life (QoL) is associated with reoffending in those with an intellectual disability discharged from medium security. No significant differences were found between reoffenders and non-reoffenders on measures of QoL except for negative aspects of the medium secure environment, where non-reoffenders rated this as worse. Clinical implications and areas for future research are discussed. Chapter 4 contains a critical review of the HCR-20, which reports on the reliability and validity of the assessment tool in terms of its applicability in assessing risk in mentally disordered offenders, as well as its limitations. Chapter 5 presents a case study of a violent male offender detained in a medium secure unit. The use of the HCR-20 in assessing risk, formulating risk reduction interventions, and informing future risk management is highlighted. Implications of the thesis are discussed in Chapter 6.

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CHAPTER ONE

INTRODUCTION

Provision of secure services

The Mental Health Act (MHA; 1983 Amended 2007) outlines a broader definition of mental disorder compared to the previous MHA (1983). It defines it as ~~"a~~ny disorder or disability of the mind, including mental impairment". This implies that mentally disordered offenders include both offenders with mental health problems and offenders with an intellectual disability (ID). The Reed Report (1992) states that mentally disordered offenders will be diverted from the criminal justice system to specialist secure facilities (i.e., including both mental health and ID secure services). These services provide care, treatment, and detention to those who are judged to be a danger to the public particularly after conviction of a serious offence (Jamieson & Taylor, 2004).

Medium secure services were developed in England following the Butler Report (1975). They were established to address the major gap in provision between high secure and local mental health services (Yacoub, Hall, & Bernal, 2008). Quinn and Ward (2000) stated that service-users who transferred to medium security from high security had a better prognosis than those who were discharged directly into the community. Badger, Vaughan, Woodward and Williams (1999) report that in the United Kingdom there are approximately 40 regional secure units offering medium secure care (although the number of medium secure units may have increased since its publication). They are designed for shorter-term care, such as stays of 18 to 24 months (Badger et al., 1999). Fernando and Sockalingum (2001) state that the aim of medium secure units is to ~~"m~~*meet health care needs, enabling each individual to function at their optimum level and to support and facilitate rehabilitation back into the community...to provide a good quality*

of life whilst trying to achieve balance in maintaining safety and security without compromising the ethos of providing a person-centred service" (pp. 332-333).

Whilst the aims of medium secure units are similar across services, the pattern of provision shows wide variations between different regions in number and size of units, and type of individual admitted (Sansom & Cumella, 1995). There does not appear to be a more recent publication to contradict this claim. The diversity is particularly marked in secure provision for service-users with an intellectual disability (ID) although some have opened secure units which specialise in admissions of this service-user group (Sansom & Cumella, 1995).

Evaluation of secure services

MacCulloch and Bailey (1991) suggested that the criterion of ‗failure' for secure services is that of conviction of a criminal offence. Friendship, Thornton, Erikson, and Beech (2001) state that the main tool used to demonstrate a reduction in reoffending is reconviction. Therefore the primary concern to clinicians is measures of reoffending as an evaluation of the effectiveness of their service. Further to this, with public interest in mind, what really matters is the prevention (or significant reduction) of further serious offending after the service-users have returned to the community. They also suggest that quality of life (QoL), is another primary concern to clinicians, which can usefully be evaluated within individual institutions as well as forensic services as a whole. Measurement of performance is important in terms of efficiency and effectiveness of organisations in achieving their goals (Koher & Eggleton, 2006). This argument supports

the statement by Holland, Clare and Mukhopadhyay (2002), who recommended that research, needs to move beyond simple prevalence studies or descriptive studies on to more complex evaluations on the role and efficacy of management strategies and outcome.

One of the most important issues in forensic psychiatric treatment is crime prevention effectiveness (Belfrage & Douglas, 2002). There have been important developments in terms of the accuracy of assessments of risk for reoffending, and in particular violence among persons with mental disorders (e.g. Douglas, Ogloff, Nicholls, & Grant, 1999; Quinsey, Harris, Rice & Cormier, 1998; Steadman et al., 2000). Risk prediction is a core task for most forensic professions (Hickey, 2005). In particular, estimating an individual‘s level of future risk for violence is important because this causes the greatest public concern. Risk assessments are therefore routinely required when considering the release of mentally disordered offenders from secure services (Douglas, et al., 1999; Fujii, Tokioka, Lichton, & Hishinuma, 2005).

There has been a shift in focus in risk assessment from questions of violence prediction to violence prevention (Belfrage & Douglas, 2002). With regards to risk management one accurate way of measuring changing violence risk is the HCR-20 violence risk assessment scheme (Webster, Douglas, Eaves, & Hart, 1997). The HCR-20 lends itself to use within the emerging management/prevention model of risk assessment because of its inclusion of dynamic risk factors that can serve as intervention targets (Belfrage & Douglas, 2002) to help reduce an individual‘s future risk of reoffending. Whether there

has been a change in some of the important risk factors among service-users prior to their release and whether risk factors are still under control whilst they are being supervised in the community is then questioned (Belfrage & Douglas, 2002).

In addition to assessing and managing risk to reduce recidivism as an effective evaluation of secure services, another factor important for evaluation is QoL. It is regarded by both governmental agencies and healthcare professionals as one of the key outcomes to measure satisfaction with services (Walker & Gudjonsson, 2000). Assessing forensic in-patient quality of care in secure units has largely been ignored (Morrison, Burnard & Philips, 1996). However, QoL in mental health care can be used as part of evaluation of treatment outcome, in the identification of high risk populations, in policy making and in guiding specific areas of improvement of care (Basu, 2004).

Overall aims of the thesis

There has been extensive research on service-users admitted to and discharged from Specialist Hospitals (e.g., Bailey & MacCulloch, 1992a; 1992b; Buchanan, 1998; Buchanan, Taylor & Gunn, 2004; Cope & Ward, 1993; Jamieson & Taylor, 2004; Quinn & Ward, 2000). In contrast, little attention has been given to the direct study of service-users (with either a mental health diagnosis or a diagnosis of ID) in medium security (Vaughan & Done, 2000) with regards to risk assessment and outcomes, and evaluating services for this population. In particular the evidence base for forensic ID practice remains sparse (Yacoub et al., 2008) in comparison to the mental health literature. The aim of this thesis is to bridge these gaps in the research evidence.

Chapter 2 presents a systematic review to provide some understanding of the outcomes associated with mentally disordered offenders who have been discharged from medium secure settings in the United Kingdom. It discusses different risk factors that impact upon reoffending and readmissions to hospital that can then be considered for future risk management strategies for these individuals. The review provided some indication of the extent and usefulness of medium secure units in the rehabilitation process of these offenders. It identified possible risk factors that could be targeted to reduce the risk of reoffending and highlighted the lack of ID research compared to the mental health speciality. The review also highlighted that other areas of evaluation, such as QoL and satisfaction with services were less commonly assessed.

Chapter 3 attempts to address some of the issues highlighted by the systematic review. Previous research on offenders with an ID has mainly concentrated on pathways to offending, prevalence studies, characteristics, treatment and psychometric assessment rather than reoffending (e.g., Lindsay et al., 2010; Søndenaa, Rasmussen & Nøttestad, 2008). More recently there has been an increase in service outcome research but these have used different methodologies and outcome measures (Chaplin, 2006), limiting the validity and reliability of the research. There is a need for more research of outcomes in medium secure units for people with an ID and no studies to date have investigated whether a service-user‘s perception of QoL within a unit has an association with reoffending after discharge. The research study described in Chapter 3 explored this by sampling service-users with an ID who have been an inpatient at one of two NHS medium secure units. The findings of the research suggested recommendations for future risk management as well as highlighting important aspects of medium secure care which

service-users have found beneficial for their progress. One of the recommendations of the research was to investigate HCR-20 scores upon discharge to explore its predictive ability and its ability to reflect measurement of risk prevention as a result of the service provided by the medium secure unit. This was not explored in the research due to the data being unavailable. It is recommended by the research presented in the thesis as well as in the past research that the HCR-20 should be considered as a useful outcome measure for mentally disordered offenders discharged from services (e.g., Chambers et al., 2009). There needs to be further justification for this claim and this is presented in Chapters 4 and 5 where the focus is on the assessment of mentally disordered offenders detained in medium secure services.

Chapter 4 aimed to present the strengths and weaknesses of the HCR-20 as a risk assessment tool, with regards to its use in forensic settings with mentally disordered offenders and its ability to predict and prevent future violent behaviour. The risk assessment was critically evaluated based on its psychometric properties, including its construction, validity and reliability. Chapter 5 is a case study of a mentally disordered offender, called John[1], who was detained in a medium secure unit. The aim of the case study was to provide an insight into the services in place to prepare an individual for discharge and to prevent reoffending. John was convicted of manslaughter with diminished responsibility and the focus of the psychological work was to conduct a comprehensive risk assessment of future violent re-offending (the HCR-20) with a particular emphasis on the impact of his mental illness on his level of risk. The critique of the HCR-20 in Chapter 4 highlighted that the HCR-20 was an appropriate risk

[1] ‚John' has been used as a pseudonym to protect the anonymity of the service-user.

assessment to use with John. The HCR-20 identified factors associated for reoffending and these risk factors were targeted in psychological intervention work with John, including self-esteem and assertiveness work and a relapse prevention plan. The aim of this work was to reduce his risk of future relapse and violence. The HCR-20 therefore informed a risk management plan to prevent John from reoffending after discharge into lower secure settings or the community.

Chapter 6 concludes the thesis by presenting a discussion of the findings and their usefulness in terms of the assessment of risk in practice, and the importance of having an understanding of factors associated with reoffending after discharge from medium secure services. This is so improvements can be recommended for the risk management and service delivery for this population. The direction of future research is also suggested. In summary, each chapter has been carefully selected in order to contribute to the aim of this thesis: to assess risk (Chapter 4 and 5) and outcomes (Chapter 2, 3, and 4) in mentally disordered offenders detained in intellectual disability and mental health medium secure units in the United Kingdom.

CHAPTER TWO

OUTCOMES OF OFFENDERS WITH A MENTAL DISORDER DISCHARGED FROM MEDIUM SECURE UNITS IN THE UNITED KINGDOM: A SYSTEMATIC REVIEW

ABSTRACT

Aim: To systematically review the research base to investigate risk factors associated with outcomes (i.e., reoffending and readmission rates) in offenders with a mental disorder who have been discharged from medium security in the United Kingdom.

Method: Scoping methods were employed to assess the need for the current review. A literature review was carried out following a systematic method of cohort studies. Inclusion/exclusion criteria and quality assessment methods were employed. Data was extracted and synthesised from included studies using a qualitative approach.

Results: Fourteen studies were included in the review that met the inclusion criteria and were assessed to be of good quality. Reconviction rates varied from 5% to 67%. Studies reported that a younger age, a diagnosis of personality disorder, previous offending, shorter length of admission, and substance misuse increased the risk of reoffending in this population. Contradictions to these results are discussed.

Conclusions: The findings suggested implications for service development and future risk management of this group of service-users. However, the findings should be interpreted with caution due to methodological limitations and the heterogeneity of the included studies. The review highlighted areas for future research.

Keywords: Medium secure units; mental disorder; psychiatric; intellectual disability; discharge; service-users; recidivism; reoffending; readmission.

BACKGROUND

The aims and objectives of secure services

The Bradley Report (2009) states that those with a mental disorder should be diverted away from the prison service to specialist health services. The reasons for this being that prisons exacerbate problems, for example increased mental illness and vulnerabilities. Those with an ID particularly find it difficult to cope with the demands of prison. The Bradley Report (2009) emphasises the need to improve secure services for this population.

High secure care in the United Kingdom is provided by the Specialist Hospitals of Broadmoor, Ashworth and Rampton. The Butler Report (1975) saw the need for medium secure forensic units to assist the rehabilitation of existing service-users from the Special Hospitals and to prevent _inappropriate' referrals to the Special Hospitals. Consequently regional medium secure units were developed initially as interim secure units and later as regional secure units (RSUs). There has been extensive research on the service-users admitted to and discharged from Specialist Hospitals (e.g., Bailey & MacCulloch, 1992a; 1992b; Buchanan, 1998; Buchanan et al., 2004; Cope & Ward, 1993; Jamieson & Taylor, 2004; Quinn & Ward, 2000). In contrast little attention has been given to the direct study of service-users in medium security (Vaughan & Done, 2000).

MacCulloch and Bailey (1991) suggested that the criterion of _failure' for secure services is that of conviction of a criminal offence. Additionally a major public concern is

whether these service-users reoffend after they are discharged back into the community. Therefore the aim for secure services is to reduce reoffending rates and thereby increase protection of the public (Buchanan, 1998). Holland et al. (2002) also stated that there is a need for more complex evaluations on the role and efficacy of outcome for these services. Similarly Fernando and Sockalingum (2001) argue that a medium secure service cannot be improved until there is further understanding of what factors increase the risk of reoffending in this population.

The Current Review

The current review attempted to provide some understanding of the outcomes associated with service-users who had been discharged from medium secure settings in the United Kingdom. It discussed impacts on prognosis, (i.e., reoffending and readmissions to hospital of offenders with a mental disorder) and highlighted the importance of addressing outcome because it will provide a performance indicator for these services as well as highlighting what factors are associated with increased risk of reoffending. These factors can then be considered for future risk management.

The inclusion/exclusion criteria defined allows for investigation of outcomes for those service-users discharged from medium secure services in the United Kingdom. Units were restricted to the United Kingdom to allow for more accurate comparisons across studies. Cohorts of service-users discharged after 1990 were included in the review. This was so the most reliable and valid conclusions could be drawn, as service-users discharged pre 1990s were more likely to have received variances in the service they

received (due to the introduction of the Reed Report in 1992). However, if the cohort included discharges of service-users pre and post 1990s then the study was included.

Existing Reviews

Preliminary searches for existing systematic reviews were conducted in the Cochrane Library, PsycINFO, MEDLINE, EMBASE, British Nursing Index, Web of Science, and Google Scholar. Reviews appeared to be very limited in this area and majority were narrative rather than systematic reviews. Seven reviews were deemed relevant to discuss.

Robertson (1989) reviewed follow-up studies of high secure hospitals. The selection of studies for review was quite biased as only four studies of Broadmoor service-users were included. Service-users were followed-up during 1960 to 1977, reflecting out of date results due to different services, policies and practices. The studies found that factors associated with reconviction after discharge was previous psychiatric and offending history, psychopathic disorder, and age at first conviction.

Exworthy (2000) completed a more recent literature review but he only reviewed the past year‘s literature, again producing biases in the selection of data. It looked at processes of admission, discharge, and longer-term outcomes across high, medium, and low secure psychiatric services. He concluded that there had been a progressive rise in admissions to medium security which may have been due to readmissions (Coid & Kahtan, 2000). The review reported on one outcome study for service-users in medium security, making it very restricted in terms of how it can be generalised to the population. The study

(Maden, Rutter, McClintock, Friendship, & Gunn, 1999a) showed a 24% reconviction rate and highlighted that factors such as longer stay in hospital during the original admission and service-users discharged subject to restrictions were at less risk of reoffending. The review comments that these results were similar to those reported for service-users discharged from high security.

One systematic review conducted by Simpson and Hogg (2001a; 2001b) focused on issues of offending by people with an ID. Their first paper reviewed literature on patterns of offending and the second paper looked at factors that predispose offenders to offending. They identified 15 papers and concluded that there was no convincing evidence that the prevalence of offending among people with an ID was higher than the wider population with the exception of sexual offences and arson. Murder and armed robbery were underrepresented. In their second paper the authors concluded that age and gender were the most highly correlated predisposing factors. Limitations were that studies had a wide variation in the definition of offence types and inconsistencies in what ID was and how it was assessed. The review also did not address outcome.

Barron, Hassiotis and Banes (2002) reviewed literature relating to issues in the identification and disposal of offenders with ID and the outcomes associated with a range of treatment models. This was not a systematic review but the authors did describe their search strategy (i.e., used electronic databases, hand-searched relevant journals, and contacted researchers about unpublished papers). They reviewed 12 studies (nine from community settings; three from secure settings), which had information on the

interventions employed and recidivism. The studies reported reconviction rates of 0% to 72% (community settings) and 35% to 85% (secure settings). They suggested that those who had been in secure settings with structured treatment plans, allocated keyworkers and out-patient follow-up were more likely to be managed satisfactory in the community. A weakness of the review was that the included studies came from a range of countries thereby increasing variation in services provided, making comparative analyses difficult. Also some of the studies looked at specific offender groups (e.g., sex offenders) again making comparisons difficult. No methodological limitations were acknowledged by the authors.

Lindsay (2002) conducted a narrative review of 11 articles to assess different aspects of ID offenders. The review focused on epidemiology, vulnerability, assessment and treatment, including outcome/recidivism. He found that studies from 1962 to 1990 reported reconviction rates of 39% to 72% with follow-up periods from one to 20 years. It was unclear from the review in what settings the studies were conducted (i.e., secure or community settings) and the author did not address any limitations of the studies. The review was very broad with very little focus on outcome and factors associated with outcome. Additionally studies from different countries were included making comparisons difficult.

The most recent review to date is a systematic review conducted by McMurran and Theodosi (2007). The focus was on the increasing evidence that offenders who do not complete treatment are at greater risk of recidivism than those who do complete

treatment. They focused solely on cognitive-behavioural interventions as they argued that evidence suggests that this type of intervention is most effective in reducing recidivism. They identified 16 relevant studies describing 17 samples from both community and institutionalised settings (all prison studies except one secure hospital). The mean effect size (d=-0.16) of differences in reoffending suggest that failing to complete treatment is associated with elevated levels of reoffending, with this effect being more pronounced in community samples (d = -0.23) than institutional samples (d= -0.15). Methodological limitations within the review included poor risk comparability between samples and heterogeneity of non-completers, as well as including samples from different settings and countries.

The existing reviews provide valuable information about the service-users, admissions and practices in secure services as well as the recent review (McMurran & Theodosi, 2007) providing some evidence that a factor associated with re-offending could be whether treatment is completed. Outcomes are discussed briefly in some of the narrative reviews but the reviews included studies that looked at cohorts of service-users discharged as early as 1969. There is not a systematic review to date that focuses directly on outcomes in secure services and in particularly medium secure services. A recent review of the literature would be useful to evaluate current practices in the United Kingdom. It is apparent from scoping searches employed prior to initiating the current review that there have been further publications of outcome research in secure services. Therefore there is a need to explore outcomes and what factors are associated with an increased risk of a poorer outcome. Additionally there has been no review that has

combined research on psychiatric and ID secure services, which would provide valuable insight into outcomes for all medium secure services in terms of their usefulness in the rehabilitation of mentally disordered offenders. The current review therefore is considered to be a valuable addition to the literature in this area.

AIMS AND OBJECTIVES

The aims of the systematic review were to identify all cohort studies in the United Kingdom which investigated outcomes of discharged service-users from medium secure services after 1990.

The objectives of this review were:

1. To determine the rates of readmissions, reoffending, and offending-type behaviours[2] after discharge from medium secure units.
2. To identify factors associated with outcome
3. To explore any differences between the cohorts (i.e., between psychiatric service-users and service-users with an ID).
4. To make suggestions based on the research, such as for service development and future risk management of these service-users.

[2] Offending-type behaviour is defined as theft, assault, sexual assault, etc., which did not lead to any contact with the Police or a conviction

METHOD

Sources of Literature

The initial search of electronic databases was conducted to identify research papers. The databases included PsycINFO (1985 to April 2008, completed on 15th April 2008, including Journals@Ovid Full Text), EMBASE (1980 to 2008, completed on 15th April 2008), Ovid MEDLINE (R) (1988 to April 2008, completed on 15th April 2008), British Nursing Index Archive (1985 to April 2008, completed on 15th April 2008), and Web of Knowledge (all years, completed on 15th April 2008). A search of the gateway Cochrane Library and of the database Google Scholar was also employed (all years, completed on 12th and 14th April 2008). The reference list of the reviews that discussed outcomes of mentally disordered offenders were hand searched for studies matching the current inclusion criteria. Key journals including Journal of Applied Research in Intellectual Disabilities, Journal of Intellectual Disability Research, Journal of Forensic Psychiatry, The British Journal of Forensic Practice, and the British Journal of Psychiatry were also hand searched for further relevant studies (all years, completed on 22nd and 30th April 2008). In addition to the above, the authors of identified papers and experts in the field were contacted via email (on 5th May 2008) and asked to identify any further references. Five authors were contacted, two replied and the other three did not respond. All searches were repeated on the 8th September 2010 to identify any further publications since the initial search was conducted.

Search Strategy and Search Terms

The databases were accessed electronically which placed limitation on the search strategy. The search was restricted to English-language publications due to the nature of the review and since time and resources did not allow for translation. Non-research-based publications (e.g., editorials and comments papers) were excluded from the search, but many were reviewed for background information and as sources of further references. The review was restricted to primary studies of research findings since no systematic review currently existed in the area, and where a review paper did include potentially useful data the original source was obtained. A standardised search was applied to all electronic databases; however the relevant search tools were applied for each database leading to slight variation. Relevant searches and references were saved using Reference Manager (see Appendix 1 for syntax).

The following terms were entered in the search. Keywords rather than mapping to subject was utilised in order to reduce the number of studies that may be lost due to incorrect coding. Although this increased the number of hits and duplicates, it increased the likelihood of identifying all relevant papers and accounted for consistency across databases.

Search Strategy One: Intellectual Disability Research

(Learning Disab*) OR (Learning Difficult*) OR (Development* Disab*) OR (Intellectual Disab*) OR (Mental* Retard*) OR (Mental* Handicap*)

AND

(Recidiv*) OR (Reoffend*) OR (Re-arrest) OR (Follow-up)

AND

(Secure Service) OR (Secure Unit) OR (Secure Hospital) OR (Secure Setting)

Search Strategy Two: Mental Health Research

(Mental Health) OR (Psychiatric) OR (Mental* Disorder*) OR (Mental* Ill*)

AND

(Recidiv*) OR (Reoffend*) OR (Re-arrest) OR (Follow-up)

AND

(Secure Service) OR (Secure Unit) OR (Secure Hospital) OR (Secure Setting)

Study Selection

Prior to the application of the formal test of inclusion, the identified papers were manually sorted to eliminate the more obviously irrelevant studies, as judged from the title or abstract. The studies still included in the search were then subject to

inclusion/exclusion criteria that were developed based on the review of the literature and from the initial scoping of searches. If there was not enough information in the abstracts of studies to make a decision then the full text articles were accessed to assess whether they fit the criteria. A copy of the inclusion/exclusion criteria can be found in Appendix 2.

Full text of all articles that fit the inclusion criteria was then accessed. A list of the included studies and those that were excluded along with details why they were excluded can be found in Appendix 3. A flow chart of the number of studies at each stage of the selection process can be found in the Results section.

Quality Assessment

The studies that fulfilled the inclusion criteria were assessed for their methodological quality. A scoring system that addressed aspects of study design most important for internal validity was used. This was adapted from other scales for the assessment of cohort studies (CASP, 2004). The key variables assessed were:

1. The aims of the study
2. The study design
3. Sample selection (i.e., whether the cohort was based on a representative sample)
4. Identification and measurement of exposure and outcome
5. Confounding factors

6. The length of follow-up period (i.e., at least 4 years), and attrition rates (i.e., at least 60% of the cohort was followed-up)
7. Whether the results are valid and applicable to the rest of the population, and the degrees of statistical analysis used

A quality assessment form (Appendix 4) was completed for each study where each variable was assessed on a three-point scale (yes (1), can‘t tell (0.5), no (0)) as recommended by CASP (2004). The total quality score was obtained by adding together the scores of each variable and a score was given out of 29 for the study. The total scores ranged from 2 to 27. A ‗quality‘ percentage was then calculated; by first dividing the quality score obtained for the study by the maximum total score (29) and then multiplying this by 100, giving a range of 7% to 93% for the included studies. Studies that did not score a percentage of 60% or over were excluded from the current review (see Appendix 5). This cut-off was selected due to the limitations of cohort studies in regards to their methodology. For example, studies that had lower quality scores were deemed to be relevant and had scored low due to such methodological limitations (e.g., it is difficult to control for confounding variables in cohort designs; limitations of following-up the whole cohort; biases in study results) and therefore it would have been inappropriate to exclude these studies on this basis. Additionally important variables such as population, follow-ups, and outcome measures were met by these studies. Also by including those of lesser quality it allowed for a discussion of a wider range of studies, which had not been done previously. The cut-off may have produced some bias but the conclusions and recommendations of this review were based on those studies assessed of

being good or excellent quality. Furthermore it assured the variables were being assessed correctly and consistently.

Data Extraction

Further relevant data was extracted from each quality assessed study using a predefined pro-forma (Appendix 6) to ensure the same data was extracted. The form allowed for both general information and more specific details of the study to be recorded. Any information that was hard to decipher was recorded as _unknown' or _no information'. In circumstances of more flexible time constraints, the authors of these studies would have been contacted in order to establish the information. However this was not accomplished due to the time frame of the review.

RESULTS

Fourteen studies were included which met both the inclusion/exclusion criteria and were assessed to be of a good quality. Figure 1 shows the process of the study selection which details the number of studies excluded at each stage. The characteristics of the included studies as a result of the quality assessment are collated in Table 1.

Process of Study Selection

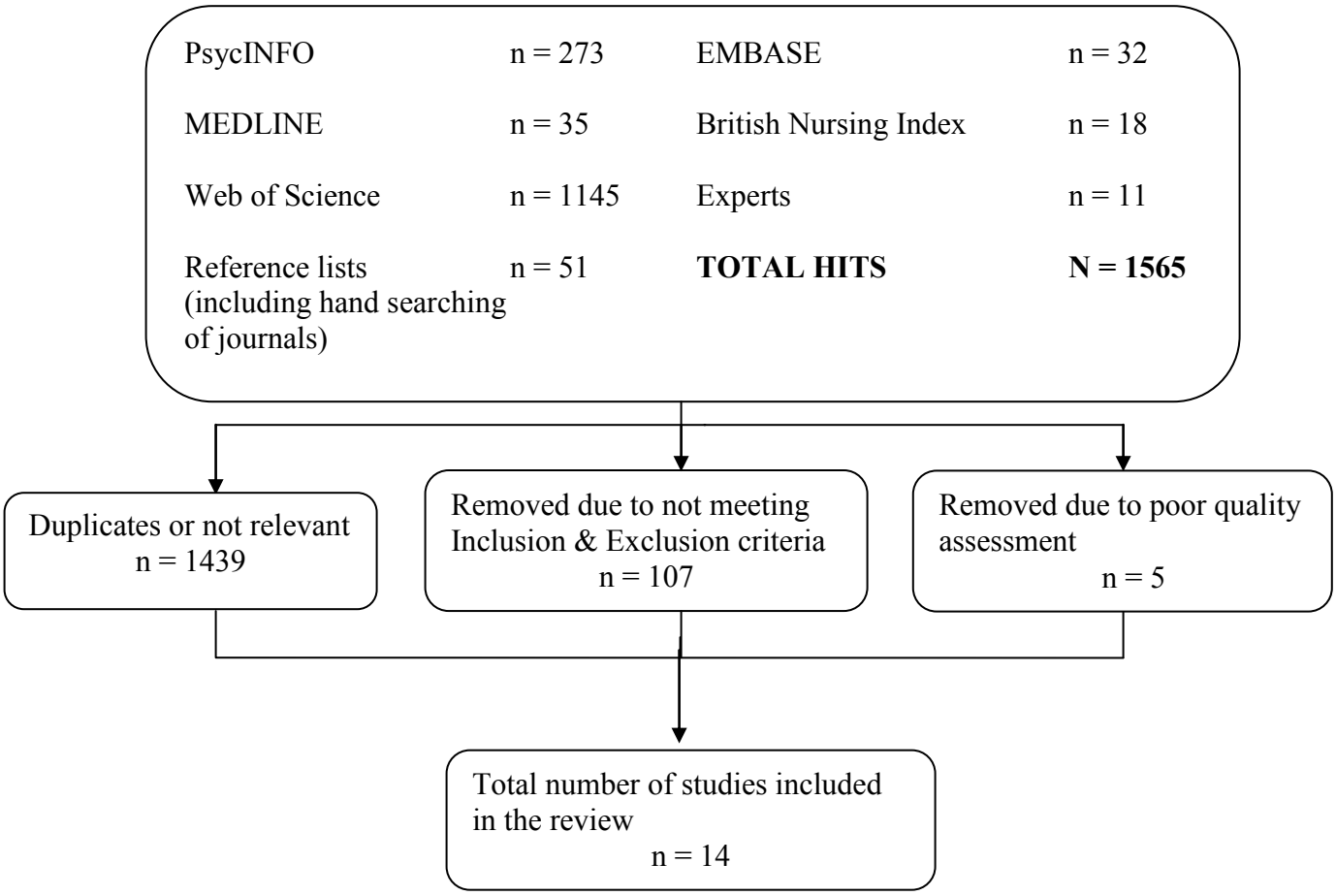

Figure 1: Flowchart

Table 1: Characteristics of Included Cohort Studies

Authors (year)	Aims of Study	Population and Study Design	Secure setting	Follow-up period	Results	Factors Associated with Outcomes
Alexander et al. (2006)	To explore outcomes in two cohorts. First cohort (Halstead et al, 2001) was assessed for longer-term outcome.	First cohort (n=34) were discharged between September 1987 and December 1993 (81% were men) Second cohort (n=40) were discharged between January 1994 and December 2000 (73% were men). Retrospective.	Eric Shepherd medium secure unit (MSU).	1-13 years for total sample.	Re-offending:19 had contact with police, 7 cautions, and 7 reconvictions. 38 service-users displayed offending like behaviours – 37% reported relapses and 30% had re-admissions. No differences in re-offending or offending like behaviours between the two cohorts.	Those who were aged 27 or less, had a forensic history of theft and burglary, and a diagnosis of personality disorder were more likely to gain a conviction. Those with a diagnosis of schizophrenia were less likely to gain a conviction.
Baxter et al. (1999)	To measure violent reoffending/ reconviction.	63 service-users with schizophrenia (75% were men) as diagnosed by the DSM-III-R. Discharged before 1st January 1994. Retrospective.	Bracton clinic MSU.	0.3-8.75 years (mean 3.9 years).	89% required a re-admission; 67% violently reoffended; 30% received 32 disposals by the courts.	Predictors of reconviction: conduct disorder, young age, polydrug abuse, alcohol problems, and absence of restriction order. Predictors of all reoffending behaviour: absence of restriction order, conduct disorder, no neuroleptics on discharge, and alcohol.

Castro et al. (2002)	Examines the effects of socio-demographic, behavioural and treatment variables on discharge.	166 service-users (81.9% were men) who were admitted between 1995 and 1998. Retrospective.	Mental health MSU.	6-15 months.	13% had reports of further convictions.	Further offending had a correlation with a history of sexual aggressive behaviour. No association with previous convictions. Significant negative correlation between compliance and further convictions and significant negative association between length of time known to institutions and further convictions.
Coid et al. (2007)	Followed-up a large nationally representative sample of discharged service-users to examine incidence of reoffending.	1344 (86.6% were men) mental health service-users who had been admitted between 1989 and 1993. Retrospective.	Medium secure services in 7 of the 14 regional health authorities.	Less than 1 month – 9.9 years (mean 6.2 years).	More than a third of men and nearly 1 in 7 were convicted of a criminal offence; more than 1 in 6 men, but only 1 in 20 women for violence against the person. Incidence rates of subsequent conviction were significantly higher among men for all offence categories except for arson.	Risk factors for a conviction for violent and acquisitive offending were younger age, had a personality disorder, from minority ethnic groups, were younger when first appearing in court and had a higher number of previous convictions for violence. Risk was reduced if they had stayed 2 years or more in a MSU. Risk of sexual offending was increased among younger service-users, with a primary diagnosis of affective disorder and those with comorbid diagnoses of

						sexual deviation.
Davies et al. (2007)	Examined a first admission cohort across a range of outcomes.	595 (mental health) admissions since its opening in July 1983 up to June 2003 (84.4% were men). Retrospective	Arnold Lodge MSU.	Mean 9.4 years Outcome was collected at 2 and 5 years after discharge.	48.7% were reconvicted (85% were in the community). Mean time from discharge to first conviction was 3.2 years; maximum time to conviction after discharge was 16.4 years. At 2 years 28% of service-users had exhibited violent behaviour not resulting in conviction and 42% at 5 years.	Men who were diagnosed with psychopathic disorder were more likely to be convicted of a standard list offence (all other indictable offences that don't carry a maximum life sentence which are tried in either a Crown court or a Magistrate's court). Those with a psychopathic disorder did not have a significant higher rate of reconviction than those with a classification of mental illness.
Edwards et al. (2002)	To describe the outcome following admission.	405 psychiatric service-users who were admitted between October 1983 and October 1996 (85.3%were men). Retrospective.	Three Bridges MSU.	At 2 years and then again at 5 years.	No statistical differences between those who were discharged in less than 2 years and those with longer first admissions. At 2 years 4.8% of service-users in total and 10.4% of those who had spent time in the community had been reconvicted. Between 2 and 5 years, 11% in total and 14.4% of those	At both 2 and 5 years those service-users who were most likely to have reoffended were those with the most previous convictions.

					who had spent time in the community were convicted of further offences.	
Falla et al. (2000)	To collate long-term reconviction data on discharged service-users.	85 psychiatric service-users discharged between 1992 and 1997 (gender composition unknown). Retrospective.	Trevor Gibbens unit – Regional secure unit.	6 years (mean 3 years, 5 months).	7% had been reconvicted of 'serious offences. A 'failure rate' including readmissions would amount to 17%.	Not investigated.
Friendship et al., (1999)	To describe reoffending in all discharged service-users.	234 psychiatric service-users discharged between October 1980 and October 1994 (85% men). Retrospective.	Denis Hill MSU.	6 months to 14 years.	24% were reconvicted. This was an underestimate as there were incidences of violent re-offending in hospital that resulted in neither prosecution nor conviction. A further 10% of the sample had no convictions recorded against them when discharged but almost half of this group exhibited behaviours which could have resulted in conviction.	Relationships with conviction included younger mean age on admission, younger mean age at first conviction, higher mean number of previous offences, and shorter length of admission. There was no apparent association between psychiatric diagnoses and reoffending. The behaviour in the institutions was not reported.
Halstead et al. (2001)	To follow-up of all service-users	35 learning disabled service-users (29 were male) discharged between September 1987 and March 1994. Retrospective.	Eric Shepherd MSU.	Up to 5 years.	Re-offending behaviour: 34% did something that could have been construed as an offence during the follow-up period (only one person was reconvicted) 7 service-	Those who did not reoffend were on average 7 years older on discharge than those who did reoffend. Also those from special hospitals or prison, and those

					users were readmitted.	who were mentally ill or had a lower IQ may do better at follow-up. Those who were younger, more intelligent and psychopathically disordered did not do as well. A good response to inpatient treatment was significantly associated with successful community placement.
Maden et al., (1999a)	Longitudinal study to describe short and long-term outcomes of admissions.	234 psychiatric service-users (85% were men) who were discharged between October 1980 and October 1994. Retrospective.	Denis Hill MSU	6 months to 14 years (mean 6.6 years).	75% were readmitted to a hospital. 24% were reconvicted (4 women – their reconviction rate was 11% compared to 26% for men).	Reconvicted service-users were younger, had more previous convictions and shorter length of admission compared to those who did not reoffend. Service-users subject to a restriction order at discharge had a lower risk of reconviction. No statistical association between reconviction and diagnosis, previous psychiatric treatment, referral source,, violence prior to referral and ethnic origin.
Maden et al.	Follow-up study looking for	234 psychiatric service-users (112 White; 93	Denis Hill MSU.	6 months to 14	Reconviction – 24% were White service-users; 25%	Mean ages on admission – Black service-users were

(1999b)	systematic differences in outcome between White and Black service-users.	Black) discharged between October 1980 and October 1994. Retrospective.		years (mean 6.6 years).	were Black service-users but these differences were not statistically different 71% White and 80% Black service-users were readmitted but not statistically different.	younger on admission and were younger at the time of first recorded criminal offence compared to White service-users. Black service-users also had shorter length of admissions compared to White service-users.
Maden et al. (2004)	Investigated how many service-users offend after discharge.	959 psychiatric service-users (88% were men) who had been discharged between April 1997 and March 1998.	MSUs in England and Wales.	2 years.	15% were reconvicted, including 6% who were convicted of violent offences.	Associations with offending were previous offending, substance misuse and experiencing sexual abuse. Service-users were less likely to be convicted after a lengthy admission or if they had a history of self-harm. Diagnosis and number of previous admissions showed no association.
Maden et al. (2006)	Examines gender differences in reoffending.	959 psychiatric service-users (88% were men) who had been discharged between April 1997 and March 1998. Retrospective.	MSUs in England and Wales.	2 years.	Women were 50% less likely to be reconvicted compared with men. However when variables such as self-harm and number of previous convictions were controlled for the difference in reconviction rates between males and females was reduced. Adjustment for all	Significant independent predictors of reconviction were age, self-harm (higher in women), history of drug problems (higher in men) and number of previous convictions (lower in women).

					variables reduced significantly the gender differences in reconviction.	
McCarthy & Duggan (2010)	Examines psychological functioning and offending outcomes in three different groups of service-users.	100 male personality disordered service-users. 13 current service-users and 6 discharged service-users were excluded from the follow-up due to their ID and/or psychotic illness. Discharge dates unknown. Service-users were classified into one of three groups depending on level of completion and engagement in treatment programme: Completers (N=22), Expelled (N=30), and Non-engaged (N=29)	Medium secure personality disorder unit in Leicester.	5 years	59.67% of the sample re-offended within 5 years of discharge. No significant differences between three different groups in rates of re-offending. However, the authors argue that a 10% reduction in the rate of re-offending in the Completers group was of clinical significance. The mean survival time to first offence was 793 days for the Completers group, 707 days for the Expelled group, and 670 days for the Non-engaged group. There were no significant differences between these survival rates.	Diagnosis of personality disorder (high rate of re-offending), level of completion and engagement in treatment.

Descriptive Data Synthesis

The results of the included studies were not statistically combined in a meta-analysis due to their heterogeneous nature, such as variable follow-up periods and differences in statistical analyses. It has also been argued that meta-analysis of observational epidemiological studies can produce misleading, summary statistics (Egger, Schneider & Davey Smith, 1998). In the absence of meta-analysis, risk factors were identified if they were clearly defined in at least two studies, and the evidence across studies was consistent. Therefore the studies were examined in a qualitative manner in order to reach any conclusions. Due to the nature of the statistical analyses used, the task of calculating effect sizes was not implemented. Collation of data from included studies can be viewed in Table 2.

Table 2: Data from Included Cohort Studies

* CF = confounding factors

Authors (year)	Sample Methods	Measures of Outcome	Statistical Analysis	Attrition Rate	Number of Service-users Followed-up.	*CF	Quality Score (%)
Alexander et al.(2006)	First cohort was that used in Halstead et al (2001). Second cohort identified as those discharged between 1st January 1994 and 31st December 2000. All received at least one year's treatment.	Case notes, Clinical Global Improvement Scale, subjective ratings of progress at the MSU, telephone interviews with health and social professionals.	Odds Ratios	13.5%	Cohort 1 (n=27) Cohort 2 (n=37) Total (n=64)	Yes	69
Baxter et al. (1999)	Fulfilled diagnosis of Schizophrenia according to the DSM-III-R; received antipsychotic medication; discharged to the community direct or via local psychiatric provision; discharged before 1st January 1994.	Home Office criminal records statistics (S1 Division), case/medical notes for clinical data, Camberwell Assessment of Need (CAN, Research version R3.0).	Poisson Regression (or negative binomial as appropriate), Wilcoxon Signed Ranks Test, and Kappa Coefficients.	11%	56	No	67

Castro et al. (2002)	Admitted to a psychiatric MSU between 1995 and 1998.	Multidisciplinary notes, telephone questionnaires, subjective ratings.	Chi Square, and Pearson's Product Moment Correlation Analyses	70%	49	Yes	60
Coid et al. (2007)	Service-users admitted to medium secure forensic psychiatric services in 7 of the 14 regional health authorities between 1989 and 1993. Extra-contractual referrals were included. Service-users were excluded on basis of not entering the community during the follow-up period and due to insufficient information to complete coding schedules or the hospital case files were unavailable.	Medical record files, the Mental Health Unit at the Home Office, the Offenders Index, and the NHS Central Register.	Poisson distribution, Cox Regression Models.	0%	1344	Yes	93
Davies et al. (2007)	All admissions since the opening of the MSU in July 1983 up to 30th June 2003.	Medical/clinical records at MSU, other psychiatric services, the Home Office Mental Health Unit, the Office for National Statistics (ONS), the general	Chi Square analyses	7%	554	Yes	86

		practitioner registrations database, Offenders Index and the Police National Computer (for reconvictions), the electoral roll, and the LexisNexis database of newspaper reports.					
Edwards et al. (2002)	All psychiatric service-users admitted between October 1983 and 31st October 1996.	Unit's computerised case-register, individual medical records, unit's follow-up records, catchment area hospitals, social services, probation, high secure hospitals, prisons, the Home Office Mental Health Unit, and Offenders Index Case records.	Logistic Regression analysis, Mann Whitney U test.	7%	At 2 years n=225 At 5 years n=152	Yes	62
Falla et al. (2000)	All service-users discharged from a RSU between 1992 and 1997.	Criminal records obtained through the police and Home Office Information known by the multidisciplinary team.	None	0%	85	Yes	62

Friendship et al. (1999)	Psychiatric service-users discharged from a MSU between 20th October 1980 and 31st October 1994 following a first admission.	Offenders Index, the MSU case register and medical discharge summary, medical records (case notes), register of restricted service-users, the special hospitals case register, prison service records, and the NHS Central Record.	Mann Whitney U test, Logistic Regression.	11%	209	Yes	81
Halstead et al. (2001)	Learning disabled service-users discharged from a MSU between September 1987 and March 1994 and who had received at least one year's treatment at the MSU.	Case notes, subjective ratings at point of discharge, and interviews with carers.	None.	0%	35	Yes	71
Maden et al. (1999a)	All psychiatric service-users discharged from a MSU whose admission was between October 1980 and October 1994.	Multidisciplinary medical records, medical records at other hospitals, Home Office register of restriction order service-users, Special Hospitals Case Register, Prison Service records, Offenders Index, and NHS Central Record.	Odds Ratio	11%	209	Yes	67

Maden et al. (1999b)	All psychiatric service-users discharged from a MSU whose admission was between October 1980 and October 1994.	Multidisciplinary medical records, medical records at other hospitals, Home Office register of restriction order service-users, Special Hospitals Case Register, Prison Service records, Offenders Index, NHS Central Record, and semi-structured interview with service-users.	Odds ratio	11% (and a further 60% for interview)	209 (but only 84 agreed to the interview)	Yes	83
Maden et al. (2004)	All psychiatric service-users discharged from MSUs in England and Wales between 1st April 1997 and 31st March 1998.	The Offenders Index.	None	0%	959	Yes	72
Maden et al. (2006)	All psychiatric service-users discharged from MSUs in England and Wales between 1st April 1997 and 31st March 1998.	Patient notes, medical records from locations of discharge, and the Offenders Index.	Non-parametric kappa test, Pearson's x^2 test, and Logistic Regression.	0%	959	No	73
McCarthy & Duggan (2010)	The first 100 service-users admitted to the MSU.	Case notes, psychometric assessments (measuring anger, anxiety and	Chi Square, ANOVA, t tests, Kaplan-	63%	Completers (n=15) Expelled	Yes	66

	impulsivity)	Meir survival function.	(n=11) Non-engaged (n=11) Total (n=37)

Study Populations

Overall there was a considerable difference in the number of participants in the cohorts across the 14 studies. This varied from a sample size of 34 to 1344 participants. There were two studies, Halstead, Cahill, Fernando, and Isweran (2001) and Alexander, Crouch, Halstead, and Piachaud (2006) that followed-up male service-users with an ID, although the two studies concentrated on cohorts from one medium secure unit. The cohorts used in the mental health studies included both males and females due to mixed gender units. However, the composition of males appeared to be fairly consistent across studies with a range of 75% to 100% of the sample being males. One study, Falla, Sugarman and Roberts (2000), did not state the gender composition. There were differences between the selections of psychiatric service-users compared to the service-users with an ID. Those with an ID were only included in the cohort if they had received at least one year's treatment at the medium secure unit as the authors thought that a stay of less than one year was less than unlikely to produce significant change in the individual. This exclusion criterion was not applied to the psychiatric service-user cohorts; the authors included all service-users discharged during a defined follow-up period. This may have produced differences in the results between the two populations.

All the studies were investigating outcome in their cohorts of participants and/or factors associated with outcome. Three studies had a slightly different emphasis. Maden, Friendship, McClintock, and Rutter (1999b) explored whether there were differences in reoffending between males and females which was important due to the nature of the cohorts. Not all of the studies that had females in their cohorts acknowledged this in their results and analysed outcome and factors associated with outcome for the whole cohort,

possibly affecting the results (e.g., Friendship, McClintock, Rutter & Maden, 1999; Edwards, Steed & Murray, 2002; Davies, Clarke, Hollin, & Duggan, 2007). Maden et al. (1999b) investigated differences between White and Black psychiatric service-users in outcome after discharge. McCarthy and Duggan (2010) explored whether treatment completion and level of engagement in treatment had an effect on re-offending after discharge. The types of treatments, however, were not stated.

Interestingly Baxter, Rabe-Hesketh and Parrot (1999) explored reoffending in service-users with schizophrenia but did not compare their findings with other groups of service-users, such as personality disorder. This was also true of McCarthy and Duggan (2010) who investigated personality disordered service-users only. This differed from other studies which investigated different groups of psychiatric service-users (Coid, Hickey, Kahtan, Zhang, & Yang, 2007; Friendship et al., 1999; Maden, Scott, Burnett, Lewis, & Skapinakis, 2004).

Overall the majority of studies investigated outcome in service-users discharged from one medium security facility (Alexander et al., 2006; Baxter, et al., 1999; Castro, Cockerton & Birke, 2002; Davies et al., 2007; Edwards, et al., 2002; Falla, et al., 2000; Friendship et al., 1999; Halstead et al., 2001; Maden et al., 1999a; McCarthy & Duggan, 2010), limiting generalisability across studies. Outcomes may have been specific to a particular medium secure unit due to possible differences in treatment provision (Coid et al., 2001). Due to studies failing to describe the services it was not possible to ascertain the QoL service-users had, making comparisons difficult. However there are some studies which looked at more than one service, extending the validity of their results. Coid et al. (2007)

looked at medium secure psychiatric services in seven of the 14 regional health authorities, and two further studies investigated outcome in medium secure units across England and Wales (Maden et al., 2004; Maden et al., 2006). However Table 1 illustrates that these differences in study design did not lead to contradictory findings in terms of what factors were associated with outcome.

Follow-up of Participants

Across studies the follow-up period varied from 0.3 to 14 years. Those studies with a short follow-up period (i.e., less than 4 years) affected the quality assessment score as they were unlikely to show significant outcomes (e.g., Castro et al., 2002; Maden et al., 2002; Maden et al., 2006). The majority of studies used variable follow-up periods due to the nature of the study designs. The point of follow-up was usually the date of the study and therefore service-users within the cohort would have been discharged at different times. This made interpretation of the results difficult due to the variable lengths of time in the community. To overcome some of these difficulties some studies (e.g., Davies et al., 2007; Edwards et al., 2002; McCarthy & Duggan, 2010) had set points of follow-up at two years and then at five years after discharge for all service-users.

Attrition rates were fairly low across studies due to not having to rely on individual service-users‘ consent to be followed-up. Official databases and multidisciplinary notes also allowed for accurate follow-up of the majority of service-users. Loss to follow-up usually included deaths, unable to trace, a specific request by service-users not to be followed up for research purposes, and data being unavailable for some individuals.

Castro et al. (2007) however, had an attrition rate of 70%. This was due to the researchers posting consent to all discharged service-users. It was less likely for individuals to consent to take part in the study. They did not use official databases unlike other studies, such as Coid et al. (2007), Davies et al. (2007), Friendship et al. (1999), Maden et al. (2004), and McCarthy and Duggan (2010).

Outcomes after Discharge from Medium Security

Measures of outcome

Measures of outcome varied across studies, affecting their quality score. The studies have used data from multidisciplinary notes (e.g., Alexander et al., 2006; Coid et al., 2007; Maden et al., 1999a; McCarthy & Duggan, 2010), official databases, such as the Home Office Offenders Index (e.g., Davies et al., 2007., Maden et al., 2004; McCarthy & Duggan, 2010), the Police National Computer (e.g., Davies et al., 2007) and the NHS Central Register (e.g., Coid et al., 2007; Friendship et al., 1999), telephone interviews/questionnaires (e.g., Alexander et al., 2006; Castro et al., 2002; Halstead et al., 2001), information from the multidisciplinary team (e.g., Falla et al., 2000), and interviews with service-users (e.g., Maden et al., 1999b). Some studies were more restrictive than others in their data collection methods (e.g., Alexander et al., 2006; Halstead et al., 2001; Maden et al., 2004), which can lead to loss to follow-up or inaccurate information, introducing unknown biases. Jamieson and Taylor (2002) followed-up high security mental health service-users using multiple records which helped to trace almost everyone 12 years after discharge. This also addressed the limitations of reconviction data. For example, Friendship et al. (1999) argued that offending behaviour can often result in neither prosecutions nor convictions so

reconviction as indicated by official national databases may underestimate the true level of risk posed by service-users after discharge. Also due to a time lag in the criminal justice system between charging and conviction means the Offenders Index is not always up to date. Therefore the following results should be viewed with caution due to the variability in data sources.

Relapses and Readmissions

Seven studies (Alexander et al., 2006; Baxter et al., 1999; Davies et al., 2007; Falla et al., 2000; Halstead et al., 2001; Maden et al., 1999a; Maden et al., 1999b) reported readmission rates of service-users back to the medium secure service after discharge due to relapses in either mental illness or displays of risky behaviours. Rates of readmission varied from 26% to 89% over periods of 0.3 to 14 years with large variability due to differences in the studies. For example, Baxter et al. (1999) reported 89% readmission rate, but their sample was of service-users with a diagnosis of schizophrenia, which limited the extent to which this can be compared to all service-users without schizophrenia (that had been included in samples of the other studies). The lowest readmission rate was 26% (Davies et al., 2007) at five years after discharge. Compared to other studies Davies et al. (2007) had the shortest follow-up period. Similarly Alexander et al. (2006) reported a 30% readmission rate but in comparison their sample was very small (*N*=64) and this was an ID sample. There may be differences between this population and psychiatric service-users in regards to readmissions due to the diagnosis of ID. It was difficult to decipher the true readmission rate in Falla et al.'s (2000) study as they had included reconvictions in their 'failure rate' of 17%. Maden et al. (1999) looked at differences between White and Black service-users in readmission

rates but no statistical differences were found (71% of those readmitted were White service-users and 80% were Black service-users).

Reoffending

Rates of reoffending were difficult to compare across the 14 studies due to differences in definitions, data sources, and follow-up periods. Additionally, studies did not account for any service-users who may have spent further time in hospitals during the follow-up period; it is assumed that they reoffended in the community after the original discharge. If this was the case for some service-users the opportunities to reoffend would have been reduced. There were also differences between studies in regards to definitions of reoffending and reconviction data (e.g., Alexander et al., 2006; Davies et al., 2007).

Over a period of 0.3 to 14 years there were reoffending rates of 5% to 67% (11% for service-users with an ID; Alexander et al., 2006). Davies et al. (2007) found that the mean time from discharge to first conviction was 3.2 years. In comparison McCarthy and Duggan (2010) found a range of 1.84 years to 2.17 years (depending on the group of service-users with regards to treatment completion and engagement) from date of discharge to first reconviction. The reduced length of time in this study compared to Davies et al. (2007) may be due to differences in the population studied as McCarthy and Duggan (2010) followed up personality disordered service-users only, which could mean differences in the characteristics of personality disordered service-users compared to other service-users (McCarthy & Duggan, 2010).

Those studies that recognised differences between men and women found that generally convictions were higher in men for all offence categories except arson (Coid et al., 2007). Additionally, Maden et al. (1999a) reported a reoffending rate of 11% in women and 26% in men. However Maden et al. (2006) who found that women were half as likely to be reconvicted (OR 0.49, 95% CI 0.25-0.98), found that the gender differences in reconviction were significantly reduced when adjustments were made for variables such as self-harm and number of previous convictions (OR 0.97, 95% CI 0.45-2.12). In regards to differences between Black and White service-users there were no statistical differences found between them (Maden et al., 1999a).

Offending-like behaviours

Mental health and ID services do not always report reoffending-type behaviours to the police as they believe they can deal with these incidences within the service (Simpson & Hogg, 1999a). Therefore reoffending data can be an underestimate, so it is important to record offending-like behaviours which have not gone through the criminal justice system to explore the true risk of service-users after discharge (Friendship et al., 1999). Only four studies (Alexander et al., 2006; Davies et al., 2007; Friendship et al., 1999; Halstead et al., 2001) have reported on this, which showed 3% to 28% of service-users displaying offending-like behaviours in mental health samples. In regards to service-users with an ID, Alexander et al. (2006) found that 59% of service-users displayed offending-like behaviours.

Factors Associated with Outcomes

All 14 studies looked for variables that correlated with outcome except Falla et al. (2000), reflecting its quality score of 62%.

Age

A number of studies found that younger age was associated with an increased risk of reoffending (e.g. OR 3.31, 95% CI 1.28-8.57, $p = 0.01$; Baxter et al., 1999). In regards to psychiatric service-users, Maden et al. (1999a) found that mean age at admission was 29 years in those reconvicted compared to 35 years in those who were not reconvicted (95% CI 2.96-8.13). Additionally Friendship et al. (1999) found that age at first admission was a predictor factor for recidivism ($p<0.02$). A similar pattern was found for service-users with an ID. Halstead et al. (2001) found that those who reoffended were on average seven years older than those who did not reoffend (statistical analysis could not be completed due to a small sample size) and similarly Alexander et al. (2006) found that those who reoffended were aged 27 or less compared to those who did not reoffend.

Diagnoses

Coid et al. (2007) found that having a diagnosis of personality disorder increased risk of recidivism for violent and acquisitive offending (OR 2.4, 95% CI 1.6-3.6 and OR 2.4, 95% CI 1.7-3.5 respectively) and that having a psychopathic disorder increased the likelihood of being convicted of a standard list offence anytime after discharge ($X^2 = 4.5$, $d.f. = 1$, $p = 0.034$; Davies et al., 2007). Additionally McCarthy and Duggan (2010) found a high reconviction rate of 57%, higher than those found by Coid et al. (2007) and Davies et al. (2007). McCarthy and Duggan (2010) argue that their higher reconviction

rate is in line with the other studies as all service-users in their sample had a diagnosis of personality disorder, putting them at higher risk for re offending.

Similarly for service-users with an ID, Alexander et al. (2006) also found that those with a diagnosis of personality disorder were nine times more likely to reoffend (OR 9, 95% CI 1.6-54) and those with a diagnosis of schizophrenia were four times less likely to reoffend (OR 0.255, 95% CI 0.073-0.889). Halstead et al. (2001) also found that those who had a mental illness did better at follow-up. This contrasted to Baxter et al. (1999) who reported a 67% reconviction rate in service-users with schizophrenia. Additionally some studies found that there was no apparent relationship between psychiatric diagnoses and reoffending (Friendship et al., 1999; Maden et al., 1999a; Maden et al., 2004) and no studies reported on comorbidity. The studies that found no relationship between psychiatric diagnoses and reoffending used the same cohort of service-users (e.g., Friendship et al., 1999; Maden et al., 1999a). However, the national study (Maden et al., 2004) also showed no relationship between diagnoses and reoffending but the authors only used the Offenders Index for data (which has many limitations as previously discussed).

Previous offending history

A number of studies show an association between a higher number of previous offences and risk of reoffending. For example, Friendship et al. (1999) found that the mean number of previous offences was 13 in those that reoffended and six in those that did not reoffend (95% CI for the difference between means 5-10). Also this was a predictor factor for risk of reoffending ($p<0.03$). Similarly Edwards et al. (2002) found that

service-users who reoffended had more previous convictions at both two years and five years after discharge (Mann Whitney z = -2.466, p<0.014 and Mann Whitney z = -2.974, p<0.003 respectively). Additionally Alexander et al. (2006) found that a forensic history of theft and burglary increased the risk of gaining a conviction by 14 times in those service-users with an ID (OR 14, 95% CI 1.6-126). Two studies (Castro et al., 2002; Maden et al., 2004) stated that they did not find an association between the number of previous convictions and reoffending. This may have been due to sources of outcome data (e.g., multidisciplinary notes and the Offenders Index both contain inaccuracies) and short follow-up periods (which would have affected the likelihood of reoffending). Additionally only 49 out of 166 service-users consented to take part in one study (Castro et al., 2002) and these service-users may have had particular characteristics. Literature has suggested that men are more unlikely to participate than women and that the response rate is also lowest for both youngest and oldest members of the population (e.g., Radler & Ryff, 2010). Additionally Streib (1966) found that people were less likely to participate in research if they had a lack of interest.

Length of admission at the medium secure unit

Four studies (Coid et al., 2007; Friendship et al., 1999; Maden et al., 1999a; Maden et al., 2004) reported that a longer length of admission was associated with a reduced risk of recidivism. In particular Coid et al. (2007) said that risk of violent reoffending was reduced if service-users stayed two years or more in the medium secure unit (OR 0.10, 95% CI 0.01-0.73). Additionally Friendship et al. (1999) found that this was a risk predictor for recidivism (p<0.001), that is a longer length of admission reduced the likelihood of recidivism.

Substance Misuse

Three studies (Baxter et al., 1999; Maden et al., 2004; Maden et al., 2006) found that risk of reoffending was associated with a history of substance misuse (OR 3.0, 95% CI 1.09-8.3, $p = 0.04$; OR 2.20, 95% CI 1.27-3.81; $p<0.01$ respectively).

Other risk factors were identified but only one study reported such findings. These included conduct disorder, compliance in institutions, diagnosis of affective disorder, response to inpatient treatment, and a history of sexual abuse (see Table 1).

DISCUSSION

Main Findings

Fourteen studies were discussed in this systematic review. The objectives of this review were:

1. To determine the rates of readmissions, reoffending, and offending-type behaviours after discharge from medium secure units.

The systematic review found that rates of reoffending after discharge from medium security varied from 5% to 67% over a period of 0.3 to 14 years. Only seven studies reported readmission rates (Alexander et al., 2006; Baxter et al., 1999; Davies et al., 2007; Falla et al., 2000; Halstead et al., 2001; Maden et al., 1999a; Maden et al., 1999b)

and these varied from 26% to 89% over periods of 0.3 to 14 years. Despite the importance of considering incidences of where service-users have displayed offending-like behaviours (Simpson & Hogg, 1999a) only four of the studies (Alexander et al., 2006; Davies et al., 2007; Friendship et al., 1999; Halstead et al., 2001) recorded this. In psychiatric samples this varied from 3% to 28% and in cohorts with an ID this varied between 34% and 59%.

2. To identify factors associated with outcome.

The studies in the systematic review identified a number of different risk factors that increased the likelihood of reoffending after discharge. These included a younger age (Alexander et al., 2006; Baxter et al., 1999; Halstead et al., 2001) and more specifically a younger age at first admission (Friendship et al., 1999; Maden et al., 1999a); a diagnosis of personality disorder/psychopathic disorder (Alexander et al., 2006; Coid et al., 2007; Davies et al., 2007; McCarthy & Duggan, 2010); previous offending history (Alexander et al., 2006; Edwards et al., 2002; Friendship et al., 1999); a shorter length of admission (Coid et al., 2007; Friendship et al., 1999; Maden et al., 1999a; Maden et al., 2004); and a history of substance misuse (Baxter et al., 1999; Maden et al., 2004; Maden et al., 2006) . Other factors were noted but these were not consistently found across the studies.

3. To explore any differences between the cohorts (i.e., between psychiatric service-users and service-users with an ID).

There were some consistencies between psychiatric and ID cohorts in regards to outcomes and factors associated with outcome. However comparisons were not possible due to the cohorts with an ID not being very representative of the population. There were only two studies (Alexander et al., 2006; Halstead et al., 2001) identified in the systematic review and they both looked at outcome in service-users with an ID discharged from the same medium secure unit, making their sample size very small. Additionally the measures of outcome used were not very robust as they relied on subjective views of carers and case notes, which can contain errors, although official databases also have their own errors (Friendship et al., 1999). This may explain the substantial difference in incidences of offending- like behaviours between psychiatric and ID service-users, especially as these behaviours would not have been captured by the official databases which have been used more frequently in the mental health literature. But the number of reconvictions would have been more reliably recorded in the official databases compared to collecting this information from carers.

Strengths and Weaknesses with the Literature

There were a number of difficulties which made a fully rigorous systematic review impossible. There were differences in definitions of outcomes such as reoffending, reconvictions, readmissions, relapses and re-arrests which raised questions as to whether the outcomes measured across studies were truly equivalent. There were also large degrees of variation in how offence types were defined and grouped, making comparisons and interpretations problematic.

Throughout the studies variations in quality, study populations, methodology, and lack of comparable data meant no meaningful meta-analysis could be carried out (Egger et al., 1998). This limits the extent to which robust conclusions can be drawn. Additionally due to the variations in statistical analyses between studies, effect sizes were not calculated to enable comparisons and to provide an indication of the efficacy of secure services on outcome in offenders with a mental disorder.

The selection of studies included in the review was chosen after meeting specific inclusion criteria. Therefore not all studies from the searches were included creating some bias. Restricting the criteria meant that a full appreciation of the outcomes could not be acknowledged due to all studies not being included. However, within the included studies differences in outcome could be explored to find out whether services do have a positive impact on the rehabilitation of mentally disordered offenders. This was the first review that focused on United Kingdom services for mentally disordered offenders, which enabled more accurate comparisons across the same service framework.

The studies were also subjected to a quality assessment to ensure they were of high quality. Due to the design of the studies which had many methodological limitations the quality cut-off score had to be reduced to 60% or there would not have been a sufficient number of studies included to discuss. Therefore the methodologies of the studies do have a number of limitations which shed caution over the results presented in the review. Additionally to reduce biases in the study selection, an inter-rater reliability score could not be achieved due to constraints of time and resources.

As with any systematic review there is the possibility of publication bias. This is when studies with positive results are more likely to be published. Due to the tight time frame in which the review had to be completed, attempts to reduce this bias by contacting researchers in the field to obtain unpublished research, could not be carried out.
A strength of the systematic approach compared to narrative reviews is that the reader can be clear on what basis the studies have been selected. The systematic review is also less prone to other forms of bias, introduced by too much weight being given to the findings of studies which are flawed or weaker in design (Hindly, Ramchandani & Jones, 2006), for example, with regards to this review the quality of the design not being lower than 60%.

There are difficulties in comparing these results to those of other reviews due to their different emphasis and focus. Those reviews which have documented outcomes have not been conducted systematically so they are therefore more open to bias and interpretation. There appears to be some similarities between the findings of the current review and that of Robertson (1989) who also concluded that reconviction after discharge was associated with previous offending history, a diagnosis of psychopathic disorder and age at first conviction. Reconviction rates of service-users with an ID in previous reviews (Barron et al., 2002; Lindsay, 2002) appear to be much higher than those found in this review. However, these reviews included studies from different countries and those discharged before 1990, possibly reflecting different service frameworks and different quality of services. It is promising that the results in the current review may indicate an improvement in outcomes; however it should be noted that the evidence presented for service-users with an ID is very limited.

Interpretation of the Findings

The statistical findings reported in the systematic review must be noted alongside a number of methodological limitations in the studies. These include small sample sizes; retrospective designs, in which some studies lacked important information about the conduct of the research; cohort designs, which is a convenient sampling method (i.e., samples are opportunistic, introducing biases); and differences in outcome measures and data sources. These variations are likely to account for some of the contradictory results found on risk factors associated with outcome, making the clinical significance of these findings difficult to entangle and interpret.

Jamieson and Taylor (2004) highlight a number of limitations associated with reconviction studies, such as the disregard of clinical issues in a clinical population (e.g., mental state, presence of symptoms and severity), the uncertainty about accuracy of such data, the limited acknowledgement of the context of the timing on any reconvictions, and the counting of offences and working definitions of what constitutes a serious or violent offence. Therefore it is difficult to decipher what contributed to the reoffending and whether the secure service had any effect on this outcome. MacCulloch and Bailey (1991) stress that reconviction as an outcome should not be the only measure of success but measures of offending behaviour (not necessarily producing a conviction) and QoL should also be considered to evaluate secure services. Furthermore the retrospective nature of the research meant that it was not possible to record some variables which would give an insight into the circumstances in which offending occurs and its relationship to mental disorder (Friendship et al., 1999).

The cohort design complicates the results further in that confounding factors are difficult to account for and they will affect some service-users but not others in the cohort (MacCulloch & Bailey, 1991). Confounding factors common in most of the studies was that the time spent in institutions after their original discharge, level of psycho-social functioning during admission and discharge, and the perceptions and experiences of the service-users during admission. All these factors may have impacted on rates of re-offending after discharge (MacCulloch & Bailey, 1991).

The studies also failed to distinguish follow-up findings for female service-users from male service-users. This is important as Steels et al. (1998) found a more satisfactory outcome for women. Additionally there is considerable variation in which sources of data were used across the studies, reducing the reliability of the results. Jamieson and Taylor (2004) argued that databases used and length of follow-up contributes to the accuracy of the results. For example, studies that used data from the Offenders Index (for example, Maden et al., 2004; Maden et al., 2006; McCarthy & Duggan, 2010) would have to have left a reasonable period in order to allow the previous year‘s offending data to be entered. There is a time lag between conviction in court and its appearance in the database and therefore follow-up periods of between two and five years would mean that both accuracy and meaningfulness of official criminal statistics are likely to be impaired. Long follow-up periods are therefore necessary (Jamieson & Taylor, 2004).

The information on psychiatric service-users is based on representative samples (i.e., national studies, such as Maden et al. (2004); Maden et al. (2006), and studies which have explored more than one medium secure unit, such as Coid et al. (2007). Also substantial

research has been done in this area so even though the majority of studies have investigated one medium secure unit it can be looked at in the context of other studies. However the ID research is much more limited in that the findings are not based on a representative sample of the population.

CONCLUSIONS AND RECOMMENDATIONS

Implications of the findings and limitations on practice

The last aim of the systematic review was:

4. To make suggestions based on the research, such as for service development and future risk management of these service-users.

For the reasons mentioned above, the author recommends that interpretations of the findings presented in the systematic review should be made with caution. Additionally firm conclusions cannot be made from the review, instead it represents working hypotheses based on the best available evidence to date.

The review provides some indication of the extent and usefulness medium secure units have in the rehabilitation process of these offenders. It has identified possible risk factors that could be targeted to reduce the risk of reoffending. For example, more extensive therapeutic input may be needed for younger service-users with a diagnosis of personality

disorder and who have an offending history prior to their admission. Additionally a longer admission may be beneficial to these service-users to help reduce their risk. Identification of these service-users has implications for future risk management. Davies et al. (2007) state that follow-up care needs to be consistent and long-term due to the risk posed by service-users after discharge from medium security, and that information on risk should not be overlooked or lost which can happen between multiplicity of teams and continual reorganisation of services.

Recommendations on future research

Due to the retrospective design of current research it is difficult to determine whether the mental state of the service-user at discharge, psychiatric follow-up on release into the community (forensic and general services), social support on release into the community and mental state at reconviction are variables that may have affect reoffending rates. These would therefore be an important focus for future studies (Friendship et al., 1999). Additionally direct measurement of therapeutic input and a focus on examining the effectiveness of interventions after discharge would also be useful to consider in future research. For example, McCarthy and Duggan (2010) investigated level of treatment completion and engagement in their study as a factor associated with offending outcomes. It would therefore be interesting to investigate this in more detail across medium secure units especially as this was limited to a personality disorder medium secure unit.

There is also a lot of literature that has explored subjective experiences as a measure of QoL (e.g., Carlin, Gudjonsson & Yates, 2005; Druss, Rosenheck & Stolar, 1999; Fish & Lobley, 2001; Longo & Scior, 2004). It is regarded by both governmental agencies and

healthcare professionals as one of the key outcomes to measure satisfaction with services (Walker & Gudjonsson, 2000). Bouman (2009) stated that the relationship between subjective QoL and criminal recidivism has rarely been explored. The Good Lives Model (GLM; Ward, 2002; Ward & Mann, 2004; Ward & Stewart, 2003) offers a framework to relate the concept of QoL to reduced reoffending (Bouman, 2009). The GLM supports ways of living that enhance well-being by developing a personally meaningful life plan assumed to improve QoL and, in turn, reduce the likelihood of reoffending (Birgden, 2008). It can then be hypothesised that reductions in criminal offending can be established by creating more fulfilling and meaningful lives for offender populations, including those with mental disorders (Bouman, 2009).

There is some literature that supports the hypothesised link between QoL and reoffending. McNeill (2000) explored probation worker‘s definitions of effective probation. In their interviews with the workers they found that a stronger emphasis on meeting the offender‘s needs, empowering them to realise their potential, improve QoL and achieve personal change reduced or stopped further offending. Additionally Lehman (1999) found that patients with personality disorders in the Netherlands were generally less satisfied with their lives than patients with schizophrenia. In the systematic review it found that a diagnosis of personality disorder put an individual at higher risk of reoffending than those with schizophrenia (e.g., Alexander et al., 2006).

Chenhall, Senior, Cole, Cunningham & O‘Boyle (2010) developed a nine-day programme to improve the QoL for Indigenous Australian male youths aged 14 to 19. The youths were referred with problems with drug and alcohol misuse and criminal

activity. Using the Schedule for the Measurement of Individual Quality of Life they found scores on this measure significantly increased throughout the course of the programme. They concluded that the programme had positive effect on the life of the young and provided them with confidence to consider a wider range of life options and achieve positive long-term outcomes.

Bouman (2009) argues that to decrease the risk of re-offending is through increased emphasis on positive aspects of the patient's life. Protective factors have been considered to mediate or buffer offending behaviour. Therefore indicators of QoL may constitute a group of factors which can act as a buffer or mediator for criminal recidivism. An improved QoL may therefore contribute to a primary target for services to reduce the risk of criminal offending. Bouman (2009) argues that through treatment it can help forensic patients change their objective circumstances and aim towards a better life. In Bouman's (2009) study of forensic outpatients with personality disorders she found that creating a meaningful life was negatively related to reoffending. She also found a protective effect of subjective well-being (satisfaction with health and life fulfillment) in reducing short-term and long-term criminal behaviour.

Based on the previous literature and the Good Lives Model it would therefore be interesting to explore service-user experiences in the medium secure unit as measures of QoL and to see whether it has an association with future reoffending. This would then be a direct evaluation of medium secure services. The systematic review demonstrated that this has not been explored as a possible factor associated with reoffending after discharge from medium security.

Finally the biggest gap highlighted from the systematic review was the lack of research on outcomes of service-users discharged from ID medium secure units in the United Kingdom. There were only two published research papers found in the systematic review (Alexander et al., 2006; Halstead et al., 2001) compared to a number of studies published in forensic mental health. Currently the published data is based on one ID medium secure unit and there is therefore a need to increase the validity of the findings by investigating other medium secure units for an ID population.

CHAPTER THREE

FOLLOW-UP STUDY OF DISCHARGES FROM INTELLECTUAL DISABILITY MEDIUM SECURITY: QUALITY OF LIFE AS A FACTOR ASSOCIATED WITH REOFFENDING

ABSTRACT

Background: Two criteria have been used to evaluate secure services: 1) reconviction of criminal offences and 2) service-user perceptions of quality of life (QoL) at the secure unit. Bouman (2009) argues that QoL is related to criminal recidivism. QoL hasn't previously been considered as a factor associated with reoffending for service-users detained in medium secure services.

Aims: The current study investigated a service-user's perception of QoL in one of two intellectual disability medium secure units and whether this had an association with reoffending. Service-users who had been discharged between 1st January 2000 and 31st July 2009 were followed up.

Method: Seventy-four service-users were in the original cohort but only 28 of these were successfully followed up and had consented to take part in the study. They completed the Quality of Life (QoL) Questionnaire and were also interviewed about their experiences at the medium secure units. Information on reoffending was collected from current carers.

Results: Forty-three percent of the sample reoffended. Thematic analysis performed on the interview transcripts revealed a number of themes related to areas of QoL. There was no significant difference between reoffenders and non-reoffenders on the questionnaire or on all the themes, except for negative aspects of the medium secure environment, where non-reoffenders rated this as worse than reoffenders.

Conclusions: A small sample size and a number of confounding variables meant concrete conclusions about the relationship between QoL and reoffending could not be made. The results are discussed in relation to methodological limitations but they did provide information about how services can be improved and recommendations were discussed.

Keywords: Intellectual disability, medium secure units, risk factors, quality of life, reoffending.

INTRODUCTION

The Reed Report and the Mansell Report in the 1990s set the social policy direction for adults with ID who exhibited challenging behaviours or mental health needs and those at risk of offending. The Reed Report (1992) and Bradley Report (2009) state that mentally disordered offenders should be diverted from the criminal justice system to specialist secure health services and that such offenders should be cared for with regard to their particular needs, under conditions of no greater security than is justified, and as near as possible to their family homes. The aim of secure services is therefore to enable each individual to function at their optimum level and to support and facilitate their rehabilitation back into the community (Fernando & Sockalingum, 2001).

Similar to other psychiatric secure services, the aims of ID secure units endeavour *"to provide a good quality of life whilst trying to achieve balance in maintaining safety and security without compromising the ethos of providing a person-centred service"* (Fernando & Sockalingum, 2001, p. 333). The services adopt a multi-disciplinary approach to provide professional intensive care to the service-users. MacCulloch and Bailey (1991) identified two areas, 1) reoffending and 2) QoL, which are a primary concern to clinicians and which can usefully be evaluated within individual institutions as well as forensic services as a whole.

Evaluating Secure Services – "Reconviction"

MacCulloch and Bailey (1991) argue that the criterion of ‗failure' in secure services is that of future conviction of a criminal offence. The main tool to demonstrate a reduction

in reoffending is reconviction, which is an important indicator of performance. Reconviction is always derived from criminal history data and is a measure of recidivism, typically measured as a percentage of the sample who were reconvicted of a further offence from a particular point in time (Friendship, Thornton, Erikson & Beech, 2001). There have been problems in previous follow-up studies of forensic service-users investigating reconviction rates, such as small sample sizes, errors in reconviction rates (MacCulloch & Bailey, 1991), and relying on case notes due to errors in recording (Jamieson & Taylor, 2002). Another limitation is the use of the Police National Database (PNC; a record of all people convicted of a standard list offence) as not all offences have been entered on the system and there is a time lag between a conviction in court and its appearance on the databases (Jamieson & Taylor, 2004). Additionally Badger et al. (1999) state that the attitudes and responses of care staff and attitudes of the general public may contribute to levels of underreporting with regards to individuals with an ID as they are more reluctant to report incidences of offending to the police. Therefore use of reconvictions to estimate offending results in an underestimate due to under detection, delays in recording convictions and gaps in the records (MacCulloch & Bailey, 1991).

To date, there have been only two published studies (i.e., Alexander, et al., 2006; Halstead, et al., 2001) investigating outcomes in ID service-users but both have investigated the same ID medium secure unit. A previous study by Marks, Beech and Keene (unpublished) aimed to increase the research evidence base and increase the generalisablity of findings by investigating factors associated with outcome in a different ID medium secure unit. Both reconviction rates and future displays of risky behaviour were collected due to the possibility of care staff underreporting incidences to the police.

All service-users discharged between January 2000 and July 2009 were included in the study. Twenty-two service-users were discharged during this period, but ten of these were successfully followed up and consented to take part in the study. Service-user files were accessed for information on possible factors associated with outcome and information on reoffending, current location and current level of support was collected from current carers. It was found that no service-user was reconvicted of another offence but four service-users had displayed offending- type behaviours that did not lead to police contact or conviction (classified as reoffenders) and six had not (classified as non reoffenders). Statistical analyses revealed that one factor was associated with reoffending, which was that reoffenders seemed to make poorer progress at the medium secure unit compared to non reoffenders. Due to a small sample size it meant that no concrete conclusions could be drawn. However, it appears that behavioural problems continue after discharge, highlighting the importance of follow-up care after discharge. Marks et al. (unpublished) found a significant relationship between progress made at the medium secure unit and reoffending. Progress may therefore have some association with service-users‘ perception of QoL at the medium secure unit.

Quality of life as a factor for evaluating services

QoL is regarded by both governmental agencies and healthcare professionals as one of the key outcomes to measure satisfaction with services (Walker & Gudjonsson, 2000). Schalock (2000) defined QoL as a concept that reflects a person‘s desired conditions of living related to eight core dimensions of one‘s life: emotional well-being, interpersonal relationships, material well-being, personal development, physical well-being, self determination, social inclusion, and rights.

For people with an ID who rely on services, satisfaction with life experience is a significant indicator of service quality and should be evaluated continuously (Fish & Lobley, 2001; Schalock, 2000; Koher & Eggleton, 2006). Additionally satisfaction is important in the process of engagement in a group of long stay service-users and is relevant to the efficacy of services (Carlin, Gudjonsson & Yates, 2005). Basu (2004) and Cummins (2001) also state that QoL can be used as part of evaluation of treatment outcome, identification of a high risk population, prevention and policy making, and can guide specific areas of improvement of care.

Swinton, Oliver and Carlisle (1999) argue that as secure services are responsible for all aspects of daily living, then QoL measures are even more appropriate as a measure of performance than elsewhere, but Coid (1993) argued that there are problems in attempting to measure QoL. No existing scales cover all life situations and placement possibilities. Additionally Basu (2004) points out that QoL assessment instruments that have proved useful when applied in one context may be less appropriate elsewhere.

In previous studies investigating QoL within services, two approaches have been used: quantitative and qualitative approaches. The quantitative approach includes self-rated QoL assessments, which are developed to enable people to indicate how they feel about various aspects of their lives (Schalock, 2000). This approach generally has more influence with policy makers‘ decisions as it is more amenable to generating and supporting policy and standards (Fish & Lobley, 2001) and it allows one to quantify the level of expressed satisfaction (Schalock, 2000). However, this method can limit the types of questions asked and the types of problems studied. Qualitative approaches

include interviewing the service-users about their experience and have the advantage of eliciting more subtle views. Service-users can be encouraged through open questioning to talk in a less restricted way about their experiences (Goodwin, Holmes, Newnes & Waltho, 1999). Rapley, Ridgeway and Beyer (1997) found that when both service-users and staff were asked to measure service-user's perception of service quality, there was a low staff: service-user concordance. It is now widely accepted that individuals are the best authority on their own lives and views and also that professionals are of the view that people with an ID are the rightful evaluators of the service (Fish & Lobley, 2001; Stalker, 1998;).

In the past there have been problems with collecting QoL data from service-users with an ID because they have a tendency to show high levels of acquiescence[3], especially when there are few options to choose from (Fish & Lobley, 2001). This is not because of their impairment but because 1) so many aspects of their lives are controlled by others; 2) because of power relations between the interviewer and the interviewee (Rapley, 1995). Stalker (1998) stated that when there is acquiescence both methodological and ethical implications arise for researchers which need to be considered.

Finlay and Lyons (2002) reviewed the literature on levels of acquiescence in interviewing people with an ID and made recommendations on how questions and interview schedules should be designed and conducted in order to minimise problems of acquiescence in the population. They suggest open questions and either/or questions should be used rather than yes/no questions as these can produce biases. They also found that "don't know"

[3] Acquiescence is defined in the psychometric literature as the tendency to agree with or say yes to statements or questions, regardless of the content of the items (Couch & Keinston, 1960).

options are useful to reduce acquiescence as people with as ID are more likely to agree when they are uncertain of the answer. Simplifying questions is helpful as acquiescence is likely to occur when the demands of the questions exceed the person‘s linguistic abilities. Finlay and Lyons (2002) concluded that these strategies should be useful in clinical assessments, service evaluation and planning, and forensic contexts.

Previous studies have investigated service-users‘ perceptions of QoL as a measure of satisfaction with their current service with a view to make recommendations of improvement. Coid (1993) reviewed the literature and concluded that important factors for improved satisfaction in psychiatric hospitals included levels of boredom, relationships between staff and service-users, improvements in autonomy, and an emphasis on preparation for discharge. Greenwood, Key, Burns, Bristow and Sedgwick (1999) interviewed 433 service-users about their satisfaction with inpatient psychiatric services using a standardised questionnaire and a semi-structured interview. Those who rated themselves as satisfied reported fewer adverse experiences than service-users who were dissatisfied, suggesting that service-users‘ perceptions of their QoL had impacted upon their outcome during their admission (i.e., number of adverse experiences). Druss, Rosenheck and Stolar (1999) found that in their cohort of 5542 discharged service-users of inpatient psychiatric services, measures of satisfaction with care were significantly associated with reduced likelihood of readmission, suggesting that more satisfied service-users may have better outcomes after discharge.

Brunero, Lamont and Fairbrother (2009) also explored the level of satisfaction with an adult acute mental health service and identified three items linked with satisfaction.

These were being happy with the service, having support for services on discharge, and feeling safe and secure on the ward. Two primary interventions were developed to address some of the issues raised. Longo and Scior (2004) reported on the experiences of individuals with ID who were admitted to psychiatric inpatient care. Thirty-seven service-users and their main carers were interviewed. Themes emerged such as providing a pleasant environment, supportive and caring staff, good information sharing and satisfactory discharge arrangements, as well as highlighting important areas for service improvement.

Similar studies have also been conducted within forensic mental health secure services (e.g. Morrison, Burnard, & Philips, 1996; Ford, Sweeney, & Farrington, 1999; Swinton et al., 1999; Walker & Gudjonsson, 2000; Baker, 2003; Carlin et al., 2005). Bouman (2009) investigated the association of QoL and criminal recidivism in personality disordered offenders. She argued that QoL is related to reoffending based on the principles of the GLM (Ward, 2002; Ward & Mann, 2004; Ward & Stewart, 2003). The GLM supports ways of living that enhance well-being by developing a personally meaningful life plan assumed to improve QoL and, in turn, reduce the likelihood of reoffending (Birgden, 2008). Additionally, Ward and Brown (2004) state that *„thebest way to lower offending recidivism rates is to equip the individual with the tools to live more fulfilling lives..."* (p. 244).

Compared to the mental health literature there are very few studies that have investigated service-users with ID and QoL. One of the very few papers is Wood, Thorpe, Read, Eastwood, and Lindley (2008) who used a semi-structured interview to explore

experiences of care of adults with ID in a low secure forensic unit. The themes that emerged as being important for their satisfaction, included restrictions/detention, lack of control, food, smoking, environment, other service-users, treatment, progress, meetings, relationships with staff, and advocacy. Only seven service-users were interviewed, questioning the generalisability of the findings however, recommendations for improvement were made.

Fish and Lobley (2001) suggest that perceptions of QoL are important for good outcome. They investigated both quantitative (QoL Questionnaire, Schalock & Keith, 1993) and qualitative methods (personal accounts) of measuring service-user opinions of QoL in a new community forensic ID service. They found that qualitative approaches were better at revealing particular benefits and disadvantages of the service. They concluded that concentrating on the areas of QoL that matter to the individual service-user improves efficacy of services and thereby their outcome (e.g. Greenwood et al., 1999; Druss et al., 1999).

Current Study

Previous research has highlighted the concept of QoL as an important construct to help evaluate services. It has also been linked to the frequency of adverse experiences (e.g. Greenwood et al., 1999) and to the likelihood of readmission to psychiatric hospital (Brunero et al., 2009; Druss et al., 1999). Additionally it has been linked to criminal recidivism (Bouman, 2009; McNeill, 2000). The previous study by Marks et al. (unpublished) also suggests that service-users perceptions of QoL whilst at the medium secure unit may have links with how well they progress at the unit (progress was

measured by how well they engaged with the therapeutic programme, their interactions with staff and peers, and how well they functioned on a daily basis; all concepts that can be measured by various dimension of QoL; Schalock 2000), which was found to have a significant relationship with reoffending- type behaviours after discharge.

The evidence base for forensic ID practice remains sparse (Yacoub et al., 2008) and currently there are only two published studies that have focused on following up service-users that have been discharged from ID medium security (Alexander et al., 2006; Halstead et al., 2001). No studies to date have investigated whether a service-user's perception of the QoL in an ID medium secure unit has an influence on their outcome after discharge. Therefore the current study attempted to investigate this by exploring whether there is an association between QoL and reoffending.

There have been methodological issues within the previous literature. The current study addressed these issues by utilising a sample of service-users from two medium secure units increasing the size of the sample in order to support generalisability of findings. Also the study followed-up service-users who had been discharged from the medium secure unit for up to nine years. The literature also discusses the usefulness of using both quantitative data and qualitative data for measuring QoL. Therefore the current study adopted both approaches by administering both the QoL Questionnaire (Schalock & Keith, 1993) and interviewing the service-users using strategies recommended by Finlay and Lyons (2002).

The aim of this research was to be able to make recommendations for future risk management of these service-users as well as highlighting important aspects of medium secure care which service-users have found beneficial for their progress (i.e., recommendations for service delivery). Such recommendations for this service-user group may help to reduce rates of recidivism (Bouman, 2009). Recidivism is the main data of interest for social policy makers (Quinsey, 1998).

Hypotheses

It is hypothesised that there will be an association between QoL and outcome (Bouman, 2009; Chenhall et al., 2010; Druss et al., 1999; Fish Lobley, 2001; Greenwood et al., 1999; MacCulloch & Bailey, 1991; McNeill, 2000). Therefore those service-users that have reoffended or have displayed offending-type behaviour after their discharge from the medium secure unit will discuss more negative aspects of QoL at the unit and will have lower scores on the QoL Questionnaire.

METHOD

Design

This was a retrospective study using a cohort design. The study design was based on previous research, which has followed-up service-users from either ID or mental health secure units or has investigated QoL in forensic settings (e.g., Alexander et al., 2006; Fish

& Lobley, 2001; Halstead et al., 2001). The methodology is therefore based on the best available evidence as to how this type of study should be carried out.

Unlike previous studies which have used different methodology of tracing service-users and collecting data, the current study used similar periods and methods of follow−up. For example, Alexander et al. (2006) combined two different cohorts where one cohort was the sample used in Halstead et al.'s (2001) study. These cohorts were followed-up using different methods yet were combined as one cohort in the Alexander et al. (2006) study. Similar follow-up periods and methods for the current cohort, (although within the cohort there are service-users from two different medium secure units), decreased bias by increasing the likelihood of service-users receiving similar care and discharge planning. Attempting to follow−up the whole cohort ensured a representative sample, hopefully decreasing bias. However loss to follow−up was expected due to possible deaths, difficulties in tracing service-users, service-users refusing to be contacted or not consenting to take part. Therefore, with this in mind it was deemed more appropriate to carry out purposive sampling using the study methodology.

Setting

Two NHS medium secure units for people with an ID were the focus of the study. The first medium secure unit had 10 beds. People using the service are detained under sections of the MHA (1983 Amended 2007). The service offers support to individuals over the age of 18, who have an ID, a forensic history, related mental health needs and who need to receive treatment in a secure environment. Its service philosophy states that service-users need to be treated as individuals; should be treated with respect by all

professionals and be informed by those professionals, including being involved in decision-making; to be able to make their own choices; to be able to develop a network of relationships and to remain in contact with relatives; to develop skills and minimise disability; and to have their health needs catered for.

The second medium secure unit has 30 beds for medium security and six continuing treatment beds for individuals detained under a section of the MHA and who are over 18 years old. Their admission criteria included: a diagnosis of ID; mental health or personality issues; drug and alcohol issues; complex cases; and offending behaviour (not necessarily convicted). The service aimed to include a focus on the individual but also acknowledging the contribution of carers, families and friends, to rehabilitate and re-settle service-users back into the community, to promote individuals' independence and personal responsibility, to create a safe and therapeutic environment, and to foster an appropriate staff approach where trust and valuing the individual provides positive therapeutic relationships.

Sample

A cohort sample of adult males and females with an ID who had been an inpatient at one of the two medium secure units were followed-up. The sample included all service-users discharged from the medium secure units within the follow-up period from 1st January 2000 to 30th July 2009 and who had received at least one year's treatment as it is expected that less than one year is unlikely to confer any significant therapeutic benefit (Alexander et al., 2006; Halstead et al., 2001).

Although the second medium secure unit had been explored in previous studies (Alexander et al., 2006; Halstead et al., 2001), the follow-up period had only been up to the year 2000 and existing studies did not explore the concept of QoL as a possible factor associated with outcome after discharge. To increase generalisability of the findings the cohorts from each unit were combined as one sample so that the sample was representative of ID medium secure services rather than a particular unit.

Seventy four service-users met the inclusion criteria (i.e., discharged from the medium secure unit from 1st January 2000 to 30th July 2009 and had received one year's treatment). Of these, 36 did not consent to take part in the study due to reasons of being uninterested in the study, wanting to forget the past, or their current professionals deciding that their current mental state would not allow them to give informed consent or would be detrimental to their mental state. A further six service-users could not be traced and four withdrew their consent after having consented to take part. The final cohort that had consented to take part and were followed up and included in the analyses was 28 service-users. The follow-up period for the cohort was a mean of 4.27 years (SD = 2.27 years) with a range of 0.50 years to 9.75 years.

Altogether, 93% of the sample was male and 7% was female. Of the sample 89% were of Caucasian origin, 4% was Black African and 7% was Black Caribbean. The mean age of the cohort was 41.10 years (SD = 8.96 years) with a range of 23.67 years to 55.83 years. On admission 25% were detained under Section 37 (Hospital Order) and 54% detained under Section 37/41 (with Ministry of Justice restrictions) of the MHA (1983) due to criminal offences. A further 18% were detained under Section 3 due to challenging

behaviour that was unmanageable in a community setting and one service-user was detained under a Probation Order. Table 3 details the reasons why the service-users were admitted to the medium secure units. Some service-users had more than one conviction or reason, which led to their admission.

Table 3: Reasons for Admission to the medium secure unit

Index Offence/Reason	Number of Service-users
Arson	4
Assaults/violent behaviour (including wounding)	8
Burglary	3
Criminal damage	3
Sexual assault against a child	6
Sexual assault against an adult	5
Substance abuse/risky behaviour	1

Five service-users had a diagnosis of mental illness (18%), three had a diagnosis of personality disorder (11%), eight were classified as having a diagnosis of _other' (28%), which included Autism and Bipolar Affective Disorder, and 12 service-users had no other diagnosis except for a diagnosis of ID (43%). The mean Full Scale IQ Score for the cohort was 65.64 (SD = 7.54), with a range of 50.00 to 85.00. Table 4 displays the statistics for all the temporal variables for the final cohort.

Table 4: Temporal variables (in years)

	Age on Admission	Age on Discharge	Length of stay in medium secure unit
Minimum	18.75	22.42	0.92
Maximum	45.08	50.92	12.17
Range	26.33	28.50	11.25
Mean	32.39	36.82	4.38
SD	8.15	8.99	2.95
Median	32.30	37.34	4.00

Current location of the sample and current level of support

Current location of the sample was classified as medium secure service, low secure service, step down facility (a half way house between secure services or community services), and community supported living. Eighteen percent of the sample was currently in medium secure services, 32% in low secure services, 7% in step-down facilities, and 32% were in community supported living services at follow-up. One service-user was detained in high security, one was living independently and another was residing in an assessment and treatment inpatient unit. With regards to current level of support, 71% of the service-users were currently receiving high level of support (24 hour support with waking staff), 18% were receiving a medium level of support (24 hour support with sleeping staff) and a further 11% were in an environment with a low level of support (less than 24 hour support).

Procedure

All service-users who had been discharged from the medium secure units were contacted via their current care team to confirm location or to begin the tracing process (i.e., finding out where the service-user went to next and contacting that place for confirmation of location and so on). Once the current location of all service-users who had been released from the medium secure unit had been confirmed and a member of the service-user's current team had been identified, the research protocol (Appendix 7), participant information sheets and consent forms (Appendix 8) along with a simplified version (Appendix 9) to aid the service-user's understanding were sent to their current clinical team. The consent pack' also included a letter (Appendix 10) to the current clinical team, stating that the research team would like them to introduce the research to the service-user and to go through the participant information sheet with them to see if they were interested in meeting with the researcher. Due to the level of ID of the service-users their current team were asked to go through the information with them to aid their understanding of the aims of the research. It was also thought that the service-user would find this beneficial and would feel more comfortable if the research was introduced by someone familiar to them before they met with the researcher. They were given up to two weeks to consider the information before the researcher contacted the team member to find out if the service-user was interested in taking part.

If the service-user agreed to take part in the research the researcher then arranged to visit them, along with a member of their current team, to go through the simplified version of the participant information sheet and consent form, in order to answer any questions they had about the research. Once service-users had consented to take part in the study, they

were asked to identify a member of their current team to be present in the interview with them.

The professional identified to observe the interview was then asked to complete their own participant information sheet and consent form (Appendix 11), which gave details of the role of the ‗observer'. They were also asked to complete a short questionnaire by providing details on the service-user's outcome since their discharge from the medium secure unit (Appendix 12). The data along with descriptive information (taken from service-users' files at the medium secure unit) about the service-user was then recorded on data collection sheets (Appendix 13) which was transferred to an electronic database.

Once this information had been collected a date for the interview and completion of the QoL Questionnaire was then arranged with the service-user and the observer. The interview was recorded using a digital Dictaphone, which was transcribed for analysis. Two service-users did not consent for the interview to be recorded and therefore these interviews were recorded by hand.

Measures

Service-user perceptions of QoL at the medium secure unit, and their current situation were measured using the QoL Questionnaire (Schalock & Keith, 1993; Appendix 14). This standardised measure was selected due to its applicability with an ID population. It has been validated in the United Kingdom by comparing scores of people living in different settings, and strikes a balance between reliability and sensitivity (Rapley & Lobley, 1995). It is particularly relevant to an ID population due to its answer structure.

Such a service-user group are more likely to acquiesce when asked a yes/no question (e.g., Finlay & Lyons, 2002) and the QoL Questionnaire uses either/or questions by offering three possible options for the individual to choose from. The questionnaire measures four different areas of QoL including satisfaction, competence/productivity, empowerment/independence, and social belonging. Some items of the QoL Questionnaire were re-worded slightly by the researcher to make them more applicable to a secure setting.

The literature recommends that multiple methods are used to collect data on perception of QoL so that multiple dimensions of the concept can be measured (e.g. Coid, 1993; Fish & Lobley, 2001; Langdon, Swift, & Budd, 2006). Therefore it was also measured using an unstructured interview with the service-user. Using open questions and keeping an open mind the researcher could ensure the direction of discussion was led by the interviewee and in turn the interviewee had the power to talk about what was relevant and important to them (Fish & Lobley, 2001). This can reduce the level of acquiescence (Finlay & Lyons, 2002). The interview explored service-users‘ perceptions of different areas of QoL such as the environment, activities provided, therapeutic input, community contact, family contact, staff support, other service-users and discharge planning. As the interview was led by the service-user the researcher started the discussion by asking them to talk about their positive and negative experiences of being at the medium secure unit and then used prompt questions if particular areas were not covered (see Appendix 15). This procedure also allowed the service-user to discuss topics relevant to them. It may be that their current QoL was more influential on their outcome than their QoL in the

medium secure unit and therefore this was explored in the interview by asking how their experiences in the medium secure unit differed from their current experiences.

Ethical Considerations

Information collected on the data collection sheets was transferred to an electronic database. To ensure confidentiality, identifiable data (i.e., names and locations of service-users) was removed from the data analysis database and was kept in a locked cabinet and was destroyed as soon as it was no longer needed (i.e., all relevant data collected and service-users had been notified of the results of the study). Informed consent from each service-user was sought via an information sheet and consent form. They were told that all information they provided and collected would be confidential and that they had the right to withdraw their consent at anytime.

An identified carer or professional from the service-user's care team was present in the interview for support and to witness the interview for the safety of the participant and the researcher. They did not participate in the interview; only observed. It was believed that a member of the service-user's care team in the interview did not interfere in the interview process because they did not represent the medium secure unit. Limits to confidentiality were outlined in that if the service-user disclosed any criminal, abusive or substance misuse behaviour this information would be passed on to their current team or carer, or the police. With regards to debriefing the service-users, there may have been unforeseen situations that can cause a service-user distress, therefore support was available to all service-users after the interview (by the person that attended the interview) if they required it.

RESULTS

During the follow-up period 12 service-users reoffended (43% of the sample). This included one service-user being convicted for another violent offence; and another 11 service-users having incidences of offending-type behaviour, which did not result in contact with the police or a conviction. Of these: five service-users had an incident of aggression/violence; four service-users had sexually offended against an adult or had been in places that had been considered ‗risky'; two service-users had engaged in risky behaviours as a result of substance abuse; and one had committed offences of criminal damage, theft and sexual assault against an adult.

The 12 service-users who had displayed incidences of offending behaviour were classified as the ‗reoffending' group and the 16 that had not displayed any risky behaviour since their discharge from the medium secure unit were classified as the ‗non-reoffending' group for the purpose of the subsequent analyses.

Analyses were conducted to see whether there were any differences between the reoffending and non-reoffending groups, in terms of the perceptions of QoL at the medium secure unit. Potvin and Roff (1993) state that with small sample sizes the distribution underlying the data cannot be tested. Therefore non-parametric statistics are preferred. Non-parametric analyses were performed on all inferential tests (due to the small sample size in the current study) to find out whether they were any significant differences between those that had displayed offending behaviour and those that had not on measures of QoL.

Qualitative Data

The transcribed interviews from all 28 service-users were coded by the researcher into themes using thematic analysis. Thematic analysis allows you to compare themes between different groups of people, where the themes are influenced by the interview questions. Although the aim was initially to design an open interview, due to the level of ID of the sample, it was too difficult and therefore the prompt questions were used regularly to illicit further information about their perceptions of the medium secure unit. These questions naturally produced themes within the semi-structured interviews, suggesting that thematic analysis was the most appropriate analysis to use with this data. The procedure for coding the semi-structured interview transcripts into themes was based on the recommendations of template analysis by King (n.d.).

King (n.d.) stated that template analysis is a particular way of thematically analysing data. It involves the development of a coding template, which summarises the themes identified by the researcher. Hierarchical coding is emphasised, such that broad themes encompass successively narrower, more specific ones. The initial themes were produced from the interview questions that each service-user was asked. Familiarisation of the transcripts was then performed to develop the initial coding plate of themes. Each transcript was coded in turn using the template, such that statements from the interviews were classified into the themes. Through this process the coding template was further developed based on presence or absence of the themes within the transcripts. The final coding template used to code all transcripts can be found in Appendix 16, which illustrates both the broader themes and the sub themes.

Inter-rater reliability of the themes

Fifteen of the 28 transcripts were rated by a second independent rater to explore the inter-reliability of the themes defined by the template analysis. Inter-rater reliability was assessed using Cohen's Kappa and was interpreted by a set of guidelines by Fleiss (1981). These guidelines suggest Kappa correlation coefficients of 0.40 to 0.60 are fair; 0.60 to 0.75 are good; and above 0.75 are excellent. Inter-rater reliabilities for the themes ranged from 0.41 to 1.00. The inter-rater reliabilities of all the themes can be found in Appendix 17. Where there was disagreement between cases on the themes, a third independent rater re-coded the themes to resolve the disagreements.

Abeyasekera (n.d) states that quantitative methods of data analysis can be of great value to the researcher who is attempting to draw meaningful results from a large body of qualitative data. He argues that quantitative analytical approaches allow the reporting of qualitative summary results in numerical terms to be given with a specified degree of confidence. Additionally characteristics that differ across two or more groups can be accompanied by a statement giving the probability of error. The qualitative features of the data are then important because they give breadth and depth to the quantitative research findings and provide the means to explain any special features that emerge. The themes in the current study were therefore analysed using Chi-Square Fisher's Exact Test due to the small sample size to see whether there was a significant difference between reoffenders and non-reoffenders on their perceptions of QoL. As not all service-users commented on every theme, the number of reoffenders and non-reoffenders that were compared was small. Therefore significant differences were unlikely.

The good things about the medium secure unit

This theme included comments made by service-users when asked what they liked _best' about the medium secure unit. It was therefore an open ended question with no specific prompts. The theme was broken down into sub-themes to categorise the things liked the most as a service-user on the medium secure unit.

Staff

Fourteen service-users spoke about how they used to enjoy spending time with the staff and talking to them. Of these, seven were non-reoffenders and seven were re-offenders. Therefore there is no difference between the two groups on this theme (Chi Square Fisher's Exact Test = 5.83, $p = 0.35$, OR 1.77). Examples of the types of comments made about how much they used to like being with the staff are outlined below:

1) *"I liked best? That's a very good question. Umm, it was fun talking to the staff. I got on well with my named nurse..."* (Non-reoffender 6)

2) *"Having a laugh with some of the staff, you know."*(Non-reoffender 8)

3) *"I used to like the staff there, some of the staff...They used to always come and talk to me to see what was wrong with me."* (Non-reoffender 14)

Meals

Four service-users spoke about liking the food and how they used to enjoy getting involved with cooking the food. As only a small proportion of the sample spoke about this no analysis was performed on the two groups. Examples included:

1) *"Meals were nice because all the service-users there used to cook for all the staff and the service-users."*(Reoffender 10)

2) *"The food, yeah. It was nice food."*(Non-reoffender 16)

3) *"I used to like helping out in the kitchen. I used to help out with the cooking and helped to read out what cleaning other people had to do. "*(Non-reoffender 14)

Environment

This sub-theme covered comments made about the building including the bedrooms and the surrounding environment. Service-users that spoke about rules and any events that were put on by the medium secure unit were also covered within this theme. Thirteen service-users spoke about the environment however, only five of them were reoffenders. Therefore more non-reoffenders appeared to be more positive about the environment in which they lived compared to the reoffenders (e.g., the bedrooms, the building). This relationship was not significant (Chi Square Fisher's Exact Test = 0.19, $p = 0.48$, OR 0.72). Examples of comments made within this theme included:

1) *"The grounds were good ... How it was laid out and the plants, everything really."*(Reoffender 5)

2) *"The bedrooms were alright coz you had your own shower and toilet in the bedrooms."*(Reoffender 10)

3) *"We had chores to do and they used to get us to do little jobs. My job was to sweep and mop the kitchen and then after that umm maybe clean the laundry rooms. Most of the time I liked to do these but sometimes if we did not do them we would lose money!"*(Non-reoffender 4)

Sessions

Nineteen of the service-users spoke enthusiastically about the different activities they were involved in whilst at the medium secure unit. Majority commented on how they used to enjoy their sessions. There was no difference between the two groups about their perceptions of the variety of sessions they were involved with and the quality of those sessions (Chi Square Fisher's Exact Test = 0.49, $p = 0.39$, OR 1.8). Examples of comments from this theme are detailed below.

1) *"...did woodwork, education, to the (name of social club). There were lots of things I did."*(Non-reoffender 1)

2) *"I liked the education because I got all my exams and stuff like that from there. So I enjoyed that and that was really good. Going to college and have college on site and that was the only sort of thing I enjoyed."*(Reoffender 3)

3) *"I liked best umm; they won't believe this when they hear this from me, but mainly the treatment and the group therapy I went for, yeah."*(Reoffender 6)

Friendships

Ten service-users spoke about how being at the medium secure unit gave them the opportunity to make friendships with other service-users and being able to socialise with other service-users. Seven of these were non-reoffenders, suggesting that non-reoffenders may have made and maintained friendships more easily at the medium secure unit and valued these more than reoffenders. This was demonstrated by the quotes made for example, reoffenders tended to comment that the other service-users were _alright' and that they generally got on with them but non-reoffenders made comments about the other service-users being _friends'. This relationship was not significant (Chi Square Fisher's Exact Test = 0.05, $p = 0.57$, OR 0.84). Examples of comments about _friendships' included:

1) *"The other clients were alright; I got on with them all."* (Reoffender 9)

2) *"I made a lot of new friends there but they have now moved on."*(Non-reoffender 7)

3) *"I made some good friends."*(Non-reoffender 16)

Leave

Fourteen service-users spoke about how they used to enjoy having the opportunity to go out to different places, either on ground or community leave, and that they used to go out regularly. There was no difference between the two groups in their perceptions of the type of leave they had, and being able to see different places whilst at the medium secure unit (Chi Square Fisher's Exact Test = 2.33, $p = 0.13$, OR 3.33). Examples of comments included:

1) *"We had meetings about where we would like to go and they mentioned a barge trip. I said to one of the staff, what's a barge trip? And they said a big boat. On the boat we could see outside and see all the nature. I really enjoyed that."*(Non-reoffender 4)

2) *"I suppose the trips we used to go out on, yeah all things like that ... Urr, well I suppose like walking trips and umm, you know. "*(Non-reoffender 11)

3) *"If you got community leaves you could go to different places... It was really encouraging that you could do these things."*(Reoffender 12)

Things that could have been better at the medium secure unit

This was another open question which asked the service-users what was more difficult or could have been better for them whilst they were at the medium secure unit. A number of different sub-themes emerged, which are discussed below.

Staff

Comments were made about staff not being friendly; not having time for them, and acting like they were more superior were included in this theme. Six service-users made negative comments about the staff; four of these were reoffenders, suggesting that reoffenders tended to be more negative about the staff than non-reoffenders. This relationship was not significant (Chi Square Fisher's Exact Test = 1.78, $p = 0.19$, OR 3.45) but power analysis reveals that a significant relationship may have been present if the sample size was 46 (effect size was also good at 0.66). Examples of comments in this theme include:

1) *"The staff they could have been more understanding. Some of them were, you know, but, I know they have got a job to do...It's their sense of humour and they thought that just because they had a bunch of keys they were sort of top dog you know."*(Reoffender 3)

2) *"I found it difficult getting on with the staff...rules and regulations that people come out with."*(Reoffender 5)

3)"*The way they treat you. They give you medication to dope me up. I felt slowed down and they give me more drugs."*(Reoffender 7)

Environment

Twelve service-users spoke about the negative issues of the medium secure unit environment, such as the restrictions and the medium secure unit policies (such as Mental Health Act sections and physical restraint). Of these, only three were re-offenders,

suggesting non-reoffenders were more negative about the environment than the reoffenders were. This relationship was significant (Fisher's Exact Test = 4.50, $p<0.05$, one-tailed, OR 0.15). Examples of comments made in this theme are detailed below.

1) *"Umm I suppose a lot of the rules they had there and the things they had going on"* (Non-reoffender 11)

2) *"I was sectioned."*(Non-reoffender12)

3) *"Sometimes I used to get in a really bad mood as I did not want to be there no more....Yeah, especially as you have a fence all round, it was like being in prison."*(Non-reoffender 14)

Other Service-users

Six service-users discussed how other service-users used to make them feel angry and scared, and how they did not enjoy living with them. Only one was a reoffender and this may have been because the non-reoffenders were comparing the service-users they were currently living with in less restrictive environments. This relationship was not significant (Chi Square Fisher's Exact Test = 2.14, $p = 0.16$, OR 0.2). Examples of comments made were:

1) *"I found the service-users difficult. I used to get into fights. They kept pushing my limits and my temper came out."*(Non-reoffender 7)

2) *"At one particular house some of them used to kick off all the time... I used to keep to myself and sometimes I felt scared. It was nicer when I moved to a different house."*(Non-reoffender 2)

3) *"...but err some service-users used to be in funny moods; like you were talking to somebody and next minute his mood's just gone like that (clicks fingers and laughs)... yeah it was a bit difficult."*(Non-reoffender 4)

Nothing

Eight service-users spoke about how they found nothing to be difficult or that nothing could have been better. They were very positive about their experiences of being at the medium secure unit. As expected less reoffenders made this type of comment (only three) compared to the non-reoffenders. This relationship was not significant (Chi Square Fisher's Exact Test = 0.00, $p = 0.67$, OR 1.00) but may have been if the sample size was larger. Power analysis revealed a good effect size of 0.53 with a sample size of 72. Examples of these comments included:

1) *"There was nothing difficult, everything was ok."*(Non-reoffender 6)

2) *"Nothing much really. The way it was I took really. Everything there was good."*(Reoffender 2)

3) *"I don't think anything; I think everything was quite ok. I liked it altogether. It was brilliant there. It kept me busy!"*(Non-reoffender 3)

Other

Some service-users made comments about other negative aspects of the medium secure unit but as they were made by only one or two people a separate theme was not developed. It therefore felt relevant to have an _other' theme so not to lose this information. Things spoken about included not having enough to do and feeling bored at times, the meals not being very nice, and not being able to get out enough on leave. Six service-users made such comments.

The following themes were asked as direct questions to get more information about what they liked or disliked about the medium secure unit. Comments made by each service-user were coded as generally positive or negative for the purpose of analyses to explore differences between the two groups.

The Staff

When service-users were asked for their opinion on the staff, two sub-themes emerged:

Support

This included all comments on the level of support service-users had for their problems and concerns. Nineteen of the 28 service-users made generally positive comments about the staff. Eleven of these were non-reoffenders, suggesting more non-reoffenders compared to reoffenders made positive comments about the staff. This relationship was not significant (Chi Square Fisher's Exact Test = 0.14, $p = 0.61$, OR 0.91). Examples of comments made by service-users included:

1) *"The doctor helped me too... by talking about being there and moving on...Staff helped me."*(Non-reoffender 12)

2) *"I used to like the staff there, some of the staff...They used to always come and talk to me to see what was wrong with me...The staff used to take me away and help me calm down, which helped me. There was enough support when I needed it."*(Non-reoffender 14)

3) *"The staff were there more, you know what I mean; they would help you more when you were there. They would sit down with you on your own when you had a problem. But the staff there, they were ok; they were helpful. I know sometimes I got, not a mood swing, but very low mood, but they did sort of build me back up again. They were supportive... I felt understood."*(Non-reoffender 1)

Staff-Service-User Interactions

This sub-theme covered comments about service-users' thoughts about the time spent with staff and the quality of this interaction. Service-users also spoke about staff being approachable. Eighteen service-users made comments that were covered by this theme. Of these, 13 service-users made positive comments about interactions between staff and themselves. Eight of these were non-reoffenders, suggesting more non-reoffenders were positive about their interactions with staff than the reoffender group. However, this relationship was not significant (Chi Square Fisher's Exact Test = 0.68, $p = 0.38$, OR 0.42). Examples of comments made in this sub-theme included:

1) *"There was one thing I used to do there; I used to do a social evening. Staff used to help me set it all up. Staff were really helpful. They used to come down with you, help you set it all up."*(Reoffender 10)

2) *"The staff, they were kind. They took me out on trips"* (Reoffender 1)

3) *"The staff because there were a lot of African and Caribbean. They were from different countries and I liked that as I get on better with them* **...***I could approach them. I got on with them."*(Reoffender 7)

Other Service-Users

Participants spoke positively and/or negatively about the other service-users they lived with at the medium secure unit. Two sub-themes emerged:

Friendships

This sub-theme was slightly different to the previous _friendships' sub-theme discussed. The previous sub-theme emerged from an open question of _what they liked best about the medium secure unit'. In comparison this sub-theme was developed from a direct question that service-users were asked and may not have necessarily been one of the things they liked best about the medium secure unit. Therefore the context in which both sub-themes were developed was different. This sub-theme related to how service-users made friends with the other service-users and how they used to enjoy spending time with them. Nineteen service-users from the sample made such comments, where 15 made positive comments about making friendships and having a good time with them. There

was no difference between the two groups (Chi Square Fisher's Exact Test = 0.01, p = 0.67, OR 0.88), suggesting both reoffenders and non-reoffenders made friends whilst they were at the medium secure unit however, perceptions of friendships between reoffenders and non-reoffenders may have been different as suggested by the other _friendships' sub-theme. Examples of comments made included:

1) *"I got on alright with the service-users. They made me laugh all day...We were friends until the day we left."*(Reoffender 2)

2) *"Friends there but they miss me quite a lot and sometimes I ring them but not often. There were lots of friends there, they were kind to me. We go in the garden and play games, like football and dominoes, Ludo, card games. Sometimes we watched football."*(Non-reoffender 15)

3) *"They were funny, they were great..."* (Reoffender 12)

Restraint/feeling frightened

This sub-theme included comments made about not liking it when service-users are restrained and whether other service-users made them feel scared or unsafe whilst they were living at the medium secure unit. Feeling scared would have affected their perception of QoL at the unit. Eleven service-users made such comments, where six made positive comments. There were no differences between the two groups on this theme (Chi Square Fisher's Exact Test = 0.11, p = 0.61, OR 0.67). Examples of comments made included:

1) *"I don't mean to sound disrespectful but some were unwell. I did feel scared and sometimes angry, you know."*(Reoffender 6)

2) *"...some of them used to kick off all the time...I used to keep to myself and sometimes I felt scared."*(Non-reoffender 2)

3) *"...if you were sat in the community area watching TV and they had an incident and you were told to go and get out the way. It frightened me. I mean if there was an incident and one service-user, I won't name names, and I was in the smoking room and this person really did frighten me. Luckily there was staff there who pressed the buzzer when he poured hot tea over me. The staff took me down to my room and got me under the shower. That was one thing I was frightened off."*(Reoffender 10)

Structure

This question focused on what types of activities service-users did and whether their time was spent constructively whilst at the medium secure unit. Sub-themes that emerged were:

Types of sessions

This sub-theme included all activities and therapies service-users said they completed whilst at the medium secure unit. Service-users spoke about a range of activities that they did from occupational therapy sessions to psychology sessions. Some service-users spoke about the therapy in more detail from offence specific treatment they completed to interventions targeting emotional regulation. They all said that they found treatment

helpful but some commented that it was difficult. As this theme was more descriptive, the groups were not analysed for any differences as they were all asked about what sessions they did. Examples of comments made included:

1) *I liked the activities they do there...Going to the gym, umm pottery...sports, going out jogging."*(Non-reoffender 16)

2) *"The activities in there, coz you had gardening, woodwork, art and crafts and that."*(Non-reoffender 2)

3) *"I did art therapy and psychology. I liked art therapy the best; made models and paintings...I used to do cooking...I took part in table tennis competition and won a competition."*(Reoffender 1)

4) *"I did some psychology work with the psychologist there...Umm yeah it took me a long, long time to do it. Eventually after a couple of years, I started opening up, realising what I had done."*(Reoffender 3)

Feeling bored

Service-users also spoke about not having or having enough sessions, and at times feeling bored on the unit. Twenty-five service-users made comments about the amount of sessions they had to keep them busy. Of these, 11 service-users made comments about not having enough sessions and felt the medium secure unit could have provided more. There was no difference between reoffenders and non-reoffenders on this theme (Chi

Square Fisher's Exact Test = 0.02, $p = 0.61$, OR 0.90). Examples of comments made were:

1) *"Yes especially over the weekends, I used to get really bored."*(Non-reoffender 14)

2) *"There could have been more as there was not that many sessions really...Hmm, yeah bored."*(Non-reoffender 9)

3) *"Umm I found them quite boring but that's me. I didn't enjoy the craft sessions, which you were just doing things that were too easy and I would like to do something more challenging...We could have more because in the evenings if the (name of social club) wasn't open it could be so boring. I thought we could have gone to the local cinema for the evening but that took up two staff."*(Reoffender 4)

Leave

Participants were asked whether they had ground and community leave. The question explores whether or not they felt isolated from the community and had opportunities to build on skills for independent living in the future. Sub-themes identified were:

Contact with the community

This sub-theme covered comments made by service-users about whether they had contact with the community and the types of places they went to. All the service-users in the sample spoke about a range of places they visited in the community, such as going shopping and visiting places. However 14 made negative comments about not having

enough contact with the community and feeling isolated and half of these were re-offenders. There was no difference between the two groups in their perception on the level of restriction to accessing the community (Chi Square Fisher's Exact Test = 0.58, *p* = 0.35, OR 0.56). Examples of comments made included:

1) *"I did not have any leave for the first time as you start off with half an hour and then they increased to three and a half and then they increased it. They had reviews every Thursday morning. You had to work before you had your leave. You just work hard to getting your leave. You then went down to no escorts and I used to go down to the village which would take me 20 minutes there and 20 minutes back. It was knackering."*(Non-reoffender 1)

2) *"I used to go out a lot to different places...umm football matches, the cinema, wherever you wanted to request."(Non-reoffender 3)*

3) *"My keyworker, like me and my keyworker were taking me places and umm taking me shopping and taking me places I had not been before. I'd meet with my named nurse and we would talk about places I would like to go and she would sort it out for me."* (Non-reoffender 4)

Home leave

Six service-users spoke about whether they were able to go home and visit relatives or friends. All six were generally positive about their opportunities to go home and visit family (four were reoffenders and two were non-reoffenders) although one reoffender

stated he would have liked to have gone home more often. Based on the fact that both reoffenders and non-reoffenders were generally positive about their home leave analyses were not performed. Examples of comments made include:

1) "I used to go home every three months and it used to take five hours in the car. It is much closer from here. I would have liked to have gone home more often; about once a month."(Reoffender 1)

2)"I also had home leave. The staff left me with my mum and then they came back for me. I sorted this in my review."(Non-reoffender 6)

Problems with facilitation of leave

Service-users were asked whether they thought they had enough leave and the reasons they thought why leave was not always facilitated. Twenty-two service users spoke about facilitation of leave and the reason for leave not happening would usually be due to staff shortages. Twelve service-users made negative comments about leave not being facilitated enough and how frustrating this could be. Interestingly nine of these were non-reoffenders, suggesting that more non-reoffenders than reoffenders perceived facilitation of leave as poor at the medium secure unit. This relationship was not significant (Chi Square Fisher's Exact Test = 1.48, $p = 0.22$, OR 3.03). Examples of comments made included:

1) *"No, sometimes yeah when there were staffing shortages and level of staff, it can be difficult like here sometimes as well...Not having leave happened quite a lot yeah. I used to get a bit frustrated but I got used to it."*(Non-reoffender 3)

2) "Umm I would have liked more but because it was locked up unit you couldn't get much leave…" (Reoffender 10)

3) *"Yes when staff went sick and couldn't go out. I used to go out for a walk around the grounds and sit on the bench as I did not want to go too far. I used to then take myself off to my room."*(Non-reoffender 14)

Visits

This question also explores their perception of feeling isolated from others and in particular the people they were closest to.

Having visits

Twenty-seven service-users stated whether they had visits from family members or friends. Nineteen service-users had visits. Half of these were reoffenders, suggesting that reoffenders did not have any fewer visits from significant people in their life compared to non-reoffenders. Some service-users commented that their family did not like coming to visit due to the locked doors and fences.

Facilitation of visits

Perceptions of how well visits were facilitated were explored. Twenty-three service-users gave their opinion where 15 made positive comments on how well visits were facilitated. Negative comments included financial difficulties of friends and family visiting and not feeling supported by the medium secure unit to help with the costs. There was no difference between the two groups (Chi Square Fisher's Exact Test = 0.18, $p = 0.51$, OR 1.47). Examples of comments made included:

1) *"It was not restricted too much."* (Non-reoffender 8)

2)*"They used to ring up and book the visit and then they had to make sure there was staff on to cover it coz it used to be weekends anyway. But I think they cover it for everybody. They were good on that as well."*(Reoffender 10)

3) *"The unit did not facilitate it as much as they could have. I could understand where my dad and mum were coming from. My mum and dad said it was like, they had a taxi and it used to cost them about £60 each time."* (Non-reoffender 1)

Gaining Skills for the Future

This theme emerged from the things the participants spoke about and was therefore not directly asked about. Not all participants spoke specifically about what skills they had gained from their time at the medium secure unit. Ten service-users spoke about this theme, five were non-reoffenders and five were reoffenders, highlighting no difference

between the groups (Chi Square Fisher's Exact Test = 0.39, $p = 0.41$, OR 1.67). Examples of comments that were made in this theme were:

1) *"I liked the education because I got all my exams and stuff like that from there..."* (Reoffender 3)

2) *"Umm it was ok, it was helpful to me and it was very rewarding...Because they actually taught me how to sort things out in my mind..."* (Reoffender 4)

3) *"They helped me with independent living skills such as having a bath and getting dressed."*(Non-reoffender 5)

4) *"...Yes I received psychology and they helped me on drug management and other things to help me move on into the community. I found that helpful."*(Reoffender 8)

Preparation for discharge

The question directly asked participants about whether they felt they were prepared sufficiently for their discharge to help with their transition to succeed in the future. Sub-themes that emerged were:

Support

Twenty six service-users spoke about their perceived level of support with helping them move on. Of these, 17 made positive comments where only five of these were reoffenders. Additionally more reoffenders made negative comments (six compared to

three non-reoffenders) about the support they received. This relationship nearly reached significance (Chi Square Fishers Exact Test = 3.35, p = 0.08, one-tailed, OR 0.21) and the power analysis suggested that this may have reached significance if the sample was larger (N=77). Comments made in this sub-theme included:

1) *Yes they searched all different places for me to go. They searched by the sea front, they could have been searching the other side of the world. I could have gone miles and miles away, right off the map. They were searching different places for me, what was suitable for me. I could have been anywhere...It was down to me where I wanted to go."*(Non-reoffender 1)

2) *"Umm yeah they prepared me enough...Someone met me from (name of current placement) and said how I would get more freedom. He said I was getting less freedom here and I would get more. He said I would have a good team and that I could talk to staff about any problems. I thought that this would take time as I would be getting used to them...My doctor like wanted me out of there and said I would get the support. My social worker wanted me out of that place completely."*(Non-reoffender 4)

3) *"They didn't prepare me, no, they didn't even tell me that I was going to another medium secure unit. They just said I was going to move to another hospital, that was it...They could have done more for me."*(Reoffender 5)

Visited new placement/meeting the staff

Visiting the new placement is aimed to help the service-user's transition. Therefore the opportunity to go to the new placement first and meet the staff is seen as a benefit to the service-user. Twenty-six service-users spoke about visiting their new placement and 21 of these were able to visit before they moved from the medium secure unit. Only five did not visit and said they would have liked this. There was no significant differences between the two groups on this theme (Chi Square Fisher's Exact Test = 0.01, $p = 0.65$, OR 1.11).

Experiences now compared to the medium secure unit

The participants were asked about how their experiences at the current placement compared to their experiences at the medium secure unit. They discussed both differences and similarities between the two placements. Sub-themes that emerged included:

More freedom and independence

The majority of the service-users (N=25) said they got to go out more at their current placement than at the medium secure unit, suggesting less restrictions at their current location. There was no significant difference between reoffenders and non-reoffenders as to whether one group perceived more freedom and independence at their current placement compared to the other group (Chi Square Fisher's Exact Test = 0.78, $p = 0.39$, OR 0.34). Examples of comments made were:

1) *"There are more opportunities to see my family on my own and to go out with my family and friends. I can go anywhere with them."*(Non-reoffender 8)

2) *"Well you get out more, you go bike riding, you can go to the seaside, you can go like on trips out. It's just like a holiday here! You can get out more, you can have more trips. I can get out quite a lot more. Also at (name of medium secure unit) I did not have home visits but here I get home visits and go fishing when I go on home visits. I didn't get anything like that at (name of medium secure unit)."*(Non-reoffender 9)

3) *"More freedom here. I get to go out more. I have my own front door key."*(Non-reoffender 12)

4) *"I'm excited now, I got everything I want. I've got my dream. I've come to an open unit which was expected in the future and I achieved it..."* (Reoffender 5)

Better at the current placement

As this was quite an open question, service-users gave quite a range of responses suggesting that their current placement was better or worse than the medium secure unit. These comments were grouped together as either _better' or _worse' and was then compared between reoffenders and non-reoffenders. Comments made included staff support, access to seeing family, relationships with service-users, and the progress they have made.

Sixteen service-users made comments that represent this theme. The majority of these service-users said their current placement was better than the medium secure unit (*N*=12). Four service-users preferred the medium secure unit and three of these were reoffenders. This relationship was not significant (Chi Square Fisher's Exact Test = 0.76, $p = 0.39$, OR 0.33) but power analysis reveals there may be a significant relationship with a sample size of 67 (good effect size of 0.55). Examples of comments made included:

1) *"There's more staff here, there is more one to one..."* (Non-reoffender 2)

2) *"I am doing so well here compared to all the other places. I've progressed more..."* (Reoffender 5)

3) *"It's much better...More homely."*(Non-reoffender 10)

4) *"Service-users are not nice here. There are different rules, it is more restrictive here, and I don't get leave...There are more English staff here and I prefer Caribbean, I liked (name of medium secure unit) because of that. I prefer mixed culture staff."*(Reoffender 7)

Quantitative data

Significant differences between reoffenders and non reoffenders on the scales of the QoL Questionnaire were unlikely due to the small sample size. A priori analyses were therefore performed on the data to explore what size the sample would need to be to find a reliable significant relationship between the scales of the QoL Questionnaire and

reoffending (i.e., to suggest that QoL has an association with reoffending). This was done using power analysis. Power analysis could not be performed on the Social Belonging subscale as the median between the two groups was identical and therefore it can be assumed that there are no differences between the two groups on this scale. This was confirmed by the Mann Whitney U Test ($U = 88.50$, $p = 0.73$, $r = -0.07$; Appendix 18). Table 5 shows the results of the power analysis.

Table 5: Sample sizes needed for each QoL scale for a power of 0.80

**Reoffended Group = R*

Non-reoffended Group = NR

QoL Questionnaire Scale	Mean		Median		Standard Deviation		Minimum		Maximum		Effect Size	Total Sample Size	Sample Size in each group
	R	NR	R	NR	R	NR	R	NR	R	NR			
Total QoL	67.83	66.88	64.50	66.50	9.80	5.68	55	59	85	77	0.25	418	209
Satisfaction	20.83	19.88	18.50	19.50	4.65	3.07	16	14	28	25	0.25	404	202
Competence/ Productivity	12.17	12.75	12.00	13.00	1.64	1.07	10	11	14	14	0.72	52	26
Empowerment/ Independence	18.17	18.50	17.50	19.00	2.69	2.42	13	14	22	22	0.59	78	39
Social Belonging	16.67	15.81	16.00	16.00	3.42	2.40	13	12	26	19	----	----	----

The total QoL scores for both reoffenders and non-reoffenders suggest a moderate score of QoL (as there is a maximum score of 120; range for reoffenders was 55-85 and the range for non-reoffenders was 59-77) at the medium secure units. Competence/Productivity had the lowest scores of all the scales, suggesting that maybe their perception of QoL was compounded by their perception of feeling competent. Satisfaction and Empowerment/Independence had the highest scores highlighting that service-users may have felt moderately satisfied with the service with which they were provided, and felt encouraged to develop a sense of independence and empowerment by making some of their own decisions with regards to their own care.

The difference in scores on the scales of the QoL Questionnaire was compared between those that reoffended and those that did not reoffend using the Mann Whiney U Test (Appendix 18). All of the results were non-significant. Therefore there was not a significant difference between reoffenders and non-reoffenders on Total QoL ($U = 94.00$, $p = 0.95$, $r = -0.02$), Satisfaction ($U = 93.00$, $p = 0.91$, $r = -0.03$), Competence/Productivity ($U = 76.00$, $p = 0.37$, $r = -0.18$), and Empowerment/Independence ($U = 89.50$, $p = 0.78$, $r = -0.06$). However, the power analysis in Table 5 revealed that a significant difference may have been found if more service-users from the original cohort had taken part with regards to Competence/Productivity (total sample size of 52; good effect size of 0.72) and Empowerment/Independence (total sample size of 78; fair effect size of 0.59).

DISCUSSION

The aim of the current study was to explore the experiences of people with an ID who have been detained in either one of two NHS medium secure units; to investigate whether their perceptions of QoL were linked to future incidences of reoffending behaviours after discharge. It was hypothesised that there would be a relationship between QoL and outcome. Therefore those service-users that had reoffended or had displayed offending-type behaviours after their discharge from the medium secure unit would discuss more negative aspects of QoL at the unit and would have lower scores on the QoL Questionnaire. The hypotheses were not supported by the data.

Reoffending rates

The current study showed that during a follow-up period of 0.50 years to 9.75 years, 43% of the sample had reoffended. This included one service-user being reconvicted of another offence. The majority of re-offending behaviours did not lead to a conviction or contact with the police, supporting the argument of Alexander et al. (2006), that staff tolerate many complex and challenging behaviours. The findings concur with arguments that limitations of reconviction data exist as offending behaviour often results in neither prosecution nor conviction, so reconviction rates underestimate the true level of risk posed by service-users after discharge (Friendship, et al., 1999). Therefore, if the present study had relied solely on data from criminal convictions it would have revealed few negative outcomes for the cohort and therefore not reliably highlighted the continued risk presented by these service-users.

The relationship between QoL and future risk of reoffending

The size of the sample was too small to give sufficient statistical power to draw any concrete conclusions. However, the results do highlight that some areas of QoL may be significantly associated with reoffending behaviours if the entire original cohort had been followed up in the study.

There was no significant difference on any of the scales of the QoL Questionnaire between those that reoffended and those that did not reoffend. However, _Competence/Productivity' and _Empowerment/Independence' may have reached significance if the sample had been larger. This would suggest that the reoffending group did not feel as competent, were not gaining skills at the medium secure unit, and were not feeling as empowered or independent compared to the non-reoffending group. This may have produced negative feelings within the reoffending group, which may mean they won't do well in the future and are more likely to display future risky behaviours. The Competence/Productivity scale had the lowest scores from both groups compared to the other scales of the QoL Questionnaire. This suggested that their perception of QoL was compounded by their perception of feelings of competency in the medium secure unit. This lack of perceived competence is likely to have risen from the fact the there are many restrictions within a medium secure unit (e.g., locked doors, restricted kitchen access, limited community access) and staff have a tendency to do many things for service-users (such as opening doors, acting as escorts on leave) limiting their sense of independence . The lower score on Competence/Productivity may have also been due to not having paid employment (which would have lowered their scores on this scale).

The qualitative approach included personal accounts of service-users‘ experiences of the medium secure unit, revealing particular benefits and disadvantages of the medium secure unit, not highlighted by the quantitative approach (supporting the argument made by Fish & Lobley, 2001). Thematic analysis of the transcribed interviews identified ten super-ordinate themes relating to different areas of QoL at the medium secure unit. From these themes it became apparent that this group of service-users valued the staff, the environment, the sessions/activities, leave, and friendships they made whilst there. Both positive and negative comments were made about different areas of QoL. It also appeared that non-reoffenders were more forthcoming in their semi-structured interviews compared to the reoffenders. Non-reoffenders generally made more detailed comments across a wider range of themes and appeared to have been more reflective of their past experiences at the medium secure unit.

Although the relationship was not significant there was a trend for reoffenders to be less positive about the staff support and interaction, believing they did not receive adequate support for their problems. There was a belief that there was a difference of power as staff carried keys and some service-users thought that they abused that power. In contrast more non-reoffenders thought that staff were supportive and understood that staff could not be there at all times. They also thought that staff were kind and enjoyed spending time with them. These findings support those of Coid (1993) and Longo and Scior (2004) who also found that one of the important factors for a improved satisfaction with services was the relationships between staff and service-users, and in particular service-users perceiving staff as caring and supportive.

Service-users also spoke about their peers at the medium secure unit, such as making friends and how their peers could cause them to feel frightened and unsafe on the ward. There was no difference between reoffenders and non-reoffenders on this theme. However, it became apparent that their perception of making friends and spending time with other service-users had impacted upon how they perceived their experiences and QoL at the unit. In line with the literature, Brunero et al. (2009) and Wood et al. (2008) also found that other service-users and feeling safe and secure on the ward was important for satisfaction with the service.

The interviews highlighted the importance of having sessions to gain skills, to address their problems, and to help them spend their time productively at the medium secure unit. Both units provided a range of sessions to their service-users, ranging from occupational therapy to psychology sessions. Just under half of the sample made comments about feeling bored and not having enough sessions whilst they were at the medium secure unit. There was no difference between reoffenders and non-reoffenders on this theme. In particular, service-users spoke about limitations on what was on offer to them and how at the weekends they felt particularly bored as there was rarely any activities planned. Coid (1993) also found that reduced levels of boredom were an important factor for improved satisfaction in psychiatric hospitals.

Another theme identified from the interviews was service-users‘ perception of having enough opportunities to access ground and community leave so they can feel less isolated and build on skills for independent living in the future. Half of the sample commented that they didn‘t have enough access to the community. This may have been influenced

by their perceptions of being in a restricted environment and possibly poor insight into their problems at the time that may have limited their level of access for leave. Interestingly there was a trend for more non-reoffenders than reoffenders perceiving facilitation of leave as poor. Similarly there was a significant relationship of non-reoffenders speaking more negatively about different aspects of the medium secure environment. These relationships were in the opposite direction to the predictions made by the hypotheses. It may be that the current experiences of both reoffenders and non-reoffenders had influenced their perceptions of their past experiences. Non-reoffenders are currently doing well, living in less restricted environments and having more access to leave with less need for escorts. Therefore comparing these experiences, non-reoffenders are more likely to view different aspects at the medium secure unit less positively. The majority of reoffenders in contrast are continuing to live in medium and low secure settings with continuing restrictions. Additionally due to them presenting with continuing risks their level of restrictions to leave may have increased further, leading to more positive perceptions of being at the medium secure unit. In support of this there was a trend for more reoffenders saying that they preferred the medium secure unit compared to non-reoffenders. This may be reflective of them placing blame on their current placement for their poorer outcome. For example Reoffender 2 was very negative about his current placement throughout the semi-structured interview and commented about his frustrations in terms of restrictions about leave and not being actively engaged in activities. In comparison, all comments he made about the medium secure unit were positive. However, it may have been the case that reoffenders viewed the medium secure service as more positively and therefore reoffended as they were motivated to return to the medium secure unit. Some service-users may prefer the restrictions of a medium

secure service as it may make them feel safer and also due to high staffing levels and other service-users they may not feel as isolated compared to a setting of less security. More research would be needed to substantiate these claims.

Other parallels to the literature include the importance of service-users feeling prepared and being involved in the decisions made for their discharge (e.g., Brunero et al., 2009; Coid et al., 1993; Longo & Scior, 2004). Reoffenders made more negative comments about the level of support they received for their discharge and not feeling involved in the decisions. This relationship nearly reached significance. It may be that reoffenders are blaming the fact that they were not prepared for their discharge for their poor outcome. This has highlighted the importance of service-users feeling involved in their future and having the support for their transition to less secure environments.

Clinical Implications

Although no causal relationship between QoL and reoffending can be made, the findings from the study can be used to identify aspects of service provision that require attention and improvement (e.g. Brunero et al., 2009; Carlin et al., 2005). The present findings highlighted that service-users with an ID can explore and understand their experiences of being detained in medium secure care, promoting a person-centred service (Fish & Lobley, 2001). This is reflected in both the positive and negative comments made by service-users with regards to different areas of QoL. Focusing on areas of QoL that matter to the service-user improves effectiveness of services and thereby their outcome (Fish & Lobley, 2001).

It appeared that service-users should be given more opportunity to be able to contribute to decisions involving their own care, including discharge planning as well as getting involved in the sessions on offer and being given opportunities to reflect upon their own experiences. Some commented on not feeling listened to or not feeling trusted to progress further. A further understanding of the experiences of people with an ID detained in medium secure units will help clinicians to improve service delivery and interventions further. For example, a frequent theme was the lack of activities during the weekend, arguing for the need of a weekend programme to help service-users feel less bored. One service-user commented on his increase in anxiety levels when not involved in sessions. Also more effort should also be made to reduce power relationships between service-users and staff so service-users can feel more supported and more competent in making decisions regarding their own lives.

Additionally it may be beneficial for people with an ID within a secure setting to have access to support groups within which they may explore their experiences and have access to other people's stories (Cookson & Dickson, 2010). This may lead to more emphasis on having input in the provision of their own care, feeling listened to and supported, and developing relationships, thereby increasing levels of QoL.

Limitations of methodology and recommendations for future research

The findings have highlighted the difficulties in exploring the relationship between reoffending and perceptions of QoL. There are a number of methodological limitations which should be noted when interpreting the findings of the current study.

It was a retrospective study design which meant it was not possible to record particular variables that would give insight into the circumstances in which reoffending occurs (Friendship et al., 1999). Also it increases the potential of errors in the data collection, such as inaccurate recordings within the service-user files and subjective views of carers. Unlike some of the previous studies official criminal databases such as the Police National Computer were not used for additional measures of outcome. Such databases have their own limitations (Jamieson & Taylor, 2004) as previously mentioned. It would therefore be more reliable to use both sources of information to gain more accurate information especially as carer information would be important for gaining data on offending-type behaviours which did not lead to conviction or police contact.

Also due to the retrospective nature of the study it became apparent that current experiences or other experiences after discharge may have impacted on service-users' perceptions of the medium secure unit. This was evident in non-reoffenders perceiving the environment and facilitation of leave as poorer than reoffenders. Additionally when asked directly about how their current experiences compared to their experiences at the medium secure unit, 25 service-users said that they now had more freedom and independence. There are therefore a number of confounding variables which may have led to the non-significant relationships found between various aspects of QoL and future outcome. These variables would be very difficult to control for. It would have been more appropriate to conduct a prospective study, in which service-users are interviewed about their experiences of the medium secure unit, and to complete the QoL Questionnaire upon discharge and at set follow-up periods to see whether it has a relationship to later reoffending.

Additionally a cohort design is a convenient sampling method which is therefore opportunistic and introduces biases. It also complicates the results further in that confounding factors are difficult to account for and will affect some service-users and not others in the cohort (MacCulloch & Bailey, 1991). One confounding factor common in most of the cohort was time spent in secure services after their original discharge from the medium secure unit. Therefore not all service-users were in the community throughout the follow-up period where the potential to reoffend would be higher than being in a secure service due to the level of supervision and restrictions of a secure setting.

The size of the sample was very small (28 service-users), whereby 46 service-users from the cohort did not participate in the study. Therefore the sample was not representative of service-users from these types of services, although attempts were made to follow-up service-users from two medium secure units to increase generalisability of findings. Loss to follow−up was expected due to possible deaths, and difficulties in tracing and/or some service-users refusing to be contacted or don't consent to take part. With this in mind it was more appropriate to carry out purposive sampling using the study methodology, but this introduced biases in the data beyond the researcher's control due to ethical considerations (e.g., unable to access service-users without their consent). Additionally there may have been biases within the sample due to possible differences in the characteristics of those service-users that consented and those that did not consent as well as some professionals making the decision for service-users to take part or not. It would have been more ideal to follow-up the whole cohort for a more representative sample and the current study highlights the difficulties with carrying out this type of research with

vulnerable service-user groups. This also made it difficult to accurately put forward recommendations for improvements in service delivery to reduce the risk of poor outcomes in service-users discharged from medium secure services.

Another factor which would have led to biases within the sample, impacting on the validity of these findings was the length of follow-up being different between service-users. The median for the reoffenders was 3.9 years (range of 2.4 to 9.8 years) and the median for the non-reoffenders was 4.1 years (range of 0.5 to 6.8 years). Therefore it may be that majority of those who had not showed any offending-type behaviour had not long since been discharged and may display these behaviours later.

The qualitative approach revealed more detailed information than the quantitative approach being consistent with Wood et al. (2008) and Fish and Lobley (2001). This has highlighted that no existing scale can cover all life situations and the difficulties in attempting to measure all dimensions of QoL (Coid, 1993; Langdon et al., 2006). A particular problem with the QoL Questionnaire was that it was not designed specifically for secure environments. Therefore adaptations were made to the wording of some items to make it more relevant. Swinton et al. (1999) also argued that adaptations are needed to existing instruments that measure QoL to account for the specific nature of secure care, and in particular to cover the range of behaviours being restricted. Therefore the QoL Questionnaire may not have adequately measured relevant areas of QoL in medium secure services, which may have affected the findings. This suggests that further research is needed to develop standardised instruments to measure QoL in secure services. The qualitative approach however, also had some limitations. Although every effort was

made to follow the recommendations made by Finlay and Lyons (2002) to reduce levels of acquiescence, there may have been an element of service-users being reluctant to criticise or agree with the researcher. This would have been due to the power relationship between interviewer and interviewee (Goodwin et al., 1999). It became evident that due to their level of intellectual and verbal ability they found open questions very difficult. Therefore they needed more direction from the researcher as to what they should talk about. Therefore the information provided (especially the less able service-users) may not have been a true representation of their perceptions on QoL, confounding the results.

Chambers et al. (2009) conducted a structured review to identify and assess measures used in forensic mental health services research over the period 1990 to 2006. They found that none of the more common instruments, such as the HCR-20 (Webster et al., 1997), were used to evaluate outcomes. The HCR-20 is a structured risk assessment that determines what level of risk someone is for future violence. The current study initially intended to collect HCR-20 scores for service-users upon discharge from the two NHS medium secure units. Unfortunately this data was unavailable from both units as this instrument was not routinely used at the time of discharge for those service-users. This would be an aim for future research to see whether the HCR-20 can reliably predict whether individuals reoffend after discharge from medium secure services as well as exploring its ability to inform risk management in this population effectively.

Summary and conclusions

Due to the small sample size and other confounding variables it was not possible to draw any concrete conclusions as to whether perceptions of QoL had a relationship with

reoffending after discharge from the medium secure units. The study highlighted the importance of the qualitative approach in providing a deeper understanding of individual experience without limiting the data by relying on the set format of a questionnaire (Wood et al., 2008). However, the assessment of subjective QoL in people with an ID is complicated by difficulties in communication, including verbal ability and possible acquiescence (Hensel, 2001). The study highlighted how useful the information can be to make recommendations for improvements in service delivery that matter most to the service-user.

It is recommended that future research is needed in this area. For example a prospective design, exploring perceptions of QoL at the medium secure unit before discharge and collecting data at set follow-up points, would eliminate the majority of confounding variables. This would also increase the possibility of interviewing all the service-users, thereby increasing the sample size and generalisability of the findings. It would also be interesting to evaluate more structured risk assessments, such as the HCR-20, by exploring its applicability as a risk prevention and risk prediction tool in ID medium secure services. Chapter 4 describes the HCR-20 in more detail as well as providing a consideration of it strengths and weaknesses in terms of its validity and reliability as a risk prediction tool for violent behaviour. Chapter 5 illustrates the HCR-20 as a risk prevention tool with regards to future management in a case study of a violent mentally disordered offender detained in medium security. Both Chapters 4 and 5 provide support for using the HCR-20 as a standardised instrument to evaluate medium secure services.

CHAPTER FOUR

A CRITIQUE OF A PSYCHOMETRIC MEASURE: THE HCR-20 RISK ASSESSMENT SCHEME (WEBSTER ET AL., 1997)

INTRODUCTION

Scope, Purpose and Content of the HCR-20

Risk prediction for further offences is a core task for most forensic professions (Hickey, 2005). In particular estimating an individual's level of future risk for violence is important as this causes the greatest public concern. Violence risk assessments are therefore routinely required for risk management, developing interventions, and when considering the release of mentally disordered offenders from secure services (Douglas et al., 1999; Fujii et al., 2005).

Webster et al. (1997) stated that the challenge of the 1990s was to integrate research on the prediction of violence and clinical practice of assessment. In the past the ability of clinicians to 'predict' violent behaviour with accuracy had been questionable (Macpherson & Kevan, 2004), leading to the development of empirically-based structured clinical decision-making schemes. These provide a systematic means of addressing the process of assessing, predicting and managing future violent behaviour (Douglas et al., 1999).

One of the most widely used of these systematic schemes is the HCR-20 risk assessment schedule (Macpherson & Kevan, 2004), first published by Webster, Eaves, Douglas and Wintrup (1995) and revised by Webster et al. (1997). Developed in North America the HCR-20 comprises of a checklist of 20 risk factors for violent behaviour designed for use in secure facilities to predict violent recidivism on release (McKenzie & Curr, 2004). The title stands for the three subscales that make up the assessment: history, current

clinical presentation, and future risk judgements. The *Historical* or H scale assesses 10 static risk factors known to be associated with elevated risk of violent outcomes. The *Clinical* or C scale assesses the presence of five dynamic and potentially changeable correlates of violence. The C items may change as a function of an individual's mental illness (Kloezeman, 2004). The *Risk Management* or R scale allows the assessor to judge prospective risk of violence given to the presence or absence of five situational factors.

Clinicians and researchers from a variety of mental health professions worked together to produce the scheme, which is based on empirical research on variables expected to predict violence in mentally ill service-users and prisoners (e.g. Monahan & Steadman, 1994). The HCR-20 differs conceptually from its predecessors, including the Violence Risk Appraisal Guide (VRAG; Quinsey et al., 1998) and the Psychopathy Checklist: Revised (PCL-R; Hare, 1991), because it includes not only static items based on a person's history but also dynamic items that evaluate current clinical presentation and environmental risk factors (Webster et al., 1995; Dolan & Khawaja, 2004). Douglas and Webster (1999) state that the HCR-20 was constructed to be applicable to a variety of populations, including civil and forensic psychiatric service-users and correctional offenders. However, Douglas, Guy and Weir (2006) state that the HCR-20 should be restricted to mainly settings in which there is a high proportion of persons with histories of violence, and a strong suggestion of mental illness or personality disorder.

Overview of the HCR-20

Table 6 shows the items in the HCR-20 Risk Assessment Scheme.

Table 6: The HCR-20 Items (taken from Webster et al., 1997)

Historical (Past)	Clinical (Present)	Risk Management (Future)
H1. Previous violence	**C1.** Lack of insight	**R1.** Plans lack feasibility
H2. Young age at first violent incident	**C2.** Negative attitudes	**R2.** Exposure to destabilisers
H3. Relationship instability	**C3.** Active symptoms of major mental illness	**R3.** Lack of personal support
H4. Employment problems	**C4.** Impulsivity	**R4.** Noncompliance with remediation attempts
H5. Substance use problems	**C5.** Unresponsive to treatment	**R5.** Stress
H6. Major mental illness		
H7. Psychopathy		
H8. Early maladjustment		
H9. Personality disorder		
H10. Prior supervision failure		

The HCR-20 when used for clinical purposes is used to help make decisions with regards to placement, treatment and management of the individual. The HCR-20 is fundamentally a framework that guides the collection of information pertinent to an assessment of risk of violence. It therefore relies on the quality of the information available about the individual. Hence, despite the presence of actuarial factors, it remains susceptible to some of the same biases and limitations of risk assessments based on clinical judgement (Jones & Plowman, 2005).

The second version of the HCR-20 avoids specific cut-off scores for classification of high versus low risk status to encourage professional judgement. Instead the authors suggest that it should be used to help the clinician structure the risk assessment (until developed into a standardised scale) to ensure that all important risk factors are considered and to

encourage systematic data collection. Coding the HCR-20 requires the clinician to determine the presence versus absence of each of the 20 items using a 3-point scale, with ~~"0~~" indicating absence; ~~"1~~" indicating partial or possible presence; and ~~"3~~" indicating clearly present. This is used to reach a summary regarding risk for violence. For research purposes, it is possible to use the HCR-20 as an actuarial scale and to sum the item codes. A copy of the HCR-20 worksheets can be found in Appendix 19.

CRITIQUE OF THE HCR-20

The current critical review examines a risk assessment by Webster et al. (1997); the HCR-20, in terms of its scientific properties, applicability and research uses. Kline (1986) states that a psychological test may be justly described as a good test if it is a) at least an interval scale; b) reliable; c) valid; d) discriminating; and e) have appropriate norms. The criteria will be used to evaluate the HCR-20.

Reliability

Reliability is the extent to which findings or measures can be repeated with similar results (Coolican, 2005). Two types of reliability, internal reliability and inter-rater reliability are discussed. Williams and Webster (2006) state that there is not yet a large accumulation of data on the HCR-20 but current research indicates that overall it has adequate reliability.

a) Internal Reliability

The HCR-20 will have good internal reliability if all its items are measuring the risk of future violence. This can be measured by Cronbach's alpha (a model of internal consistency, based on the average inter-item correlation). Research studies demonstrate that the HCR-20 has good internal reliability with Cronbach's alpha in the range of .78 and .95 for the total HCR-20 score (Belfrage, 1998; Dahle, 2006).

b) Inter-Rater Reliability

Inter-rater reliability is defined as the extent to which observers agree in their rating or coding (Coolican, 2005). Research studies using the HCR-20 have consistently found high inter-rater reliability on the HCR-20 total score. For example, they have found good intraclass correlation coefficients ranging from .76 to .96 (Dernevik, 1998; Douglas, et al., 1999; Gray et al., 2004; Kloezeman, 2004; Fujii et al., 2005 Gray et al., 2007), providing that raters are properly trained (Dernevik, 1998).

There has also been consistent reporting of satisfactory inter-rater reliabilities within the separate subscales of the HCR-20. For example, studies have reported an H score correlation of .92 (e.g. Gray et al., 2004), C score correlation of .95 (e.g. Kloezeman, 2004), and R score correlation of .85 (Gray et al., 2004), demonstrating that the scales within the HCR-20 have good inter-rater reliability.

Validity

Validity is the extent to which tools measure what they were intended to measure (Coolican, 2005). Research studies have overall indicated that the HCR-20 relates moderately to strongly to violent behaviour (Williams & Webster, 2006). However, there is a lack of validation of risk assessment tools in United Kingdom cohorts with the majority of validation studies having been conducted in North America and Sweden (Dolan & Khawaja, 2004). The HCR-20 is assessed below as to whether it has concurrent and predictive validity.

a) Concurrent Validity

The HCR-20 will have concurrent validity if it correlates with other risk assessments of violence. Douglas and Webster (1999) investigated concurrent validity in correctional settings and found moderate correlations between the H scale of the HCR-20 and the PCL-R and the VRAG (.50 and .62, respectively). Similarly, Dahle (2006) found substantial congruence between the HCR-20 and the PCL-R (r = .76) in their sample of German incarcerated individuals. Gray et al. (2004) also found significant relationships between the HCR-20 total and subscale scores and Factor 1 and Factor 2 of the Psychopathy Checklist: Screening Version (PCL: SV; Hare, 1991) in their study of mentally disordered offenders detained in medium secure settings. This provides further support for the concurrent validity of the HCR-20.

b) Predictive Validity

The HCR-20 will be judged to have predictive validity if its results correlate well with future violence. Receiver operating characteristics (ROC) and area under the curve

(AUC) analyses are the main statistical procedures used to assess the predictive accuracy of risk assessments (Mossman, 1994). The line of no information in ROC analyses (i.e., no discriminatory power beyond _chance' levels) is represented by an AUC of .50 and perfect accuracy is associated with an AUC of 1.0 (Macpherson & Kevan, 2004).

Studies of violence in secure settings

Macpherson and Kevan (2004) coded the HCR-20 for a sample of 93 male service-users detained in a British high secure forensic hospital. They found that the mean C scale and HCR-20 Total scores were significantly larger in service-users engaging in any form of violent behaviour during admission. AUCs were significantly greater than chance for the Total score (.64) and the C scale (.72) for any form of violence. The likelihood of any violence during admission was also found to significantly increase with C scale scores above the median.

McKenzie and Curr (2005) investigated whether 94 medium secure service-users in the United Kingdom who go on to be violent during their admission could be predicted accurately within two weeks of admission using discriminate profiles derived from HCR-20 codings. Similarly to Macpherson and Kevan (2004) they also found that clinical items were more predictive than historical items (e.g., AUC of .82 for service-users who went on to have 10 or more episodes of violence). McNiel, Gregory, Lam, Binder and Sullivan (2003) also found that C scores were predictive of violence in their study of psychiatric service-users.

The R scale proved to be of limited utility in this setting but these items measure future oriented variables which are not as applicable within the context of a short admission period. This contrasts to the importance of the C scale in this setting which assesses acute symptoms, reflecting mental health problems as a strong predictor of inpatient violence (Macpherson & Kevan, 2004).

Studies of violence in the community

Douglas et al. (1999) tested the use of the HCR-20 in the assessment of violence in a psychiatric outpatient sample. It produced AUCs greater than chance, ranging from .76 (for any violence and physical violence), to .77 (for threatening behaviour) to .80 (for violent crime). Odd ratios for violence analysis showed that those who scored above the median on the HCR-20 were approximately six times more likely to commit violent acts in the community on release and 13 times more likely to be arrested for violent offences. Overall their findings support the predictive utility of the subscales, particularly the H and R subscales.

Studies of service-users discharged from medium security in the United Kingdom have also found similar results. For example Dolan and Khawaja (2004) found that all subscales were predictive of readmission (e.g., total score had an AUC of .85), but the Historical items had particular utility in violence risk prediction. Similarly Gray, Taylor and Snowden (2008) report that the HCR-20 was a significantly good predictor of violent offences, with AUCs in the .70 to .76 range, but the C scale did not produce any statistically significant prediction (AUC .54 to .61). These results are not surprising as the H subscale items provide a solid foundation of predictive factors. Additionally the

predictive value of the R subscale items indicate that situational factors and poor risk management planning may play a significant role in post release violence in this population (Douglas et al., 1999). The logic of the C subscale not being independently related to violence may have been due to the fact that C items were rated on discharge and therefore the clinical state may have been different at the time of violence compared to the stable state at discharge (Gray et al., 2008). This suggests upon discharge from a secure unit the service-users were stable in mental state as a result of their rehabilitation. However, within the community there may have been a number of destablisers that may have deteriorated their mental state resulting in violent behaviour.

Studies of violence in prison samples

Douglas and Webster (1999) analysed data from a sample of 75 male prisoners. The H score emerged as a significant predictor of violence. They found that a person who scores above the median of the HCR-20 is five times more likely to commit violence than a person who scores below the median. Dahle (2006) explored the predictive accuracy of a selection of instruments in a sample of 307 German prison inmates, and found that the HCR-20 was effective for long-term violence prediction.

Applicability of the HCR-20 with females, multi-ethnic and intellectual disability samples

Strand and Belfrage (2001) investigated HCR-20 scores in violent mentally disordered men and women admitted to a forensic psychiatric centre to explore the applicability of the HCR-20 in a female forensic psychiatric population. They found that mentally disordered women display very similar risk factors to those of comparable male populations. De Vogel and de Ruiter (2005) however found that the HCR-20 was more

predictive for males than females in their sample (only the HCR-20 final risk judgement and not the total scores demonstrated significant predictive validity for violent outcome in females).

Fujii et al. (2005) argue that one area that has not been fully examined is ethnic differences in violence prediction. In their study they explored risk prediction in different ethnic groups such as Asian Americans, Euro Americans, and Native Hawaiians. The HCR-20 did not demonstrate a differential predictive accuracy between ethnic groups, suggesting that the HCR-20 has cross-cultural validity, at least with these groupings

Gray, Fitzgerald, Taylor, MacCulloch, and Snowden (2007) investigated offenders with an intellectual disability (ID) and found that the HCR-20 was a very good predictor of violent reconviction in the ID group over 5 years, achieving an AUC of .79. These were also stronger effect sizes than the non-ID group, suggesting the HCR-20 may even have more efficacy with an ID group. This instrument can therefore be used with offenders with ID without the need for any modification of the items or scoring procedures to accommodate the diagnostic features of ID (Gray et al., 2007). This adds further support to the claim that the HCR-20 can be used with a variety of populations in a variety of settings.

Appropriate norms

Webster et al. (1997) stated within their manual for the HCR-20 that they are collecting normative data concerning the prevalence of risk factors in various samples, such as civil and forensic psychiatric service-users and correctional offenders and plan to include the

results of this research in future versions of the HCR-20. It is therefore argued that due to very few or no normative data clinicians should not be using a score on the HCR-20 for clinical purposes (Jones & Plowman, 2005).

Possible alternative assessments

Alternatives to the HCR-20 include ‗purer' actuarial risk prediction measures that assign numerical scores to the presence or absence of a predetermined set of variables. These include the PCL-R or the PCL-SV (Hare, 1991) and the VRAG (Quinsey et al., 1998).

The PCL-R is a 20-item measure of the concept of psychopathy. Although it was not primarily designed as a risk prediction assessment the research has shown that the psychopathy trait highly correlates with violent recidivism (Hemphill, Hare & Wong, 1998). The PCL-R and its variants have dominated the personality evaluation field of violence risk assessments (Gray et al., 2004). It has been increasingly used as an instrument for the prediction of risk of violence in the community (Dolan & Doyle, 2000). However, there is a body of literature examining the PCL-R and the HCR-20. It is important to note that the HCR-20 contains ‗psychopathy' as one of its Historical items (H7) and is measured by the PCL-R. This therefore questions the predictive validity of the HCR-20 as it maybe the PCL-R contributing to the predictive ability of the measure (Hemphill et al., 1998). The PCL-R maybe then should not be considered as an alternative assessment to the HCR-20. On occasions a practitioner will decide to omit the H7 item from their HCR-20 assessment. Webster, Müller-Isberner and Fransson (2002) argue that this should not be the case as psychopathy has emerged as a key correlate of subsequent violence and stands out as a predictor of violence (Hemphill et al., 1998).

Therefore due to the inclusion of the PCL-R in the HCR-20 research on the predictive validity of the HCR-20 should be viewed with caution.

However, there is research contradicting that the psychopathy item should be included and essentially the ‗HCR-19' is a predictive assessment of violent recidivism in its own right (Guy, Douglas & Hendry, 2010). For example, Dolan and Khawaja (2004) found that the HCR-20 without the psychopathy rating was a reasonable robust predictor of self-reported violence and readmission in medium secure services. Additionally Guy et al. (2010) found in their meta-analysis that the exclusion of the psychopathy item did not reduce the HCR-20's accuracy, and that the HCR-20 (without H7) possessed unique predictive validity. Therefore their results suggested that the HCR-20's predictive validity was not negatively impacted by excluding the PCL-R.

Another argument for excluding the PCL-R from the HCR-20 comes from Witt (2000) who states that there are two problems with the reliance of the PCL-R in the HCR-20. First, the PCL-R takes a long time to administer and second some of the PCL-R criteria for assessing anti-social lifestyle are similar to HCR-20 items, such as prior supervision failure, employment problems, relationship instability, early maladjustment, and plans that lack feasibility. Consequently, the HCR-20 is double counting these items (Witt, 2000), suggesting that the two assessments should be considered separately.

Essentially there are ethical considerations that need to be considered for administering the PCL-R for every individual that requires a HCR-20. Thomas-Peter and Jones (2006) argue that it is important that a correct diagnosis is sought due to treatment implications

(e.g., it is thought that psychopaths do not respond to treatment and are therefore excluded from programmes). It is important that adequate training should be obtained before administering the PCL-R so items are scored in a careful and unbiased manner (Hare, 1998). Gacono (2000) demonstrated that misusing the PCL-R could result in inappropriate decision-making that compromises effective treatment. Therefore based on the available evidence it appears that the PCL-R is not essential to include in the HCR-20 (Guy et al., 2000) when predicting future risk especially if there are ethical implications for its inclusion (Thomas-Peter & Jones, 2006).

Another alternative to the HCR-20 is the VRAG is a 12-item risk instrument, which predicts violent recidivism in high-risk mentally disordered offenders. Once completed, an overall risk score is derived that can be checked against the normative data available for the original sample (from which the instrument was developed from). However, a probability statistic to predict the likelihood of future reoffending makes it difficult to ascertain how this can actually affect clinical practice and subsequent risk management (Jones & Plowman, 2005).

CONCLUSIONS

The research has highlighted the importance of clinical assessment with a view to managing future risk of violence (Macpherson & Kevan, 2004). However, at the most, risk assessment schemes, such as the HCR-20 inform decisions of clinicians and other professionals but they do not replace professional responsibility (Douglas et al., 1999).

The research has demonstrated the use of the HCR-20 with a diverse range of service-user groups, including multi-ethnic groups and its applicability to females and individuals with an ID.

Evaluating the HCR-20 against Kline's (1986) criteria of a good test, the research on the HCR-20 has demonstrated that it is reliable, valid and discriminating. The HCR-20 has been shown to have both internal reliability (e.g., Belfrage, 1998; Dahle, 2006) and inter-rater reliability (e.g. Douglas et al., 1999; Gray et al., 2007). The research reviewed has also demonstrated that the HCR-20 also has concurrent validity (e.g. Dahle, 2006) and predictive utility (e.g. Douglas & Webster, 1999; McKenzie & Curr, 2005; Gray et al., 2008). Additionally, the research has shown that the scheme has discriminatory power in that it suggests that the HCR-20's predictive power depends on finer distinctions of service-user groups and contexts. For example, demographic factors and a history of criminality (i.e., H scale) and situational factors (e.g., R scale) appeared to correlate most with violence in the community (e.g., Douglas et al., 1999; Gray et al., 2004), while clinical items (i.e., C scale) seemed to be more predictive on hospital wards (e.g., Macpherson & Kevan, 2004; McKenzie & Curr, 2005). The HCR-20 can therefore inform both risk management of individuals admitted to secure facilities as well as how to manage their future risk in the community.

The other two criteria outlined by Kline (1986) are not met so well by the HCR-20 research. There are not yet any norms for the current version and therefore the scores are not recommended to be used for clinical purposes (Jones & Plowman, 2005).

Additionally the scoring system is not an interval scale but instead is a systematic risk assessment where clinical judgements rather than scoring procedures are used.

Although the HCR-20 has established good criterion variables for violence with satisfactory prediction adequacy, the research efforts have remained unsynchronised, with only limited data available about the validity of the measure across diverse populations (Jones & Plowman, 2005). Kloezeman (2004) points out that predictive validity of the HCR-20 has not yet been carefully assessed using prospective designs. The current research instead has used retrospective coding of the HCR-20 through the use of medical records (e.g., Douglas & Webster, 1999), which can lead to inaccurate findings on both the HCR-20 risk assessment and ratings of violent behaviour. Another limitation of the research is that there are differences in outcome measures (e.g., whether community or inpatient violence) making comparisons across studies difficult due to discrepancies in the research methodology.

Possible future research is required using prospective study designs and to use similar methodology so validation studies can be compared accurately. Future research could also examine the relationship between changes in the dynamic factors of the HCR-20 with treatment so that the impact of risk management strategies can be better understood (Dolan & Khawaja, 2004).

Implications the critique has on the research study and case study

The critique of the HCR-20 has demonstrated its usefulness with both mental health (e.g. McKenzie & Curr, 2005) and ID service-users (e.g. Gray et al., 2007) detained in

medium secure services/hospital settings. The HCR-20 was specifically designed for mentally disordered offenders (the target population discussed in the thesis) with a history of violence, confirming its appropriate use for the service-user, John that is described in Chapter 5. The historical research has also shown the HCR-20 to have both reliability (e.g., Belfrage, 1998; Douglas et al., 1999) and validity, including predictive validity (e.g., Douglas & Webster, 1999; McKenzie & Curr, 2005) to further reinforce its use with John in regards to managing his risk effectively. The evidence presented in the critique also provides support for its use in future research to investigate the usefulness of the HCR-20 for risk prediction and prevention in service-users with an ID discharged from medium secure units to help further increase understanding of the circumstances around future incidences of reoffending and its efficacy in managing risk (e.g., Dolan & Khawaja, 2004). Such research would also add to the sparse evidence base for an ID population (Yacoub et al., 2008) as well as providing information to enable more complex evaluations on the role of management strategies and outcome (Holland et al., 2002).

CHAPTER FIVE

A SINGLE CASE STUDY: THE EXTENDED ASSESSMENT AND INTERVENTION WITH AN INDIVIDUAL DETAINED IN A MEDIUM SECURE UNIT

CHAPTER 6

DISCUSSION

Presentation of findings

The purpose of the thesis was to examine issues related to assessing risk and explore outcomes in offenders detained in medium secure units in the United Kingdom. This investigation began by systematically reviewing the current literature on what factors are associated with reoffending, readmission to hospital, and relapse in offenders with a mental disorder who had been discharged from medium security since the 1990s. Fourteen studies were included in the review which met both the inclusion/exclusion criteria and were assessed to be of a good quality. The systematic review found rates of reoffending after discharge from 5% to 67% over a period of 0.3 to 14 years. A number of different risk factors were identified that increased the likelihood of reoffending after discharge. These included a younger age (e.g., Alexander et al., 2006; Baxter et al., 1999) and more specifically a younger age at first admission (e.g., Friendship et al., 1999; Maden et al., 1999a); a diagnosis of personality disorder/psychopathic disorder (e.g., Davies et al., 2007; McCarthy & Duggan, 2010); previous offending history (e.g., Edwards et al., 2002; Friendship et al., 1999); a shorter length of admission (e.g., Coid et al., 2007; Friendship et al., 1999); and a history of substance misuse (e.g., Baxter et al., 1999; Maden et al., 2006). There were some consistencies between psychiatric and ID cohorts in regards to outcomes and factors associated with outcome. However, comparisons were not possible due to the cohorts with an ID not being very representative of the population. There were only two studies (Alexander et al., 2006; Halstead et al., 2001) identified in the review and they both investigated cohorts discharged from the same ID unit and therefore their sample size was small.

In Chapter 3 an empirical piece of research was presented examining whether perceptions of QoL at two medium secure units had an association with reoffending in ID offenders. This

was to address recommendations from the systematic review that there was a need for more ID research in this area. Additionally, QoL had not previously been considered as a factor associated with outcome despite its importance as a criterion for the evaluation of secure services (MacCulloch & Bailey, 1991) and previous research suggesting a link between the two variables (e.g., Bouman, 2009; Chenhall et al., 2010; McNeill, 2000). Twenty-eight service-users consented to take part that had been an inpatient on one of two NHS medium secure units. Over a mean follow-up period of 4.27 years, 43% of the sample reoffended by displaying offending-type behaviour (one was reconvicted of another offence). Thematic analysis was performed on the transcripts revealing a number of themes. Inter-rater reliability for the themes ranged from 0.41 to 1.00. Themes included what service-users liked best about the medium secure service, what could have been better, staff support, friendships, feeling scared, sessions, feeling bored, contact with the community, having visits, gaining skills for the future, preparation for discharge and how their current experiences compare to the medium secure unit. Due to a small sample size there was no significant difference between reoffenders and non-reoffenders on all the themes, except for negative aspects of the environment, where non-reoffenders rated this as worse then reoffenders (Fisher‘s Exact Test=4.50, $p<0.05$, one-tailed). There was no significant difference between reoffenders and non-reoffenders on all scales of the QoL Questionnaire. Power analysis revealed that with a larger sample (such as the whole cohort being followed up) there may have been a significant difference between the two groups, in that reoffenders rated sense of independence and social belonging as lower than the non-reoffenders.

It was highlighted by previous research that standardised tools, such as the HCR-20 had not been sufficiently explored as a measure of outcome for secure services (Chambers et al., 2009). There was therefore a requirement to evaluate the HCR-20 as to whether it would be

beneficial to use as an outcome tool. A critical review of the HCR-20 was presented in Chapter 4. It was hoped that the predictive validity of the HCR-20 as well as its usefulness as a preventative tool for future reoffending could have been explored in the research reported in Chapter 3 but was not possible due to the data being unavailable. However its potential applicability was demonstrated by the case study. The review indicated that the HCR-20 has both internal reliability (e.g., Dahle, 2006) and inter-rater reliability (e.g., Gray et al., 2007), as well as concurrent validity (e.g., Dahle, 2006) and predictive utility (e.g., Gray et al., 2008). Additionally the research has shown that the scheme has discriminatory power in that it suggests that the HCR-20's predictive power depends on finer distinctions of service-user groups and contexts, for example, the H scale and R scale appeared to correlate most with violence in the community (e.g., Gray et al. 2004), whilst the C scale seemed to be more predictive on hospital wards (McKenzie & Curr, 2005).

The case study in Chapter 5 provided some insight into the rehabilitation of an offender with a mental disorder detained in a medium secure unit. It highlighted the importance of conducting risk assessments such as the HCR-20 to identify targets for intervention to prevent risk of future reoffending as well as informing risk management in settings of lower security, thereby supporting the claim by Chambers et al. (2009) that the HCR-20 should be considered as a standardised tool to assess outcome in secure services. The assessment revealed that the service-user had poor self-esteem and had difficulties expressing negative feedback or asserting his needs. It was therefore decided that the service-user would benefit from an intervention around his self-esteem and improving his interpersonal skills, with the overall goal to help him express himself. Relapse prevention work around his mental illness was also completed to help lower his risk of relapse and future reoffending.

Contribution of the thesis to the current literature and clinical implications

The thesis has investigated the assessment of risk and outcomes in offenders with a mental disorder (i.e., those with mental health problems and those with an ID) detained in medium secure units. The review of the current literature highlighted valuable information about the service-users, admissions and practices in secure services. Outcomes have been discussed briefly in some of the narrative reviews but they included studies that looked at cohorts of service-users discharged as early as 1969. The systematic review in the thesis addressed the gap in the literature by focusing directly on outcomes in secure services and in particularly medium secure services for mental health and ID specialties. A recent review of the literature was useful to evaluate current practices in the United Kingdom and to inform risk management and service delivery of this population. Additionally this was the first review that has combined research on psychiatric and ID secure services. This was important in order for the review to be representative of medium secure services for mentally disordered offenders.

The systematic review provided some indication of the extent and usefulness of medium secure units in the rehabilitation process of these offenders. It has identified possible risk factors that could be targeted to reduce the risk of reoffending. For example, more extensive therapeutic input may be needed for younger service-users with a diagnosis of personality disorder and who have an offending history prior to their admission. Additionally a longer admission may also be beneficial to these service-users to reduce their risk. Identification of these service-users has implications for future risk management. Davies et al. (2007) states that follow-up care needs to be consistent and long-term due to the risk posed by service-users after discharge from medium security. Also information on risk should not be

overlooked or lost which can happen between multiplicity of teams and continual reorganisation of services (Davies et al., 2007).

The empirical piece of research attempted to address limitations of previous research. The findings of the research have provided further insight into the rate of reoffending in ID offenders discharged from medium secure units. The sample consisted of service-users from two medium secure units rather than one, increasing the generalisability of the findings. The qualitative analysis helped to identify aspects of service provision that require attention and improvement. It highlighted that service-users with an ID can explore and understand their experiences of being detained in medium secure care, promoting a person-centred service. Focusing on areas of QoL that matter to the service-user improves effectiveness of services and thereby their outcome (Fish & Lobley, 2001). The comments made by service-users implied that more opportunity should be given to service-users to be able to contribute to decisions involving their own care, including discharge planning as well as getting involved in the sessions on offer, and being given opportunities to reflect upon their own experiences. Additionally it was found that there was a lack of activities during the weekend, highlighting the need of a weekend programme to reduce service-users‘ boredom. Also more effort should also be made to reduce power relationships between service-users and staff so service-users can feel more supported and more competent in making decisions regarding their own lives.

The case study highlighted how mental disorder can impact upon an individual‘s risk of violent offending. Completing risk assessments such as, the HCR-20 to inform decisions around current risk and future risk management of a service-user with a mental disorder demonstrated the clinical usefulness of such assessment tools. The critical review of the

HCR-20 also demonstrated that it can be used with individuals with an ID and highlights that it should be routinely used with such service-users so it can be used in future research to evaluate its applicability in the prevention (e.g., targeting dynamic risk factors through intervention) and prediction of reoffending after discharge from medium secure units.

Limitations

The thesis highlighted the limitations in the research evidence base when exploring risk and outcomes in offenders with a mental disorder who have been detained in secure services. There were a number of difficulties which made a fully rigorous systematic review impossible. These were differences in definitions of outcomes, which raised questions as to whether the outcomes measured and reported in the studies included in the review were truly equivalent across samples. There was also large variation in which offence types were defined and grouped, again making comparisons and interpretations problematic. Between studies there was also a wide variation in quality, study populations, methodology, and a lack of comparable data. The empirical research study also added to these variations when compared to other studies due to differences in methodology of tracing service-users, variable follow-up periods and the source of outcome data. Chambers et al. (2009) also conducted a structured review and intended to identify and assess measures used in forensic mental health services research over the period 1990 to 2006. A total of 308 studies were included and between them 450 instruments used to measure outcome. The review highlighted differences in definition of types of offence, and activity or event. These were all considered as recidivism. Only 17% of the recidivism measures used a formal instrument. This variation makes it difficult to compare outcomes across studies as well as the variation in definitions of recidivism.

Due to these large differences any meaningful meta-analysis could not be carried out (Egger et al., 1998). This limited the extent to which robust conclusions could be drawn. Additionally due to the variations in statistical analyses between studies, effect sizes were not calculated to enable comparisons and to provide an indication of the efficacy of secure services on outcome in offenders with a mental disorder.

There were a number of methodological limitations in exploring the relationship between reoffending and perceptions of QoL, which should be considered when interpreting the findings of the empirical research study. It was a retrospective study design which meant it was not possible to record some variables to provide insight into the circumstances in which reoffending occurred. Such a design also increased the potential of errors in the data collection, such as inaccurate recordings within the service-user files and subjective views of carers. Due to the retrospective nature of the study it also became apparent that current experiences or experiences after discharge may have impacted on the service-users' perceptions of the medium secure unit.

Ethical review procedures highlighted the difficulties in conducting research with vulnerable individuals. To gain ethical approval meant changes to the study design which did not allow for the whole cohort to be followed up unless each participant consented to take part. This was very unlikely and therefore the size of the sample was very small (28 service-users), whereby 46 service-users from the cohort did not participate in the study. Therefore the sample was not representative of service-users from these types of services. There may have been biases within the sample due to possible differences in the characteristics of those service-users that consented and those that did not consent, as well as some professionals making the decision for service-users to take part or not. This made it difficult to accurately

put forward recommendations for improvements in service delivery to reduce the risk of poor outcomes in service-user discharge.

A particular problem with the QoL Questionnaire used in the research was that it was not designed specifically for secure environments. Therefore adaptations were made to the wording of some items to make it more relevant. As a result the QoL Questionnaire may not have adequately measured relevant areas of QoL in medium secure services, which may have affected the findings. The qualitative approach however, also had some limitations. Although every effort was made to follow the recommendations made by Finlay and Lyons (2002) to reduce levels of acquiescence, there may have been an element of service-users being reluctant to criticise and/or agree with the researcher. It became evident that due to their level of intellectual and verbal ability they found open questions very difficult, needing more direction from the researcher as to what they should talk about. The information provided (especially by the less able service-users) may therefore not have been a true representation of their perceptions on QoL, confounding the results.

The HCR-20 was used in the case study in Chapter 5. Although the HCR-20 has established good criterion variables for violence with satisfactory prediction adequacy, the research efforts have remained unsynchronised, with only limited data available about the validity of the measure across diverse populations (Jones & Plowman, 2005), which need to be considered when interpreting John‘s level of risk. The current literature on the HCR-20 has used retrospective codings of the HCR-20 through the use of medical records (e.g. Douglas & Webster, 1999), which can lead to inaccurate findings on both the HCR-20 risk assessment and ratings of violent behaviour. Another limitation of the research is that there are differences in outcome measures (e.g. whether measuring community or inpatient violence)

making comparisons across studies difficult due to discrepancies in the research methodology.

Implications for future research

Due to the retrospective design of current research in this area it appears that there are a number of confounding variables impacting upon the findings with regards to the rate of reoffending and also the context in which reoffending occurs. Therefore the mental state of the service-user at discharge, psychiatric follow-up on release into the community (forensic and general services), social support on release into the community and mental state at reconviction may be variables that could be important to record in future studies (Friendship et al., 1999). Research needs to be conducted using prospective study designs, (e.g., completing the QoL Questionnaire and interviewing service-users about their experiences when they are discharged from the medium secure unit and to collect data at set follow-up points) to see whether QoL has a relationship to later reoffending.

Additionally, direct measurement of therapeutic input and a focus on examining the effectiveness of interventions after discharge would also be useful to consider in future research. For example, McCarthy and Duggan (2010) investigated level of treatment completion and engagement in their study as a factor associated with offending outcomes. It would therefore be interesting to investigate this in more detail across medium secure units especially as their study was limited to a personality disorder medium secure unit.

Further research is needed to develop standardised instruments to measure QoL in secure services. Chambers et al. (2009) conducted a structured review to identify and assess measures used in forensic mental health services research over the period 1990 to 2006.

They found that none of the more common instruments, such as the HCR-20 (Webster et al., 1997), were used to evaluate outcomes. This should be an aim for future research to see whether the HCR-20 can reliably predict whether individuals reoffend after discharge from medium secure services as well as exploring its ability to inform risk management in this population effectively.

Additionally, Kloezeman (2004) pointed out that the predictive validity of the HCR-20 has not yet been carefully assessed using prospective designs. This should be an aim of future research as well as using similar methodology so validation studies can be compared accurately. Future research could also examine the relationship between changes in the dynamic factors of the HCR-20 with treatment so that the impact of risk management strategies can be better understood (Dolan & Khawaja, 2004).

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APPENDICES

APPENDIX 1:
Search Terms and Syntax for Literature Searches

PsycINFO (including Journals@OVID full text)
(1985 to April 2008; 2002 to August 2010)

1. Recidiv$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
2. re-offend$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
3. re-arrest.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
4. follow-up.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
5. (learning adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
6. (learning adj difficult$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
7. (development$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
8. (intellectual$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
9. (mental$ adj retard$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
10. (mental$ adj handicap$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
11. (mental adj health).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
12. psychiatric.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
13. (mental$ adj disorder$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
14. (mental$ adj ill$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
15. (secure adj service).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
16. (secure adj unit).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
17. (secure adj hospital).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
18. (secure adj setting).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
19. 1 or 2 or 3 or 4
20. 5 or 6 or 7 or 8 or 9 or 10
21. 11 or 12 or 13 or 14
22. 15 or 16 or 17 or 18
23. 19 and 20 and 22
24. 19 and 21 and 22
25. remove duplicates from 23
26. remove duplicates from 24

British Nursing Index Archive
(1985 to April 2008; 2007 to September 2010)

1. Recidiv$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
2. re-offend$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
3. re-arrest.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
4. follow-up.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
5. (learning adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
6. (learning adj difficult$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
7. (development$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
8. (intellectual$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
9. (mental$ adj retard$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
10. (mental$ adj handicap$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
11. (mental adj health).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
12. psychiatric.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
13. (mental$ adj disorder$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
14. (mental$ adj ill$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]

15. (secure adj service).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
16. (secure adj unit).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
17. (secure adj hospital).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
18. (secure adj setting).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
19. 1 or 2 or 3 or 4
20. 5 or 6 or 7 or 8 or 9 or 10
21. 11 or 12 or 13 or 14
22. 15 or 16 or 17 or 18
23. 19 and 20 and 22
24. 19 and 21 and 22
25. remove duplicates from 23
26. remove duplicates from 24

Ovid MEDLINE (R)
(1988 to April 2008; 2006 to August 2010)

5. Recidiv$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
6. re-offend$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
7. re-arrest.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
8. follow-up.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
9. (learning adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
10. (learning adj difficult$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
11. (development$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
12. (intellectual$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
13. (mental$ adj retard$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
14. (mental$ adj handicap$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
15. (mental adj health).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
16. psychiatric.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
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18. (mental$ adj ill$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
19. (secure adj service).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
20. (secure adj unit).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
21. (secure adj hospital).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
22. (secure adj setting).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
23. 1 or 2 or 3 or 4
24. 5 or 6 or 7 or 8 or 9 or 10
25. 11 or 12 or 13 or 14
26. 15 or 16 or 17 or 18
27. 19 and 20 and 22
28. 19 and 21 and 22
29. remove duplicates from 23
30. remove duplicates from 24

EMBASE
(1980 to 2008; 1996 to 2010)

1. Recidiv$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
2. re-offend$.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]

3. re-arrest.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
4. follow-up.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
5. (learning adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
6. (learning adj difficult$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
7. (development$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
8. (intellectual$ adj disab$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
9. (mental$ adj retard$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
10. (mental$ adj handicap$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
11. (mental adj health).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
12. psychiatric.mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
13. (mental$ adj disorder$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
14. (mental$ adj ill$).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
15. (secure adj service).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
16. (secure adj unit).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
17. (secure adj hospital).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
18. (secure adj setting).mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, nm, tc, id]
19. 1 or 2 or 3 or 4
20. 5 or 6 or 7 or 8 or 9 or 10
21. 11 or 12 or 13 or 14
22. 15 or 16 or 17 or 18
23. 19 and 20 and 22
24. 19 and 21 and 22
25. remove duplicates from 23
26. remove duplicates from 24

Web of Knowledge
(1990 to 2008; 2007 to 2010)

1. #20 AND #18
   Timespan=All Years
2. 24. #20 AND #19
   Timespan=All Years
3. 23. #21 AND #18
   Timespan=All Years
4. 22. #21 AND #19
   Timespan=All Years
5. 21. #3 OR #2 OR #1
   Timespan=All Years
6. 20. #7 OR #6 OR #5 OR #4
   Timespan=All Years
7. 19. #13 OR #12 OR #11 OR #10 OR #9 OR #8
   Timespan=All Years
8. 18. #17 OR #16 OR #15 OR #14
   Timespan=All Years
9. Title=(psychiatric)
   Timespan=All Years
10. 16. Title=(mental* ill*)
    Timespan=All Years
11. 15. Title=(mental* disorder*)
    Timespan=All Years
12. 14. Title=(mental health)
    Timespan=All Years
13. 13. Title=(mental* retard*)
    Timespan=All Years
14. 12. Title=(mental* handicap*)
    Timespan=All Years
15. 11. Title=(development* disab*)

Timespan=All Years

16. Title=(intellectual* disab*)
    Timespan=All Years
17. Title=(learning difficult*)
    Timespan=All Years
18. Title=(learning disab*)
    Timespan=All Years
19. 7. Title=(follow-up)
    Timespan=All Years
20. Title=(re-arrest)
    Timespan=All Years
21. Title=(re-offend*)
    Timespan=All Years
22. Title=(recidiv*)
    Timespan=All Years
23. Title=(secure unit)
    Timespan=All Years
24. 2. Title=(secure hospital)
    Timespan=All Years
25. Title=(secure service)
    Timespan=All Years
26. Title=(secure setting)
    Timespan=All Years

APPENDIX 2:
Inclusion & Exclusion Criteria for Studies

	Inclusion	Exclusion
Population	Men over the age of 18 years with mental health problems and a forensic history Men over the age of 18 years with a learning disability and a forensic history	Women with mental health and/or learning disability with a forensic history Adolescents with mental health and/or learning disability with a forensic history
Exposure	Medium secure services (both NHS and independent sector)	Prison service Low secure services Non- secure services
Comparator	Services between mental health and learning disability forensic services Differences between mental health and learning disability services Non-reoffenders	Community forensic services/outpatients Non-forensic services
Outcomes	Recidivism Re-offending Re-arrest Re-admission to hospital Factors associated with outcome	Inpatient characteristics Inpatient care/needs Service delivery Admissions Factors associated with onset of offending rather than re-offending Patient satisfaction Evaluation of psychometrics for risk.
Study design	All original cohort studies	Reviews, commentaries, opinion and expert papers
Time span	After 1990s (due to changes in service provision, The Reed Report, 1992)	Pre 1990s
Country of study	United Kingdom	All other countries

APPENDIX 3:
Screening of Studies using the Inclusion and Exclusion Criteria

REFERENCES	Included/excluded?	Reason for exclusion
(No author), (2000). The role of ethnic origin - admission rates to medium secure psychiatric unit, Journal of Advanced Nursing, 31, 997.	Excluded	Admissions
Akande, E, Beer, M. D, & Ratnajothy, K. (2007). Outcome study of service-users exhibiting challenging behaviours four years after discharge from a low secure mental health unit, Journal of Psychiatric Intensive Care, 3, 21-26	Excluded	Outcomes were on a number of measures rather than a reconviction study
Alexander, R. T., et al. (2006). Long-term outcome from a medium secure service for people with intellectual disability, Journal of Intellectual Disability Research, 50, 305-15.	**Included**	**N/A**
Bailey, J., & MacCulloch, M. (1992a). Characteristics of 122 cases discharged directly to the community from a new special hospital and some comparisons of performance. Journal of Forensic Psychiatry, 3, 91-112.	Excluded	Discharge cohort was between 1974 and 1989.
Bailey, J., & MacCulloch, M. (1992b). Patterns of reconviction in service-users discharged directly to the community from a special hospital: implications for aftercare. Journal of Forensic Psychiatry, 3, 445-461.	Excluded	Discharge cohort was between 1974 and 1989.
Baker, E. (2003). Service user views on a low-secure psychiatric ward, Clinical Psychology, 25, 11-13.	Excluded	Satisfaction of service-users
Barron, P., Hassiotis, A. & Banes, J. (2002). Offenders with intellectual disability: the size of the problem and therapeutic outcomes, Journal of Intellectual Disability Research, 46, 454-63.	Excluded	Review
Barron, P., Hassiotis, A., & Banes, J. (2004). Offenders with intellectual disability: the size of the problem and therapeutic outcomes. Journal of Intellectual Disability Research 48, 454-63.	**Included**	**N/A**
Baxter, R., Rabe-Hesketh, S., & Parrott, J. (1999). Characteristics, needs and reoffending in a group of service-users with schizophrenia formerly treated in medium security. Journal of	**Included**	**N/A**

Forensic Psychiatry, 10, 69-83.		
Beail, N. (2001). Recidivism following psychodynamic psychotherapy amongst offenders with intellectual disabilities. The British Journal of Forensic Practice, 3, 33-37.	Excluded	Outpatient setting
Belfrage, H. (1998). A ten-year follow-up of criminality in Stockholm mental service-users - New evidence for a relation between mental disorder and crime. British Journal of Criminology, 38, 145-55.	Excluded	Non-UK study
Bischof, H. L. (1986). Incidence of Recidivism Among Mentally Diseased Criminal Offenders During Compulsory Hospitalization in A Psychiatric-Hospital - A Contribution to Brinkmanship Between Correction and Safeguarding Against Potential Repeat Offender. Psychiatrische Praxis, 13, 88-93.	Excluded	Pre-1990s
Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. Psychological Bulletin, 123, 123-142.	Excluded	Canadian
Buchanan, A. (1998). Criminal conviction after discharge from special (high security) hospital, British Journal of Psychiatry, 172, 472-476	Excluded	Cohort between 1982 and 1983
Buchanan A., Reiss, D., & Taylor, P.J. (2003). Does 'like predict like' when service-users discharged from high secure hospitals re-offend? An instrument to describe serious offences, Psychological Medicine, 33, 549-53.	Excluded	Development of instrument
Buchanan, A., Taylor, P. and Gunn, J. (2004). Criminal conviction after discharge from special (High security) Hospital: The circumstances of early conviction on a serious charge, Psychology, Crime & Law, 10, 5-19.	**Included**	**N/A**
Burns, M., et al. (2003). Anger management training: the effects of a structured programme on the self-reported anger experience of forensic inpatients with learning disability, Journal of Psychiatric & Mental Health Nursing, 10, 569-77.	Excluded	Not recidivism
Carlin, P., Gudjonsson, G. & Yates, M. (2005). Patient satisfaction with services in medium secure units, Journal of Forensic Psychiatry and Psychology, 16, 714-728.	Excluded	Patient satisfaction with service

Castro, M., Cockerton, T. & Birke, S. (2002). From discharge to follow-up: A small-scale study of medium secure provision in the independent sector, British Journal of Forensic Practice, 4, 31-39.	**Included**	**N/A**
Chaplin, E. H. (2006). Forensic aspects in people with intellectual disabilities, Current Opinion in Psychiatry, 19, 486-91.	Excluded	Review
Citrome, L., Green, L. & Fost, R. (1994). Length of Stay and Recidivism on A Psychiatric Intensive-Care Unit. Hospital and Community Psychiatry, 45, 74-76.	Excluded	US study
Clare, I. C. H. & Murphy, G. H (1993). MIETS: a service option for people with mild mental handicaps and challenging behaviour or psychiatric problems, 3: Follow-up of the first 6 service-users to be discharges: Diverse measures of the effectiveness of the service.	Excluded	The unit is not locked all the time– not officially a secure service
Clarke, D. J et al. (1992). Mental impairment in the West Midlands. Medicine, Science and the Law, 32, 225-232.	Excluded	Patient characteristics
Coid, J. (1991). A survey of service-users from five health districts receiving special care in the private sector. Psychiatric Bulletin, 15, 257-262.	Excluded	Patient characteristics and needs
Coid, J, et al. (2007). Service-users discharged from medium secure forensic psychiatry services: reconvictions and risk factors, British Journal of Psychiatry, 190, 223-29.	**Included**	**N/A**
Coid, J., et al. (2001). Medium secure forensic psychiatry services: Comparison of seven English health regions, British Journal of Psychiatry, 178, 55-61.	Excluded	Patient Characteristics and provision
Coid, J, Hickey, N., & Yang, M.M. "Comparison of outcomes following after-care from forensic and general adult psychiatric services, British Journal of Psychiatry, 190, 509-14.	Excluded	Service delivery implications
Collins, M. et al. (2003). Meeting service-users' needs in secure forensic psychiatric units. Nursing Standard, 17, 33-34	Excluded	Inpatient needs assessment
Cope, R., & Ward, M. (1993). What happens to Special Hospital service-users admitted to medium security? Journal of Forensic Psychiatry, 4, 13-24.	Exclude	Cohort was pre 1990s

Daffern, M., et al. (2007). Appropriate treatment targets or products of a demanding environment? The relationship between aggression in a forensic psychiatric hospital with aggressive behaviour preceding admission and violent recidivism, Psychology Crime & Law, 13, 431-41.	Excluded	Australian
Davies, S., et al. (2007). Long-term outcomes after discharge from medium secure care: a cause for concern, British Journal of Psychiatry, 191, 70-74.	**Included**	**N/A**
Davison, S., Jamieson, E., and Taylor, P. J. (1999). Route of discharge for special (high-security) hospital service-users with personality disorder: Relationship with re-conviction, British Journal of Psychiatry, 175, 224-27.	Excluded	Cohort pre 1990s
Day, K. (1988). A hospital-based treatment programme for male mentally handicapped offenders. British Journal of Psychiatry, 153, 635-644	Excluded	Pre-1990s
Day, K. (1993). Crime and mental retardation: A review. In K. Howells & C. R Hollins (Eds.) Clinical approaches to the mentally disordered offender, Wiley & Sons Ltd, UK.	Excluded	Review
De, Taranto N., et al. (1998). Medium secure provision in NHS and private units, Journal of Forensic Psychiatry, 9, 369-378.	Excluded	Patient characteristics
Dell, S., Robertson. G., & Parker, E. (1987). Detention in Broadmoor: Factors in length of stay, British Journal of Psychiatry, 150, 824-827.	Excluded	Pre 1990s Outcome not explored
Eastman, N.L.G. (1993). Forensic psychiatric services in Britain: A current review. International Journal of Law and Psychiatry, 16, 1-26	Excluded	Review
Edwards, J., Steed, P & Murray, K. (2002). Clinical and Forensic outcome 2 years and 5 years after admission to a medium secure unit. The Journal of Forensic Psychiatry, 13, 68-87.	**Included**	**N/A**
Exworthy, T. (2000). Secure psychiatric services, Current Opinion in Psychiatry, 13, 581-585.	Excluded	Review
Falla, S., Sugarman, P. & Roberts, L. (2000). Reconviction after discharge from a regional secure unit, Medicine, Science & the Law, 40, 156-57.	**Included**	**N/A**

Faulk, M. & Taylor, J. C. (1986). Psychiatric-Interim-Regional-Secure-Unit - 7 Years Experience, Medicine Science and the Law, 26, 17-22.	Excluded	Pre-1990s
Fernando, H., &Sockalingum, A. (2001). Review of a local secure service provision for people with learning disabilities and complex health care needs, Journal of Learning Disabilities, 5, 331-43.	Excluded	Aims of service & service characteristics
Fiorentini, H. (1979). Recidivism of Convicted Killers According to Mental-Health Data, Annales Medico-Psychologiques, 137, 167-68.	Excluded	Pre-1990s
Fish, R. and Lobley, J. (2001). Evaluating a forensic service for people with learning disabilities: comparing approaches, Journal of Learning Disabilities, 2, 97-109.	Excluded	Community forensic service
Fishel, L., et al. (1993). A Preliminary-Study of Recidivism Under Managed Mental-Health-Care, Hospital and Community Psychiatry, 44, 919-20.	Excluded	US study
FRIENDSHIP, C., et al. (1999). Re-offending: Service-users discharged from a Regional Secure Unit, Criminal Behaviour and Mental Health, 9, 226-236	**Included**	**N/A**
Gardner, B. (2004). Characteristics of service-users with an intellectual disability (ID) admitted to a medium secure service in the UK, Journal of Intellectual Disability Research, 48, 463.	Excluded	Patient characteristics
Gibbens, T. C. N. & Robertson, G. (1983). A survey of the criminal careers of Hospital Order Service-users. British Journal of Psychiatry, 143, 362-369	Excluded	Pre 1990s
Gibbens, T. N. C & Roberston, G. (1983). A survey of the criminal careers of restriction order service-users. British Journal of Psychiatry, 143, 370-375.	Excluded	Pre 1990s
Gray, N, et al. (2004). Relative Efficacy of Criminological, Clinical, and Personality Measures of Future Risk of Offending in Mentally Disordered Offenders: A Comparative Study of HCR-20, PCL:SV, and OGRS. Journal of Consulting and Clinical Psychology, 72, 523-30.	Excluded	Evaluation of psychometrics
Greenberg, W. M., Shah, P. J & Seide, M. (1993). Recidivism on An Acute Psychiatric Forensic Service. Hospital and Community Psychiatry, 44, 583-85.	Excluded	US study

Gudjonsson, G. & Young, S. (2007). The role and scope of forensic clinical psychology in secure unit provision: A proposed service model for psychological therapies. Journal of Forensic Psychiatry and Psychology, 18, 1-15.	Excluded	Service provision and development
Guze, S. B., Goodwin, D. W. & Crane, J. B. (1970). Criminal Recidivism and Psychiatric Illness. American Journal of Psychiatry, 127, 832.	Excluded	US study
Halstead, S (1996). Forensic psychiatry for people with learning disability. Advances in Psychiatric Treatment, 2, 76-85	Excluded	Review/expert paper
Halstead, Simon, et al. (2001). Discharges from a Learning-disability Medium Secure Unit: What Happens to Them? British Journal of Forensic Practice, 3, 11-21.	**Included**	**N/A**
Hassiotis, A., et al. (2001). Intellectual functioning and outcome of service-users with severe psychotic illness randomised to intensive case management: Report from the UK700 trial. British Journal of Psychiatry, 178, 166-71.	Excluded	Not forensic
Hayes, S. (2007). Missing out: offenders with learning disabilities and the criminal justice system. British Journal of Learning Disabilities Special Issue: Offenders with learning disabilities, 35,146-53.	Excluded	Review
HEAP, M. (2003). Differences in the progress of discharged and undischarged service-users in a medium secure unit: a pilot study. Journal of Psychiatric & Mental Health Nursing, 10, 534-42.	Excluded	Recidivism not explored
Heyman, B., et al. (2004). Forensic mental health services as a risk escalator: a case study of ideals and practice. Health, Risk & Society, 6 (4), 307-325.	Excluded	Not a follow-up study
Higo, R., & Shetty, G. (1991). Four years' experience of a regional secure unit. Journal of Forensic Psychiatry, 2, 202-10.	Excluded	Patient Characteristics/ admissions
Holland, T., Clare, I.C.H & Mukhopadhyay, T. (2002). Prevalence of 'criminal offending' by men and women with intellectual disability and the characteristics of 'offenders': implications for research and service development. Journal of Intellectual Disability Research, supplement 46, 6-20.	Excluded	Review

Hughes, G. & Gladden, S. (2003). A survey of clinical-forensic psychological services in secure mental health settings, Clinical Psychology, 29, 20-22.	Excluded	Inpatient care
Isherwood, T., et al. (2007). 'Getting into trouble': A qualitative analysis of the onset of offending in the accounts of men with learning disabilities. The Journal of Forensic Psychiatry and Psychology, 18, 221-234.	Excluded	Onset of offending
Jamieson, E., & Taylor, P. (2002). Follow-up of serious offender service-users in the community: multiple methods of tracing. International Journal of Methods in Psychiatric Research, 11, 112-124.	Excluded	Evaluation of using multiple sources to trace discharged service-users
Jamieson, E., Davison, S. & Taylor, P. J. (1999). Reconviction of special (high security) hospital service-users with personality disorder: Its relationship with route of discharge and time at risk. Criminal Behaviour and Mental Health, 9, 226-236.	Excluded	Discharge cohort year was 1984 (therefore pre-1990s)
Jamieson, E., Taylor, P. (2004). A reconviction study of special (high security) hospital service-users. British Journal of Criminology, 44, 783-802.	Excluded	Discharge cohort was 1984
Kaye, C. (1998). Chance and control: politics and management in secure services. Criminal Behaviour & Mental Health, 8, 275-287.	Excluded	Expert paper
Lambert, E. W., Sherwood, V. & Fitzpatrick, L. J. (1983). Predicting Recidivism Among 1st Admissions at Tennessee State Psychiatric-Hospitals. Hospital and Community Psychiatry, 34, 951-53.	Excluded	US study
Langstrom, N., Sjostedt, G. & Grann, M. (2004). Psychiatric disorders and recidivism in sexual offenders. Sexual Abuse-A Journal of Research and Treatment, 16, 139-50.	Excluded	Swedish study
Lelliott, P., Audini, B., & Duffett, R. (2001). Survey of service-users from an inner-London health authority in medium secure psychiatric care. British Journal of Psychiatry, 178, 62-66.	Excluded	Patient Characteristics
Lindsay, W. R., Elliot, S. F. & Astell, A. (2004). Predictors of sexual offence recidivism in offenders with intellectual disabilities. Journal of Applied Research in Intellectual Disabilities, 17, 299-305.	**Included**	**N/A**

Lindsay, W. R. & Macleod, F. (2001). A review of forensic-disability research. The British Journal of Forensic Practice, 3, 4-10.	Excluded	Review
Lindsay, W. R. & Taylor, J. L. (2005). A selective review of research on offenders with developmental disabilities: Assessment and treatment, Clinical Psychology and Psychotherapy, 12, 201-214.	Excluded	Review
Lindsay, W. R et al (2002). A treatment service for sex offenders and abusers with intellectual disability: Characteristics of referrals and evaluation, Journal of Applied Research in Intellectual Disabilities, 15, 166-174.	Excluded	Open unit
Lindsay, W. R. et al (2004). Sexual and non-sexual offenders with intellectual and learning disabilities: a comparison of characteristics, referral patterns and outcome, Journal of interpersonal Violence, 19, 875-890.	Excluded	Community
Lindsay, W. R., et al. (2004). Women with intellectual disability who have offended: characteristics and outcome. Journal of Intellectual Disability Research, 48, 580-90.	Excluded	Women
Lindsay, W. R., et al. (2006). A community forensic intellectual disability service: Twelve year follow up of referrals, analysis of referral patterns and assessment of harm reduction. Legal and Criminological Psychology, 11, 113-30.	Excluded	Community
Lindsay, W. R. (2002). Integration of Recent Reviews on Offenders with Intellectual Disabilities. Journal of Applied Research in Intellectual Disabilities, 15, 111-19.	Excluded	Review
Linhorst, D. M., McCutchen, T. A., & Bennett, L. (2003). Recidivism among offenders with developmental disabilities participating in a case management program. Research in Developmental Disabilities, 24, 210-30.	Excluded	US study
Lovell, D., Gagliardi, G. J. & Peterson, P. D. (2002). Recidivism and use of services among persons with mental illness after release from prison. Psychiatric Services, 53, 1290-96.	Excluded	Prison setting
Lyall, I., Holland, A. J., & Collins, S. (1995). Offending by adults with learning disabilities and the attitudes of staff to offending behaviour: Implications for service development. Journal of	Excluded	Prevalence Not secure services

Intellectual Disability Research, 39, 501-508.		
MacCulloch, M. & Bailey, J (1991). Issues in the provision and evaluation of forensic services. Journal of Forensic Psychiatry, 2, 247-265	Excluded	Expert paper
MacKenzie-Davies, N., & Mansell, J. (2007). Assessment and treatment units for people with intellectual disabilities and challenging behaviour in England: an exploratory survey, Journal of Intellectual Disability Research, 51, 802-811.	Excluded	Characteristics
Maden, A. (2001). Medium secure care and research in forensic psychiatry. British Journal of Psychiatry, 178, 5-6.	Excluded	Commentary
Maden, A., et al. (1999). Outcome of admission to a medium secure psychiatric unit I. Short- and long-term outcome. British Journal of Psychiatry, 175, 313-16.	**Included**	**N/A**
Maden, A., et al. (1999). Outcome of admission to a medium secure psychiatric unit 2. Role of ethnic origin. British Journal of Psychiatry, 175, 317-21.	**Included**	**N/A**
Maden, A., et al. (2004). Offending in psychiatric service-users after discharge from medium secure units: a prospective national cohort study. British Medical Journal, 328, 1534.	**Included**	**N/A**
Maden, A. (2007). A third of men and 15% of women discharged from medium secure forensic psychiatry services in the UK re-offend. Evidence-Based Mental Health, 10, 128.	Excluded	Taken from Maden et al (2004)
Maden, A., et al. (2006). Gender differences in reoffending after discharge from medium-secure units: National cohort study in England and Wales. British Journal of Psychiatry, 189, 168-72.	**Included**	**N/A**
Mason, J. & Murphey, G. (2002). Intellectual disability amongst people on probation: prevalence and outcome. Journal of Intellectual Disability Research, 46, 230-238.	Excluded	Probation service
McCarthy, L. & Duggan, C. (2010). Engagement in a medium secure personality disorder service: A comparative study of psychological functioning and offending outcomes.	**Included**	**N/A**

Criminal Behaviour and Mental Health, 20, 112-128.		
McKenna, John, et al. (1999). Long-stay medium secure" service-users in special hospital. Journal of Forensic Psychiatry, 12, 78-89.	Excluded	Patient characteristics
Milton, J., et al. (2007). Characteristics of offenders referred to a medium secure NHS personality disorder service: The first five years. Criminal Behaviour and Mental Health, 17, 57-67.	Excluded	Patient characteristics
Mohan, D., et al. (1997). Developments in the use of regional secure unit beds over a 12-year period. Journal of Forensic Psychiatry, 8, 321-335.	Excluded	Admissions
Moore, M. E. & Hiday, V.A. (2006). Mental health court outcomes: A comparison of re-arrest and re-arrest severity between mental health court and traditional court participants. Law and Human Behaviour, 30, 659-74.	Excluded	Court settings
Moss, K. R. (2000). A comparative study of admissions to two public sector regional secure units and one independent medium-secure psychiatric hospital. Medicine Science and the Law, 40, 216-22.	Excluded	Admissions
Murphy, G., et al (1991). MIETS: a service option for people with mild mental handicaps and challenging behaviour or psychiatric problems, 1: Philosophy, service, & service users, Mental Handicap Research, 4, 41-66.	Excluded	The unit is not locked all the time– not officially a secure service
Murphy, G. & Clare, I. (1991). MIETS: a service option for people with mild mental handicaps and challenging behaviour or psychiatric problems, 2: Assessment, treatment, & outcome for service-users and service effectiveness, Mental Handicap Research, 4, 180-206.	Excluded	The unit is not locked all the time– not officially a secure service
Nelson, D. (2003). Service innovations: The Orchard Clinic: Scotland's first medium secure unit. Psychiatric Bulletin, 27, 105-107.	Excluded	Commentary
Page, M. J. (2005). Low secure care: A description of a new service. Journal of Psychiatric Intensive Care, 1, 89-96.	Excluded	Description of service
Payne, C., McGabe, S., & Walker, N. (1974). Predicting offender-service-users' reconvictions,	Excluded	Pre 1990s

British Journal of Psychiatry, 125, 60-64.		
Polk-Walker, G. C., et al. (1993). Psychiatric recidivism prediction factors. West J Nurs Res, 15, 163-73.	Excluded	US study
Power, N., Harwood, D., & Akinkunmi, A. (2006). Tilting the balance: The first long-term medium secure unit in the NHS in England and Wales. Psychiatric Bulletin, 29, 137-140.	Excluded	Patient Characteristics Description of service
Quin, P., & Ward, M. (2000). What happens to special hospital service-users admitted to medium security? Medicine, Science & the Law, 40, 345-349.	**Included**	**N/A**
Quinsey, V. L., Book, A., & Skilling, T. A. (2004). A follow-up of deinstitutionalized men with intellectual disabilities and histories of antisocial behaviour. Journal of Applied Research in Intellectual Disabilities, 17, 243-53.	Excluded	Canadian
Reed, S., et al. (2004). People with learning disabilities in a low secure in-patient unit: comparison of offenders and non-offenders. British Journal of Psychiatry, 185, 499-504.	Excluded	The outcome was challenging behaviour i.e. aggressive
Rice, M. E., Quinsey, V. L., & Harris, G. T. (1991). Sexual Recidivism Among Child Molesters Released from A Maximum Security Psychiatric Institution. Journal of Consulting and Clinical Psychology, 59, 381-86.	Excluded	Canadian study
Ricketts, D., et al. (2001). First admissions to a regional secure unit over a 16-year period: Changes in demographic and service characteristics. Journal of Forensic Psychiatry, 12, 78-89.	Excluded	Admissions
Riordan, S., Smith, H., & Humphreys, M. (2002). Conditionally discharged restricted service-users and the need for long-term medium security. Medicine, Science & the Law, 42, 339-43.	Excluded	Patient characteristics
Rolland, S. M. (1980). Recidivism among treated criminal psychiatric service-users. Bull Am Acad Psychiatry Law, 8, 15-27.	Excluded	Pre-1990s
Sansom, D. & Cumella, S. (1995). 100 Admissions to A Regional Secure Unit for People with	**Included**	**N/A**

A Learning-Disability. Journal of Forensic Psychiatry, 6 267-276.		
Sapsford, R. J. & Fairhead, S. (1980). Reconviction, Alcohol and Mental Disorder - the Prediction of Re-Offending Among Released Prisoners. British Journal of Criminology 20, 157-65.	Excluded	Prison setting
Shaw, J., Davies, J., & Morey, H. (2001). An assessment of the security, dependency and treatment needs of all service-users in secure services in a UK health region. The Journal of Forensic Psychiatry, 12, 610-637.	Excluded	Inpatient care
Shurett, R. B., et al. (2003). Rate of recidivism in a public psychiatric hospital." Schizophrenia Research, 60, 8-9.	Excluded	Not forensic
Simpson, M. K. & Hogg, J. (2001). Patterns of offending among people with intellectual disability: a systematic review. Part I: methodology and prevalence. Journal of Intellectual Disability Research, 45, 384-396.	Excluded	Prevalence Review
Simpson, M. K. Hogg, J. (2001). "Patterns of offending among people with intellectual disability: a systematic review. Part II: predisposing factors. Journal of Intellectual Disability Research, 45, 397-406.	Excluded	Offender characteristics and types of offending Review
Snowden, R. J., et al. (2007). Actuarial prediction of violent recidivism in mentally disordered offenders. Psychological Medicine, 37, 1539-49.	Excluded	Evaluation of psychometrics
Steptoe, L., et al. (2004). Personality disorder, risk of recidivism and intellectual disability. Journal of Intellectual Disability Research, 48, 465.	Excluded	Evaluation of psychometrics
Taylor, P. J., Maden, A. & Jones, D. (1996). Long-term medium security hospital units: a service gap of the 1990s? Criminal Behaviour and Mental Health, 6, 213-239.	Excluded	Service development issues Expert Paper
Tiihonen, J. & Hakola, P. (1994). Psychiatric-Disorders and Homicide Recidivism." American Journal of Psychiatry, 15, 436-38.	Excluded	Finnish study
Turner, J. T. and Wan, T. T. H. (1993). Recidivism and Mental-Illness - the Role of Communities. Community Mental Health Journal, 29, 3-14.	Excluded	Not Forensic

Wessley, S., Castle D., Douglas, A. J., & Taylor, P. J. (1994). The criminal careers of incident cases of schizophrenia. Psychological Medicine, 24, 483-502.	Excluded	Not secure service specific
Winter, N., Holland, A. J., & Collins, S. (1997). Factors predisposing to suspected offending by adults with self-reported learning disabilities. Psychological Medicine, 27, 595-607.`	Excluded	Offenders in Custody
Yates, P., Kramer, T., & Garralda, M. E. (2006). Use of a routine mental health measure in an adolescent secure unit. British Journal of Psychiatry, 188, 583-84.	Excluded	Adolescent
Vaughn, G. & Done, D. J (2000). Recent research relevant to discharge planning from medium secure psychiatric units: re-examining the literature. The Journal of Forensic Psychiatry, 11 (2), 372-389.	Excluded	Review Not outcome
Vaughn, P. J. (2003). Secure care and treatment needs of individuals with learning disability and severe challenging behaviour. British Journal of Learning Disabilities, 31, 113-117.	Excluded	Patient characteristics and treatment needs

APPENDIX 4:
Quality Assessment of Cohort Studies:
Checklist

Study:

Quality Criteria	Yes	No	Can't Tell
Screening Questions			
Did the study address a clearly focused issue? – The population identified – The risk factors studied – The outcomes considered			
Did the authors use an appropriate method to answer their question? – Did it address the study question?			
Detailed Questions			
Was the cohort recruited in an acceptable way? – Was the cohort based on a representative sample? – Were the criteria for inclusion explicit?			
Was there sufficient information about the cohort? – Did the authors include information on IQ level, offence details, and admission details?			
Was the exposure accurately measured and identified to minimise bias? – Did they use objective measurements? – Did they use subjective measurements? – Do the measures truly reflect what you want them to?			
Was the outcome accurately measured to minimise bias? – Did they use subjective or objective measurements? – Do the measures truly reflect what you want them to? – Has a reliable system been established for detecting all cases? – Was a dose-response relationship between intervention (i.e. length of stay at MSU) and outcome (re-offending) demonstrated?			
Have the authors identified all important confounding factors? 1. Were the groups (re-offenders and non re-offenders)			

comparable on all important confounding factors? 2. Was there adequate adjustment for the effects of these confounding factors?			
Was the follow-up of subjects long enough for outcomes to occur? What proportion of the cohort was followed-up? 1. The persons that are lost to follow-up may have different outcomes than those available for assessment 2. Anything special about the outcome of the people leaving, or the exposure of the people entering the cohort?			
What are the results?			
What are the results of the study? How precise are the results? How precise is the estimate of risk (size of confidence intervals)			
Do you believe the results? 1. Can it be due to bias, chance or confounding? 2. Are the design and methods of this study sufficiently flawed to make the results unreliable?			
Will the results help me locally?			
Can the results be applied to the local population? 1. The subjects covered in the study could be sufficiently different from your population to cause concern 2. Your local setting is likely to differ much from that of the study 3. Can you quantify the local benefits and harms?			
Do the results of this study fit with other available evidence?			
Total score: **Percentage of criteria the study fulfils:**			

APPENDIX 5:
Quality Assured Studies

REFERENCES	Included/excluded based on quality assessment criteria
Alexander, R. T., et al. (2006). Long-term outcome from a medium secure service for people with intellectual disability. Journal of Intellectual Disability Research, 50, 305-15.	**Included (69%)**
Barron, P., Hassiotis, A. & Banes, J. (2004). Offenders with intellectual disability: the size of the problem and therapeutic outcomes. Journal of Intellectual Disability Research, 48, 454-63.	Excluded (55%)
Baxter, R., Rabe-Hesketh, S., & Parrott, J. (1999). Characteristics, needs and reoffending in a group of service-users with schizophrenia formerly treated in medium security. Journal of Forensic Psychiatry, 10, 69-83.	**Included (67%)**
Buchanan, A., Taylor, P. & Gunn, J. (2004). Criminal conviction after discharge from special (High security) Hospital: The circumstances of early conviction on a serious charge. Psychology, Crime & Law, 10, 5-19.	Excluded (42%) Case-control study evaluation
Castro, M., Cockerton, T., & Birke, S. (2002). From discharge to follow-up: A small-scale study of medium secure provision in the independent sector. British Journal of Forensic Practice, 4, 31-39.	**Included (60%)**
Coid, J, et al. (2007). Service-users discharged from medium secure forensic psychiatry services: reconvictions and risk factors. British Journal of Psychiatry, 190, 223-29.	**Included (93%)**
Davies, S., et al. (2007). Long-term outcomes after discharge from medium secure care: a cause for concern. British Journal of Psychiatry 19, 70-74.	**Included (86%)**
Edwards, J., Steed, P & Murray, K. (2002). Clinical and Forensic outcome 2 years and 5 years after admission to a medium secure unit. The Journal of Forensic Psychiatry, 13, 68-87.	**Included (62%)**
Falla, S., Sugarman, P. & Roberts, L. (2000). Reconviction after discharge from a regional secure unit." Medicine, Science & the Law, 40, 156-57.	**Included (62%)**

Friendship, C., et al. (1999). Re-offending: Service-users discharged from a Regional Secure Unit. Criminal Behaviour and Mental Health, 9, 226-236.	**Included (81%)**
Halstead, S., et al. (2001). Discharges from a Learning-disability Medium Secure Unit: What Happens to Them? British Journal of Forensic Practice, 3, 11-21.	**Included (71%)**
Lindsay, W. R., Elliot, S. F. & Astell, A. (2004). Predictors of sexual offence recidivism in offenders with intellectual disabilities. Journal of Applied Research in Intellectual Disabilities. 17, 299-305.	Excluded (34%)
Maden, A., et al. (1999). Outcome of admission to a medium secure psychiatric unit I. Short- and long-term outcome. British Journal of Psychiatry, 175, 313-16.	**Included (67%)**
Maden, A., et al. (1999). Outcome of admission to a medium secure psychiatric unit 2. Role of ethnic origin. British Journal of Psychiatry, 175, 317-21.	**Included (83%)**
Maden, A et al (2004). Offending in psychiatric service-users after discharge from medium secure units: a prospective national cohort study. British Medical Journal, 328, 1534.	**Included (72%)**
Maden, A., et al. (2006). Gender differences in reoffending after discharge from medium-secure units: National cohort study in England and Wales. British Journal of Psychiatry, 189, 168-72.	**Included (73%)**
McCarthy, L. & Duggan, C. (2010). Engagement in a medium secure personality disorder service: A comparative study of psychological functioning and offending outcomes. Criminal Behaviour and Mental Health, 20, 112-128.	**Included (66%)**
Quin, P., & Ward, M. (2000). What happens to special hospital service-users admitted to medium security? Medicine, Science & the Law, 40, 345-349.	Excluded (59%)
Sansom, D. & Cumella, S. (1995). 100 Admissions to A Regional Secure Unit for People with A Learning-Disability. Journal of Forensic Psychiatry, 6, 267-276.	Excluded (7% - did not pass screening questions as not a reconviction study)

APPENDIX 6:
Data Extraction Form

General Information

Date of data extraction: 29.05.08

Author:

Article Title:

Source:

Identification of the reviewer: Student 888125

Notes:

Re-verification of study eligibility:

Population:	Male learning disability	Y	N	?
	Male mental health	Y	N	?
	Forensic	Y	N	?
	Discharge cohorts include post 1990	Y	N	?
	British	Y	N	?
Exposure:	Secure services	Y	N	?
Comparator:	Non-re-offending Participants	Y	N	?
Outcome:	Re-offending	Y	N	?
	Re-arrest	Y	N	?
	Re-admission to hospital	Y	N	?
	Offending-like behaviours	Y	N	?
	Factors associated with outcome	Y	N	?
Study design: Cohort		Y	N	
Continue?		Y	N	

Specific Information

Population characteristics:

1. *Target population (describe)*

2. *Inclusion criteria*

3. *Exclusion criteria*

4. *Recruitment procedures used*

5. *Characteristics of participants:*
    a. *Age*:
    b. *Ethnicity*:
    c. *Gender:*
    d. *Admission length:*

6. *Size of cohort*

7. *Other information:*

Methodology:

Data collection:

Notes:

Outcome Factors:

1. *What was measured at baseline:*

2. *What was measured during the follow-up period:*

3. *What data sources/measurement tools were used?*

4. *If a tool was used, was it validated?*

5. *What were the follow-up periods and/or intervals?*

6. *How many were lost to follow-up and reasons why?*

7. *Limitations*

8. *Other information*

Analyses

1. *Statistical techniques used:*

2. *Were confounding variables assessed?*

3. *Number of participants followed-up:*

4. *Overall study quality*
   Good Reasonable Poor

5. *Notes/Limitations*

6. *Results*

7. *Any qualitative results?*

APPENDIX 7:
Research Protocol

Version 6: 21.08.09

A Follow-up Study of Discharges from Two Intellectual Disability Medium Secure Units: An Investigation of Outcomes
(Oxfordshire Research Ethics Committee A: Ref: 09/H0604/41)

Aims: How the project was selected and why?

The Reed Report (1992) states that offenders with an intellectual disability (ID) needing care and treatment should receive it from health and social services in specialist secure services, rather than in custodial care, to support and facilitate rehabilitation back into the community (Fernando & Sockalingum, 2001). MacCulloch & Bailey (1991) suggested that the criterion of 'failure' for secure services is that of conviction for a criminal offence. Therefore measures of reoffending are used as a performance indicator.

A systematic review of the literature (conducted by the researcher) identified only two key research papers in the United Kingdom that looked at outcome of ID service-users who have been an inpatient in a medium secure unit (MSU). The first paper is Halstead et al. (2001) who investigated outcome in 35 service-users discharged from the Eric Shepherd Unit (MSU) between September 1987 and March 1994. Information was collected from case files. At final follow-up 34% of service-users in the community did something that could have been construed as an offence during the follow-up period and one person was reconvicted. The second paper (Alexander et al., 2006) reported on the follow-up of two cohorts of service-users discharged from the Eric Shepherd Unit over 1 to 13 years. The first cohort was the same sample used in Halstead et al.'s (2001) study and the second was made up of those discharged between 1994 and 2000. There were some differences in the first cohort. During the first study period one patient had been convicted, by the second assessment, 6 years later, 4 more had convictions. Results collected from telephone interviews with health and social workers and case file information, indicated that the total sample (n=64) of both cohorts showed a 30% reoffending rate. The study demonstrated that there were improvements after time, with a reduction in offending like behaviours and in levels of support. They also identified which factors were associated with outcome. A higher risk of reoffending was associated with an age of 27 years or less, a previous conviction of theft or burglary, and/or a diagnosis of personality disorder. Limitations of both studies included relatively small number of participants; there was no direct contact with service-users, and no measures of therapeutic input. The two cohorts were additionally studied using different methods.

Fish & Lobley (2001) suggest that perceptions of quality of life (QoL) are also important for good outcome (i.e. their satisfaction with services are a good indicator for their outcome). They investigated both quantitative and qualitative methods of measuring service-user opinions of QoL in a community forensic LD service and found that qualitative approaches (i.e. personal accounts) were better at revealing particular benefits and disadvantages of the service. They emphasise the importance of qualitative approaches to promote the voices of people with an ID. They concluded that qualitative approaches highlight many important aspects relevant to service delivery and that it may be more interesting to see whether there are any links to level of QoL perceived by a previous service-user and their risk of re-offending and other outcomes. However MacCulloch & Bailey (1991) point out that to obtain a range of information on QoL a variety of factors will need to be investigated. No studies have

investigated whether a service-user's perception of QoL in a MSU has an influence on their outcome after discharge.

Therefore previous research, which has investigated outcomes of service-users with an ID, who have been discharged from medium secure services, has been restricted to a single unit in a small geographical area. The importance of this research is to be able to make recommendations for future risk management of these service-users as well as highlighting important aspects of medium secure care which service-users have found beneficial for their progress (i.e. recommendations for service delivery).

Objectives

The aim of the current study is to extend the validity of the research by following-up service-users with an ID who have been discharged from one of two NHS MSUs to examine outcomes. Outcomes for the purpose of the study will include incidence of reoffending and/or offending like behaviours, current accommodation, and current level of support. Risk factors associated with good and poor outcomes will be explored in one of the MSUs to inform future risk management. Risk factors will include length of admission, index offence on admission, offending history, age at admission and discharge, level of intellectual disability, other diagnoses including personality disorder, progress at the MSU, and treatment completed at the MSU. The research will additionally follow-up service-users from another MSU to investigate outcomes but will attempt to interview and administer a quality of life questionnaire to those service-users from both MSUs to measure current QoL and QoL within the MSUs as a possible factor associated with outcome.

Methodology of Study

The design of the study was based on previous research which has investigated follow-up service-users from either ID or mental health secure units. The literature was appraised within a systematic review conducted by the researcher as part of their Doctorate course. This and the proposal has been reviewed and discussed with the researcher's academic supervisor. Methodological issues have also been discussed and considered by a NHS Research Ethics Committee. The methodology is therefore based on the best available evidence as to how this type of study should be carried out.

It is also important to point out that the researcher us currently a Forensic Support Worker on one of the MSUs since September 2007, and prior to this was an Assistant Psychologist on the same MSU for 18 months.

a) Sample

This will be a retrospective study using a cohort sample of adult males and females with an ID who have been an inpatient at one of two NHS medium secure units. The sample will include all service-users discharged from the MSU within the follow-up period from 1st January 2000 to 31st July 2009 and who have received at least one year's treatment as it is expected that less than one year is unlikely to confer any significant therapeutic benefit (Halstead et al., 2001; Alexander et al., 2006).

Although one of the units was explored in previous studies (Halstead et al., 2001; Alexander et al., 2006) the follow-up period had only been up to the year 2000. It will be interesting to investigate outcome after that year and to also measure QoL which has not been investigated previously.

Please note that the cohorts from each MSU will be combined as one sample for the purpose of the study. Therefore the sample is representative of medium secures services rather than a particular MSU.

b) Data Collection

Previous studies have been quite restrictive in their data collection methods. Loss to follow-up can introduce unknown biases and create problems relying on case notes only (Jamieson & Taylor, 2002). Therefore the current study aims to use multiple sources to collect accurate data on outcome and associated risk and protective factors:

4. Multi-disciplinary medical records obtained from MSUs
5. Information gathered from carers/clinical team

The researcher will gain consent from the service-users to access records. A clinical supervisor has been arranged at each MSU who will identify all prospective service-users. The clinical supervisor will contact a professional who is currently involved in the service-user's care to introduce the research and to will be sent the research protocol. They will be asked to introduce the study to the service-user and will be informed that the researcher will go and visit them to provide more information. If the service-user responds positively to this, the researcher will arrange a date to visit the service-user and will go through a participant information sheet with them and answer any questions they may have. All information will be presented in a language that the service-user will understand so they are able to provide informed consent. Service-users will have up to two weeks to consider their participation and the researcher will then visit them again to go through the consent form. The researcher will access service-user files after consent given and will need to come into the MSU one day a week to collect the data.

Once informed consent has been completed participant information sheets asking for information on service-user outcomes will be sent to members of the care team at the MSU and the current care team. Attached to the information sheet will be a questionnaire asking whether they were aware of any offending behaviour since the service-user's discharge from medium security. Completing the questionnaire will represent their consent for taking part in the study. Service-users will have consented to this before this part of the study takes place.

QoL data will be collected using a quantitative method as this type of approach is objective and the data can be analysed to make comparisons and associations, in order to generate and support policy and standards (Fish & Lobley, 2001). The QoL of tool which will be used is the Quality of Life Questionnaire (Schalock and Keith, 1993) which has been validated for use with an ID population. It has been validated in the United Kingdom by comparing scores of people living in different settings, and strikes a balance between reliability and sensitivity (Rapley & Lobley, 1995). The questionnaire is particularly relevant to an ID population because of its answer structure which reduced the likelihood of acquiescence associated with yes/no questions. The questions on the measure offer three possible options, e.g. lots, some or not much. It measures QoL of life in four different areas: satisfaction, competence/productivity, empowerment, and social belonging. The questionnaire will be administered to measure QoL in the MSU.

QoL data will also be collected in interviews with service-users to obtain accounts of their experiences of the MSU. However there have been problems with acquiescence and power differentials; ID service-users are often generous in praise and reluctant to criticise. Therefore it is important for the interview to be unstructured using open questions and the researcher to keep an open mind to ensure the interview

is led by the individual (Fish & Lobley, 2001). The interview will explore service-users' perceptions on factors, such as, environment; activities provided, therapeutic input, community contact, family contact, and staff support. It may be that their current QoL would be more influential on their offending rates than their QoL in the MSU; therefore this will also be explored in the interview. The interview will be recorded using a Dictaphone and a carer/member of their current care team of the service-user's choice will also be present in the interview as an observer for the protection of the service-user and the researcher.

c) Ethical considerations

To ensure confidentiality, identifiable data will be removed from the data analysis database. Identifiable data will be kept separately from the database in a locked cabinet and will be destroyed as soon as it is no longer needed (i.e. all relevant data is collected and service-users have been notified of the results of the study). Consent from each service-user will be sought. Service-users will be taken through an information sheet, which they can keep (these will be different for service-users from the two units due to their level of participation in the study), which will give full details of the research study and its purpose. They will be told that all information they provide and collected will be confidential and that they have the right to withdraw their consent at anytime. In the interview is not expected that they will be discussing any issues that may cause distress but should further support be needed a carer will be identified prior to the interview. The identified carer or professional from the service-user's care team (who have consented to take part) will be present in the interview for support and to witness the interview for the safety of the participant and the researcher. They will not participate in the interview; only to observe. It is envisaged that a member of the service-user's care team in the interview will not interfere in the interview process as they won't be a representative of the MSU. Limits to confidentiality will be outlined in that if they disclose any criminal, abusive or substance misuse behaviour this information will need to be passed on to their current team or carer, or the police. The service-users after receiving the relevant documentation will then be given up to two weeks to consider whether they would like to take part in the study and to complete the consent form, with the support of the researcher. If the service-user consents to the interview they or the current team will then be contacted by the researcher to arrange an appointment. They will be interviewed at their current location and the researcher will travel to this address. The researcher has 3 years experience of working with people with an ID and therefore has a good understanding of communication difficulties; re-wording the interview questions as appropriate. With regards to debriefing the participants, there may be unforeseen situations that cause a participant distress, therefore support will be available to all participants after the interview (by the person that attended the interview) should they require it.

The questionnaires sent to carers, which will be sent back to the researcher will be anonymised and therefore will contain service-user ID numbers only; not their names.

d) Data analysis

Quantitative analysis

Reconviction data which will be recorded as the number of reconvictions or incidences of offending-like behaviours. This study will investigate whether certain factors can be identified as associated with good or poor outcome and whether these can be shown to differ between those who and don't reoffend. This will be done using t-tests (if interval data, such as length of admission) or chi square tests (if nominal data, such as whether the service-user has a diagnosis of personality disorder) or their non-parametric equivalents if more appropriate. Logistic regression analysis will be performed on the factors which are significantly different between reoffenders and non-reoffenders to identify predictors of outcome.

Data obtained from the Quality of Life Questionnaire will be analysed using t-tests to see whether there are differences between reoffenders and non-reoffenders on different aspects of quality of life that is measured within the questionnaire.

Qualitative analysis

Information gathered from interviews will be analysed using content analysis. The data will be arranged into 'themes' to represent opinions of the MSU and their current QoL. The percentage of service-users who said what will be calculated and comparisons will be made between those and those that don't reoffend. Themes will be checked by another member of the research team and inter-rater reliability (using Kappa) will be sought. Other qualitative methods to analyse the data will not be used as minimal interpretation of the data will increase objectivity. Associations between what participants say and their outcome could then be investigated using a method of correlational analyses.

e) Planned start and finish dates

September 2008 – June 2010

Timetable of Study

TASK	METHOD	TIME REQUIRED
Ethical approval	– To approach individual NHS Trusts and MSUs to present research – To gain NHS ethical approval – To gain R&D approval at each site – To find out about access to the PNC	September 2008 – June 2009
Data collection (risk and protective factors, and outcomes for first MSU)	– Gain consent from service-users and professionals – File and database searching – Gaining outcome data from relevant professionals and PNC.	July - August 2009 July– September 2009
Data analysis	– Data analysis for risk and protective factors using SPSS computer software	October 2009
Data collection (outcomes for second MSU and QoL questionnaires and interviews with service-users from both MSUs)	– Gain consent from service-users and professionals – Gaining outcome data from relevant professionals and PNC – Administer questionnaires and conduct interviews at service-user's location.	July - August 2009 August - September 2009 August - November 2010
Analysis of QoL data	– Content analysis of interview data. Analysis of associations of QoL with outcome using SPPS – Use SPSS to analyse QoL questionnaire data	December - March 2010
Report writing	– Write up study for publication	April-June 2011
Dissemination of findings	– Distribute summaries of findings to both MSUs and service-users upon request	June-July 2011

APPENDIX 8:
Participant Information Sheet and Consent Form for Service-users

Version 5: 21.08.09

Participant Information Sheet:

Study Title:
A Follow-up Study of Discharges from Intellectual Disability Medium Security
(Oxfordshire Research Ethics Committee A: Ref: 09/H0604/41)

We would like you to consider taking part in this research study. However, before you decide you need to understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully. Talk to others about the study if you wish.

Part 1 tells you the aims of this study and what will happen if you take part. Part 2 gives you more information about how the study will be carried out. Please contact me if there is anything that is not clear or you would like more information. Please take enough time to decide whether or not you wish to take part.

Part 1

What is the purpose of the study?
The purpose of the study is part of my research for my Doctorate in Forensic Psychology Practice. It aims to follow-up service-users, such as yourself, after you have been discharged from medium security and what factors may be associated with their outcome after discharge.

Why have I been invited to take part?
Service-users who have been a service-user on (name of MSU) and were discharged between 1st January 2000 and 31st July 2009 are being invited to take part. Service-users from another medium secure unit, and discharged during the same period, are also being invited to participate. Members of the care team at the MSU have identified you as suitable for the study. It is expected that approximately 50 service-users, such as yourself, will be approached to take part in the study.

Do I have to take part?
It is up to you to decide. This information contained here will describe the study. After reading this, if you agree to take part, you will then need to sign the attached consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason. This will not affect the standard of care you receive.

What will happen if I agree to take part?
You will be given up to two weeks to consider your participation. The researcher will then arrange to meet with you to go through the consent form to find out whether you would like to take part in the study. If you consent to the study, two things will happen. These are:

1) I will contact members of your current care team to collect information on your outcome since discharge from the MSU. Outcomes will include whether or not you have displayed any offending behaviours since discharge, your current accommodation and current level of support. You will not be required to take part in this part of the study.

2) I will arrange an appointment to come and visit you. You will be asked to identify someone in your care team to accompany you when I come to see you. The person you identify to accompany you in the interview will be there to observe, not to participate. This person is to help you feel more comfortable in the interview by having somebody familiar with you. They will also be there to observe what was said during the interview. This is for your own protection. This person will also be one of the members of your team who will be asked to provide information on your outcome since you were discharged from the MSU (if you agree for this to happen). Should you require further support after the interview this person will able to provide this for you.

   During this visit you will be interviewed about your experiences at the MSU, such as what you liked and what you did not like. I will also ask how these experiences differ from your current experiences. The interview will last approximately 30 minutes (depending on how much information you would like to provide) and will be recorded using a Dictaphone for data analysis of the information you give. During this visit I will also ask you to complete a Quality of Life Questionnaire based on your time at the MSU. This will involve a series of questions which you will be asked to answer. It will measure your perception of quality of life at the MSU. However, if you prefer, this can be arranged for another day after the interview. The questionnaire will take about 20 minutes to complete.

To complete the research for all service-users it will take approximately 18 months.

Expenses
I will visit you where you are currently residing. You are not expected to come to the researcher. Therefore, there will be no expenses for you to take part in the study.

What are the possible disadvantages and risks of taking part?
If you have found anything distressing during the interview you can access further support. The person you have identified to sit in the interview with you, will be able to provide this. The interview is for research purposes only, therefore any complaints you have about the MSU or your current care cannot be followed up by the researcher. However you can make your complaints through the NHS complaints procedure.

What are the possible benefits of taking part?
I cannot promise the study will help you but the information I get from this study will help to manage and provide support to other service-users who have an intellectual disability and have been or are a service-user in medium secure services.

During the interview refreshments will be provided for you.

What happens when the research stops?
The consent form will ask whether you would like to receive a summary of the findings from this research. This will be sent to you after completion of the study.

What if there is a problem?
Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. Further information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, all information about you will be handled in confidence. The details are included in Part 2.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

Part 2

What will happen if I don't want to carry on with the study?
If, during the study, you decide that you want to withdraw your consent and participation, you will need to do this in writing and send it to me. All information collected and provided by you will then be destroyed.

What if there is a problem?
If you have a concern about any aspect of this study, you should ask a member of your care team to speak to me and I will do my best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the NHS Complaints Procedure. Ask a member of your care team for details.

In the event that something does go wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds for a legal action for compensation against the negligent party but you may have to pay your legal costs. The normal NHS complaints mechanisms will still be available to you.

Will my taking part in this study be kept confidential?
Information collected from the Police National Computer Database, from members of your care teams, and from you will be kept strictly confidential and stored on a computer database at the University of Birmingham. This data will be coded, so no-one can identify that it is your information. Your name and current location will be removed and kept separately in a locked filing cabinet at the MSU. Once the study has been completed, your name and location will be destroyed. After completion of the study the data will be stored at the University for Birmingham for a maximum of five years.

The data stored on the computer will be analysed as a group (i.e. along with other MSU service-users and service-users from the other medium secure unit) and therefore your data will not be identifiable. If quotes from your interview are used in the report, this will remain anonymous, so no-one would know you had said that. All recorded interviews will be destroyed once it has been analysed. You have the right to check the accuracy of data held about you and correct any errors.

Although all the information you provide is confidential, if you tell me that you have been involved in identifiable criminal activity or any behaviours that will cause risk to yourself or others, this will need to be passed on to a member of your care team or the police.

Only members of the research team will have access to your data. However identifiable data will be available to the regulatory authorities at the University of Birmingham in the event of a complaint of research fraud.

What will happen to the results of the research study?
The results of the study will be written up for publication. You will not be identified in any subsequent documentation. You can indicate on the consent form to receive a summary of the findings once the study has been completed.

Who is sponsoring the research?
The research study is sponsored by the University of Birmingham.

Who has reviewed the study?
All research conducted in the NHS is looked at by an independent group of people, called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by Oxfordshire Research Ethics Committee A.

Further information and contact details
If you have any questions or would like more information about the research study please contact the researcher at the following address.

Thank you for taking time to consider taking part in this study.

Version 5: 21.08.09

Consent Form:

Title of Study: A Follow-up Study of Discharges from Intellectual Disability Medium Security

Study Reference Number: Oxfordshire REC A; Ref: 09/H0604/41

Name of Researcher: Emma Marks, Trainee Forensic Psychologist

	Please initial Box
1. I confirm that I have read and understood the participant information sheet dated 21.08.09 (Version 5) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactory.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, and that this will not affect the standard of care I receive.	☐
3. I understand that I have been invited to take part because I was discharged from the (name of MSU) between 1st January 2000 and 31st July 2009.	☐
4. I give permission for the researcher to contact *current members of my care team* for information on how well I have done since my discharge from the MSU.	☐
5. I agree that I have been told about the purpose of the interview, i.e. my current experiences and how these differ from my experiences at the MSU.	☐
6. I have been informed that I will need to identify someone from my care team to attend the interview with me as an observer (i.e. they will not take part in the interview).	☐
7. I understand that if I disclose any criminal activity or any behaviours that may cause harm to myself or others, the researcher will pass this information to a member of my care team or the police.	☐

8. I understand that should I require further support after the interview, the member of my team who attended my interview will be able to provide this to me. ☐

9. I agree to take part in the interview, which will take approximately 30 minutes. ☐

10. I give permission for the interview to be recorded using a Dictaphone and understand that this will be destroyed once it has been analysed. ☐

11. I understand that if any direct quotations from my interview are used in the write up of the study, they will remain anonymised so I won't be identifiable. I therefore give permission for the researcher to use quotes from my interview. ☐

12. I have been told about the purpose of the Quality of Life Questionnaire. ☐

13. I agree to complete the Quality of Life Questionnaire, which takes about 20 minutes to complete. ☐

14. I understand that all information I provide and that is collected on me will be treated in the strictest confidence. ☐

15. I understand that although only members of the research team will have access to my data, the regulatory authorities at the University of Birmingham will have access to the data in an event of research fraud. ☐

16. I understand that my data will be analysed along with other service-user data and therefore my data won't be identifiable. ☐

17. I have been informed about the complaints procedure. ☐

18. I understand that any information I give is for research purposes and therefore any complaints I may have about my current care or my care at the MSU will not be followed up by the researcher but will need to go through the NHS Complaints Procedure. ☐

19. I would like a copy of the findings once the study has been completed. ☐

_____	_____	_____
Name of Service-user	Date	Signature

_____	_____	_____
Name of Researcher	Date	Signature

When completed, one copy will be sent to the service-user, one copy for the research site file and one copy will be sent to members of your care team or care team at the MSU who may provide information on outcome.

APPENDIX 9:
Simplified Participant Information Sheet and Consent Form for Service-users

Version 1: 14.06.09

Summary of Information for Service-users

Study Title:
A Follow-up Study of Discharges from Intellectual Disability Medium Security
(Oxfordshire Research Ethics Committee A: Ref: 09/H0604/41)

We would like you to think about taking part in a research study.

What is the study about?
I would like to find out how well you have done since you left the (name of MSU) and what may have helped towards this.

Do I have to take part?
Read the information and talk to others about the study if you wish. It is up to you to whether you would like to take part. You can change your mind when you like.

What will happen to me if I agree to take part?
I will collect information from your records and your current care team and team at the MSU to see what you have done since you left the MSU.

I will also come and talk to you in a place you choose (e.g. at home). I will ask you what you liked and did not like about the MSU. I will talk to you for about 30 minutes. I will also ask you some questions about how well the MSU met your needs. This will take another 20 minutes. Drinks and biscuits will be provided.

You can choose when we talk and I will use a tape recorder to help me remember what you say but you will be asked if that is ok.

You will also be asked to choose someone from your current care team to be with you when I meet with you who will listen to what we talk about but not take part in it.

What is good about taking part?
You will be able to talk about what helped you at the MSU and after you left. What you think may help other people like you.

What is difficult about taking part?
Some people worry about talking to people. You will be able to choose someone to be with you when I come and talk to you.

If you have found anything upsetting during our talk you can get support from the person you chose to sit with you in the interview.

What will happen to the information I give?
All information collected on you will be kept safe but we will not use names and addresses. This includes any quotes that may be used in the write up of the study. However if you tell me that you have been involved in anything that is not safe I will need to talk to a member of your care team.

You can ask for a summary of the findings from the research to be sent to you.

Who do I contact if I have any complaints?
NHS complaints procedure.

When we have finished
The information will be shared with people who took part in the study. It will also be written down in magazines.

Further information and contact details
If you have any questions or would like more information about the study please contact the researcher at the following address.

Version 1: 14.06.09

Consent Form

Title of Study: A Follow-up Study of Discharges from Intellectual Disability Medium Security

Study Reference Number: Oxfordshire REC A; Ref: 09/H0604/41

Name of Researcher: Emma Coates, Trainee Forensic Psychologist

	Please tick box
1. I have been given information about the study and have a copy to keep. I have been able to ask questions about it.	☐
2. I understand the project.	☐
3. I know the person I talk to you will ask me lots of questions	☐
4. It‘s ok if they record what I say using a tape recorder	☐
5. I know that if I talk about anything unsafe the person asking me questions may need to talk to a member of my care team.	☐
6. I know that I can ask for further support after the interview, from the member of my team who sits with me.	☐
7. I know that my name and address won‘t be used.	☐
8. I know that my information will be used in a report and will be kept safe.	☐
	☐

9. I know how to make a complaint if I have one.

10. I would like to be in the study. ☐

11. I would like a copy of the findings once the study has been completed. ☐

_____	_____	_____
Name of Service-user	Date	Signature

_____	_____	_____
Name of Researcher	Date	Signature

When completed, one copy will be given to the service-user, one copy for the research site file and one copy will be sent to members of your care team or care team at the MSU who may provide information on outcome.

APPENDIX 10:
Covering Letter sent to Current Care Teams

.....2009/2010

Dear

Re: A Follow-up Study of Discharges from Two Intellectual Disability Medium Secure Units: An Investigation of Outcomes
(Oxfordshire Research Ethics Committee A: Ref: 09/H0604/41**)**

(Name of MSU) is conducting a research study that is investigating outcomes in service-users who have been discharged from the unit. The study aims to find out what factors may be associated with future reoffending/displays of risky behaviour after their discharge. Specifically the study will attempt to find out whether service-users' perceptions of quality of life at the unit are associated with their outcome. Quality of life will be measured using the Quality of Life Questionnaire and through interviewing the service-users. The study has NHS ethical approval.

Please find enclosed a copy of the above research study's protocol (Version 6, dated 21.08.09) which gives full details of the research. Also enclosed are the participant information sheets and consent forms for the service-users along with a simplified version to help with the service-user's understanding. These explain to the service-user the purpose of the research and what will be expected from them if they agree to take part. This information has been sent to you as you are currently involved in the care of ..... who was previously an inpatient on the (name of MSU). It is thought that the service-user would find this beneficial and would feel more comfortable if the research was introduced by someone familiar to them before they meet with the researcher.

We would like you to be involved with the following:

1. **We would appreciate it if you or another member of the team could go through the participant information sheets with the service-user to find out whether they would be interested in taking part.**
2. **If they express interest in taking part the researcher will arrange a date to come and visit the service-user to go through the information again with them, answer any questions they may have and to complete the consent form.**
3. **The research team will be in touch with you by phone two to three weeks after the date of the letter to answer any questions and to find out whether the service-user is interested in meeting with the researcher to go through the consent process. If so, a date will be arranged for the researcher to meet with the service-user.**

If you have any questions regarding the research please do not hesitate to contact the research team.

Thank you for your help with the research.

Yours Sincerely

Clinical Supervisor
Clinical Psychologist

Researcher
Trainee Forensic Psychologist

APPENDIX 11:
Interview Observer Participant Information Sheet and Consent Form

Version 2: 21.08.09

Participant Information Sheet:
Interview Observer

Study Title:
A Follow-up Study of Discharges from Intellectual Disability Medium Security
(Oxfordshire Research Ethics Committee A: Ref: 09/H0604/41)

We would like you to consider taking part in this research study. However, before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully.

Part 1 tells you the aims of this study and what will happen if you take part. Part 2 gives you more information about how the study will be carried out. Please contact me if there is anything that is not clear or you would like more information. Please take time to decide whether or not you wish to take part.

Part 1

What is the purpose of the study?
The purpose of the study is part of my degree (Doctorate in Forensic Psychology Practice). It aims to follow-up service-users after who have been discharged from medium security, and what factors may be associated with their outcome after discharge. In particular, the study will investigate whether their perceived quality of life at the Medium Secure Unit (MSU) is associated with their outcome.

Why have I been invited to take part?
Service-users who have been a service-user on (name of MSUs), and who were discharged between 1st January 2000 and 31st July 2009 have been invited to take part in the study. They have received participant information sheets about the research and have been asked to consider whether they would like to be interviewed about their experiences at the medium secure unit and their current experiences as a measure of quality of life.

A service-user you work with has consented to take part in the interview and part of the process is to identify a member of his current care team to attend the interview also as an observer.

Other members of the service-user's current care team and their care team at either MSU, along with yourself are also being invited to take part to provide information on the service-user. Again the service-user has consented for me to contact you for this purpose. A copy of the consent form is attached.

Do I have to take part?
It is up to you to decide. This information will describe the study. You will then need to complete the attached consent form and questionnaire. You are free to withdraw your participation at any time without giving a reason. This includes a right to leave the interview at anytime.

What will happen to me if I take part?
If you decide to participate in the study you will need to complete the attached consent form and return it to me, along with the completed short questionnaire, in the attached stamped addressed envelope. The attached short questionnaire will ask you for information on the service-user's outcome since their discharge from medium security. In particular it will ask whether they have had any reconvictions or displayed any offending-type behaviour since their discharge. Offending-type behaviour is theft, assault, sexual assault, etc. which did not lead to any contact with the police or a conviction.

If you consent to attending the interview you will have a number of roles. The interview will last approximately 30 minutes (depending on how much information the service-user would like to give) where the service-user will be asked to talk about their experiences at the medium secure unit, such as what they liked and what they did not like as much. They will also be asked how these experiences are similar or different from their current experiences. You are being asked to observe the interview (not to participate) so the service-user feels more comfortable in the interview by having someone familiar with them. You will also be required to observe the interview so you are aware of what was said. This is for the service-user's protection as well as the protection of the researcher.

The interview will also be recorded using a Dictaphone for analysis of the content of the interview. This will be destroyed after data analysis has been completed. During this session the service-user will also be asked to complete a Quality of Life Questionnaire based on their time at the medium secure unit. This will involve a series of questions which the service-user will be asked to answer. It will measure their perception of quality of life at the MSU. Completion of the questionnaire will take approximately 20 minutes to complete and may take place on a separate occasion depending on what the service-user prefers.

Should the service-user require further support after the interview it is envisaged that you will provide this based on your knowledge of their experience.

What are the possible disadvantages and risks of taking part?
It is envisaged that there are no potential risks of taking part. However, although the service-user is informed that all information s/he provides is confidential, if s/he tells me that they have been involved in criminal activity or any behaviours that will cause risk to him or herself or others, this will need to be passed on to a member of his or her care team. As an observer you will also witness this disclosure.

The information you provide on the short questionnaire will be treated in the strictest confidence and will be coded along with other data so the service-user is not identifiable from the information you provide.

What are the possible benefits of taking part?
As you will know the procedure the service-user has gone through and have knowledge of what was discussed you will be in a position to provide further support to your service-user should they require it at after the interview.

With regards to the short questionnaire, the aim is to collect information from various sources so I have the most accurate information on each service-user. The information I collect from this study will help improve risk management and service delivery of service-users who have an intellectual disability and have been or are a service-user in medium secure services.

What happens when the research stops?
After the interview you may be asked to provide further support to your service-user, such as helping the service-user to access the NHS Complaints Procedure. This may be requested by your service-user as they have been informed of their right to access this if they have any complaints about their current care or the medium secure unit which may arise from the interview. They can also make formal complaints if they were unhappy with any aspect of the study.

The consent form will ask whether you would like to receive a summary of the findings from this research. This will be sent to you after completion of the study.

What if there is a problem?
Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. Further information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice and all information about the service-user and you will be handled in confidence. The details are included in Part 2.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

<u>Part 2</u>

What will happen if I don't want to carry on with the study?
If, during the study, you decide that you want to withdraw your participation and the information you have provided, you will need to do this in writing and send to it me. All information collected and provided by you will then be destroyed. You also have the right to leave the interview at anytime and the interview with the service-user will be terminated.

What if there is a problem?
If you have a concern about any aspect of this study, you can contact me and I will do my best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the NHS Complaints Procedure.

In the event that something does go wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds for a legal action for compensation against The University of Birmingham but you may have to pay your legal costs. The normal NHS complaints mechanisms will still be available to you.

Will my taking part in this study be kept confidential?
Information collected from the short questionnaire will be kept strictly confidential and stored on a computer database at the University of Birmingham. This data will be coded, so no-one can identify that it is your information and that the service-user can be identified. Your name will be destroyed once the information you have provided has been transferred onto the electronic database. The questionnaire that you return will only contain the service-user's ID number to retain service-user anonymity especially as you will be providing sensitive data. Service-user names and current locations are kept separately from the research data in a locked filing cabinet at the appropriate MSU. Once the study has been completed, service-user names and locations will be destroyed. After completion of the study the electronic data will be stored at the University for Birmingham for a maximum of five years. The data stored on the computer will be analysed as a group and therefore individual data will not be identifiable.

Only members of the research team will have access to the data. However identifiable data will be available to the regulatory authorities at the University of Birmingham in the event of a complaint of research fraud.

What will happen to the results of the research study?
The results of the study will be written up for publication. No service-user will be identified in any publication. You can indicate on the consent form to receive a summary of the findings once the study has been completed.

Who is sponsoring the research?
The research study is sponsored by the University of Birmingham.

Who has reviewed the study?
All research conducted in the NHS is looked at by an independent group of people, called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by Oxfordshire Research Ethics Committee A.

Further information and contact details
If you have any questions or would like more information about the research study please contact the researcher at the following address.

Thank you for taking time to consider taking part in this study.

Version 2: 21.08.09

Consent Form:
Interview Observer

Title of Study: A Follow-up Study of Discharges from Intellectual Disability Medium Security

Study Reference Number: Oxfordshire REC A; Ref: 09/H0604/41

Name of Researcher: Emma Marks, Trainee Forensic Psychologist

	Please initial Box
1. I confirm that I have read and understood the participant information sheet dated 21.08.09 (Version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactory.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. This includes leaving the interview at anytime and that the interview will be terminated should this need to happen.	☐
3. I understand that the service-user has identified me to undertake this role as a current member of his or her care team. I have seen a copy of their informed consent.	☐
4. I have been informed of the aims of the research including the purpose of the service-user interview.	☐
5. I understand that the role includes observing the interview and completion of the Quality of Life Questionnaire with possibly witnessing sensitive disclosures, and providing further support to the service-user after the interview.	☐

6. I agree to observe the interview as well as taking on the other responsibilities that is associated with this role, e.g. providing further support to the service-user. ☐

7. I have been informed about the short questionnaire which asks for information on the outcome of the service-user since discharge from medium security. ☐

8. I agree to complete the questionnaire and have attached this to the consent form. ☐

9. I understand that all information I provide and hear from the service-user will be treated in the strictest confidence. Also that what I hear in the interview is confidential information and should not be shared with others but adhering to the limits of confidentiality as outlined in the participant information sheet. ☐

10. I understand that although only members of the research team will have access to my data, the regulatory authorities at the University of Birmingham will have access to the data in an event of research fraud. ☐

11. I understand that the data I provide on service-user outcome will be analysed along with other service-users‘ data and therefore won‘t be identifiable. ☐

12. I have been informed about the complaints procedure for both myself and should the service-user require it. ☐

13. I would like a copy of the findings once the study has been completed. ☐

_____	_____	_____
Name	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

APPENDIX 12:
Outcome Questionnaire

Version 2: 27.04.09

Information on Service-user Outcomes since Discharge from Medium Security

Title of Study: A Follow-up Study of Discharges from Intellectual Disability Medium Security

Study Reference Number: Oxfordshire REC A; Ref: 09/H0604/41

Name of Researcher: Emma Marks, Trainee Forensic Psychologist

Service-user ID:

Name of person who completed the questionnaire:

Your job role:

1. Since the above service-user was discharged from (name of MSU) has s/he been:

    a) Reconvicted for any offence? Yes/No (please delete as appropriate)

        If yes, how many .....

        What offences were they convicted of and when:

    b) Involved in any offending-type behaviour[9] Yes/No (please delete as appropriate)

        If yes, how many incidences? .....

        What type of offending behaviours were they?

Please answer the following if you are a current member of the above service-user's care team:

[9] Offending-type behaviour is defined as assault, theft, sexual assault, etc. which did not lead to a conviction or contact with the police.

2. What type of accommodation is the service-user currently residing in? (e.g., secure services, community services, etc.)

   .....

3. What level of support is the above service-user currently receiving?

	Please Tick one
High: 24 hour support with waking staff	☐
Medium: 24 hour support with sleeping staff	☐
Low: less than 24 hour support	☐

I would like a copy of the research findings: Yes/No (please circle)

Thank you for completing this form

APPENDIX 13:
Data Collection Sheet

Version 1: 10.10.08

Service-user Number:

Date of birth:

Date admitted to the MSU:

MHA Section:

Date discharged from the MSU:

Age at admission:

Any other diagnoses:

Substance misuse:

IQ:

Offence on admission:

Route of discharge:

HCR-20/RSVP score:

OUTCOMES

Number of re-convictions:

Incidences of reoffending behaviour:

Current location:

Level of current support

Quality of Life Questionnaire

Robert L. Schalock, Ph.D., and Kenneth D. Keith, Ph.D.

Person's Name _____ Age _____ Gender _____

Person's Program _____ Evaluator _____ Test Date _____

RESULTS

Scale	Rater-1 (If Applicable)	Rater-2 (If Applicable)	Average Rater or Self-Report (Numbers in Circles)	Percentile
Satisfaction				
Competence/Productivity				
Empowerment/Independence				
Social Belonging/ Community Integration				
Total Score				

INSTRUCTIONS

The QOL.Q may be administered to persons with mental retardation who have adequate receptive and expressive language. The examiner needs to be sensitive to the possibility that the respondent may not understand some of the items or the meaning of some of the words. If this happens, it is okay to paraphrase the item to improve understanding. If this happens frequently, or if the person is known not to have adequate receptive or expressive skills, it is acceptable to have two persons who know the individual well complete the Questionnaire.

Instructions for Respondents

Read the following instructions to the respondent:

I want you to think about where you live, work, and have fun, and the family, friends, and staff that you know. Together, let's answer some questions that express how you feel about these things. If you like, you can check the choices given for each item; if you like, I can check them for you after reading and discussing each of the three alternatives for each item. Please try to answer each of the items and we will take as much time as you need. There are no right or wrong answers. We want only to know how you feel about where you live, work, and have fun and the family, friends and staff that you know. Do you have any questions?

If the respondent consents, the examiner proceeds to administer the 40 items. When reading the items, pay close attention to the exact wording. You may paraphrase items and repeat them as often as necessary to ensure the respondent's understanding of the item content.

Instructions for Raters

Raters should know the person well and should complete the Questionnaire "as if they were the person" (that is, rate how the person is perceiving things).

Raters should complete the Questionnaire independently and without any discussion of the items or the individual.

Special Instructions for Employment Items

If the person is unemployed, do not ask Questions 13-20 and assign to each question the score "1".

Sheltered workshop programs should be considered as jobs when responding to the Questionnaire.

QUESTIONS	ANSWER ALTERNATIVES 3 POINTS	2 POINTS	1 POINT	RECORD SCORE HERE
COMPETENCE/PRODUCTIVITY				
11. How well did ~~your educational or training program~~ one MSU prepare you for what you are doing now?	Very well	Somewhat	Not at all well	_____
12. Do you feel your ~~job or other~~ daily activity is worthwhile and relevant to either yourself or others?	Yes, definitely	Probably	I'm not sure, or definitely not	_____
Note: *If a person is unemployed, do not ask Questions 13-20. Score items #13-20 "1".*				
13. How good do you feel you are at your job?	Very good, and others tell me I am good	I'm good, but no one tells me	I'm having trouble on my job	_____
14. How do people treat you on your job?	The same as all other employees	Somewhat differently than other employees	Very differently	_____
15. How satisfied are you with the skills and experience you have gained or are gaining from your job?	Very satisfied	Somewhat satisfied	Not satisfied	_____
16. Are you learning skills that will help you get a different or better job? What are these skills?	Yes, definitely (one or more skills mentioned)	Am not sure, maybe (vague, general skills mentioned)	No, job provides no opportunity for learning new skills	_____
17. Do you feel you receive fair pay for your work?	Yes, definitely	Sometimes	No, I do not feel I am paid enough	_____
18. Does your job provide you with enough money to buy the things you want?	Yes, I can generally buy those reasonable things I want	I have to wait to buy some items or not buy them at all	No, I definitely do not earn enough to buy what I need	_____
19. How satisfied are you with the benefits you receive at the workplace?	Very satisfied	Somewhat satisfied	Not satisfied	_____
20. How closely supervised are you on your job?	Supervisor is present only when I need him or her	Supervisor is frequently present whether or not I need him or her	Supervisor is constantly on the job and looking over my work	_____
		TOTAL SCALE SCORE — COMPETENCE/PRODUCTIVITY		

QUESTIONS	ANSWER ALTERNATIVES 3 POINTS	2 POINTS	1 POINT	RECORD SCORE HERE
SATISFACTION				
1. Overall, would you say that life:	Brings out the best in you?	Treats you like everybody else?	Doesn't give you a chance?	
2. How much fun and enjoyment ~~do~~ did you get out of ~~life~~ your home at one MR	Lots	Some	Not much	
3. Compared to others, ~~are~~ were you better off, about the same, or less well off?	Better	About the same	Worse	
4. Are most of the things that happen to you:	Rewarding	Acceptable	Disappointing	
5. How satisfied ~~are~~ were you with your ~~current home~~ or living arrangement?	Very satisfied	Somewhat satisfied	Unsatisfied or very unsatisfied	
6. ~~Do~~ Did you have more or fewer problems than other people?	Fewer problems	The same number of problems as others	More problems than others	
7. How many times per month ~~do~~ did you feel lonely?	Seldom, never more than once or twice	Occasionally, at least 5 or 6 times a month	Frequently, at least once or twice a week	
8. ~~Do~~ Did you ever feel out of place in social situations?	Seldom or never	Sometimes	Usually or always	
9. How successful ~~do~~ did you think you are, compared to others?	Probably more successful than the average person	About as successful as the average person	Less successful than the average person	
10. What about your family members? Do they make you feel:	An important part of the family	Sometimes a part of the family	Like an outsider	
		TOTAL SCALE SCORE — SATISFACTION		

QUESTIONS	ANSWER ALTERNATIVES 3 POINTS	2 POINTS	1 POINT	RECORD SCORE HERE
EMPOWERMENT/INDEPENDENCE				
21. How did you decide to do the ~~job or other~~ daily activities ~~you do now~~? gas dad	I chose it because of ~~pay, benefits, or interests~~ Needed to do it	Only thing available or that I could find	Someone else decided for me	_____
22. Who decides how you spend your money?	I do	I do, with assistance from others	Someone else decides	_____
23. How do you use health care facilities (doctor, dentist, etc.)?	Almost always on my own	Usually accompanied by someone, or someone else has made the appointment	Never on my own	_____
24. How much control do you have over things you do every day, like going to bed, eating, and what you do for fun?	Complete	Some	Little	_____
25. When can friends visit your home?	As often as I like or fairly often	Any day, as long as someone else approves or is there	Only on certain days	_____
26. Do you have a key to your ~~home~~? NOM	Yes, I have a key and use it as I wish	Yes, I have a key but it only unlocks certain areas	No	_____
27. May you have a pet if you want?	Yes, definitely	Probably yes, but would need to ask	No	_____
28. Do you have a guardian or conservator?	No, I am responsible for myself	Yes, limited guardian or conservator	Yes, I have a full guardian	_____
29. ~~Are~~ were there people living with you who sometimes hurt you, pester you, scare you, or make you angry?	No	Yes, and those problems occur once a month or once a week	Yes, and those problems occur every day or more than once a day	_____
30. Overall, would you say that your life ~~is~~ was:	Free	Somewhat planned for you	Cannot usually do what you want	_____
		TOTAL SCALE SCORE — EMPOWERMENT/INDEPENDENCE		

QUESTIONS	ANSWER ALTERNATIVES 3 POINTS	2 POINTS	1 POINT	RECORD SCORE HERE
SOCIAL BELONGING/ COMMUNITY INTEGRATION				
31. How many civic or community clubs or organizations (including church or other religious activities) do you belong to?	2-3	1 only	None	
32. How satisfied are you with the clubs or organizations (including church or other religious activities) to which you belong?	Very satisfied	Somewhat satisfied	Unsatisfied or very unsatisfied	
33. Do you worry about what people expect of you?	Sometimes, but not all the time	Seldom	Never or all the time	
34. How many times per week do you talk to (or associate with) your ~~neighbors~~ peers, either in the yard or in their home?	3-4 times per week	1-2 times per week	Never or all the time	
35. Do you have friends over to visit your home?	Fairly often	Sometimes	Rarely or never	
36. How often do you attend recreational activities (homes, parties, dances, concerts, plays) in ~~your~~ the community?	3-4 per month	1-2 per month	Less than 1 per month	
37. Do you participate actively in those recreational activities?	Usually, most of the time	Frequently, about half the time	Seldom or never	
38. What about opportunities for dating or marriage?	I am married, or have the opportunity to date anyone I choose	I have limited opportunities to date or marry	I have no opportunity to date or marry	
39. How do your ~~neighbors~~ peers treat you?	Very good or good (invite you to activities, coffee, etc.)	Fair (say hello, visit, etc.)	Bad or very bad (avoid you, bother you, etc.)	
40. Overall, would you say that your life is:	Very worthwhile	Okay	Useless	
	TOTAL SCALE SCORE — SOCIAL BELONGING/COMMUNITY INTEGRATION			

APPENDIX 15:

Interview Schedule

Version 2: 29.10.08

The Interview

Can you tell me about your time at (name of MSU)?

Prompt questions:

What did you like best at the MSU?

What did you find more difficult or what should have been better?

What was the structure like – activities, therapeutic input?

What was the staff support like if you had any problems/staff relationships?

Did you have much contact with the community?

Did you have opportunities to see your family often?

Were you prepared for discharge?

How does this compare to your experiences now?

APPENDIX 16:
Coding Template for Themes

The good things about the MSU

The Staff

Meals

Environment

Sessions

Friendships

Leave

Things that could have been better at the MSU

The Staff

Meals

Environment

Other service-users

Nothing

Other

The staff

The support

Interaction

Other service-users

Friendships

Restraint/feeling frightened

Structure

Types of sessions

Feeling bored

Leave

Contact with the community

Home leave

Problems with facilitation of leave

Visits

Having visits

Facilitation of visits

Gaining skills for the future

Preparation for discharge

Support

Visited new placement/meeting the staff

Experiences now compared to the MSU

More freedom and independence

Better at the current placement

APPENDIX 17:

Inter-rater reliability Analyses of all the Themes

Higher-Order Themes	Sub-Themes	Inter-rater reliability coefficient
The good things about the MSU		
	Staff	0.86
	Meals	0.63
	Environment	0.73
	Sessions	0.66
	Friendships	0.50
	Leave	0.70
Things that could have been better at the MSU		
	Staff	0.84
	Meals	1.00
	Environment	0.60
	Other service-users	0.82
	Nothing	1.00
	Other	0.58
The staff		
	The support	0.63
	Interaction	0.72
Other service-users		
	Friendships	0.71
	Restraint/feeling frightened	0.44
Structure		

	Types of sessions	0.76
	Feeling bored	0.60
Leave		
	Community contact	0.63
	Home leave	1.00
	Problems with facilitation of leave	0.41
Visits		
	Having visits	0.63
	Facilitation of visits	0.86
Gaining skills for the future		0.71
Preparation for discharge		
	Support	0.42
	Visited new placement/meeting the staff	0.44
Experiences now compared to the MSU		
	More freedom and independence	0.82
	Better at the current placement	0.53

APPENDIX 18:

Mann Whitney U Test Analyses

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
QoLQTotal	28	67.29	7.561	55	85
QoLQsatisf	28	20.29	3.780	14	28
QoLQcomp	28	12.50	1.347	10	14
QoLQempow	28	18.36	2.498	13	22
QoLQsocbel	28	16.18	2.855	12	26
Reoffended	28	1.5714	.50395	1.00	2.00

Mann-Whitney Test

Ranks

	Reoffended	N	Mean Rank	Sum of Ranks
QoLQTotal	Yes	12	14.33	172.00
	No	16	14.63	234.00
	Total	28		
QoLQsatisf	Yes	12	14.75	177.00
	No	16	14.31	229.00
	Total	28		
QoLQcomp	Yes	12	12.83	154.00
	No	16	15.75	252.00
	Total	28		
QoLQempow	Yes	12	13.96	167.50
	No	16	14.91	238.50
	Total	28		

QoLQsocbel	Yes	12	15.13	181.50
	No	16	14.03	224.50
	Total	28		

Test Statistics[b]

	QoLQTotal	QoLQsatisf	QoLQcomp	QoLQempow	QoLQsocbel
Mann-Whitney U	94.000	93.000	76.000	89.500	88.500
Wilcoxon W	172.000	229.000	154.000	167.500	224.500
Z	-.093	-.140	-.957	-.304	-.353
Asymp. Sig. (2-tailed)	.926	.889	.339	.761	.724
Exact Sig. [2*(1-tailed Sig.)]	.945[a]	.909[a]	.371[a]	.767[a]	.732[a]

a. Not corrected for ties.

b. Grouping Variable: Reoffended

APPENDIX 19:
HCR-20 Worksheet

Violence Risk Assessment Worksheet

Identifying Information

Patient

Name:

ID:

Date of Birth:

Ethnicity:

Date of Admission:

Referral

Date of Referral:

Referral Source:

Reasons for Referral:

Summary of Reasons for Referral:

☐ Violent Behavior

- ☐ Documented (reported by others)
- ☐ Admitted (reported by self)
- ☐ Suspected

☐ Violent Ideation

- ☐ Documented (reported by others)
- ☐ Admitted (reported by self)
- ☐ Suspected

Presence and Relevance of Major Risk Factors	
Historical Factors	*Coding*
H1: Previous Violence	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H2: Young Age at First Violent Incident	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H3: Relationship Instability	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H4: Employment Problems	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H5: Substance Use Problems	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Historical Factors (continued)	*Coding*
H6: Major Mental Illness ☐*Definite* ☐*Provisional*	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H7: Psychopathy ☐*Definite* ☐*Provisional*	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H8: Early Maladjustment	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H9: Personality Disorder ☐*Definite* ☐*Provisional*	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
H10: Prior Supervision Failure	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Other H Factor:	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Clinical Factors	*Coding*
C1: Lack of Insight	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
C2: Negative Attitudes	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
C3: Active Symptoms of Major Mental Illness	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
C4: Impulsivity	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N
C5: Unresponsive to Treatment	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Other C Factor:	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Risk Management Factors □ *Institutional Plans* □ *Community Plans*	*Coding*
R1: Plans Lack Feasibility	*Presence* □Y □? □N *Relevance* □Y □? □N
R2: Exposure to Destabilizers	*Presence* □Y □? □N *Relevance* □Y □? □N
R3: Lack of Personal Support	*Presence* □Y □? □N *Relevance* □Y □? □N
R4: Noncompliance with Remediation Attempts	*Presence* □Y □? □N *Relevance* □Y □? □N
R5: Stress	*Presence* □Y □? □N *Relevance* □Y □? □N

Other R Factor:	*Presence* ☐Y ☐? ☐N *Relevance* ☐Y ☐? ☐N

Risk Formulation

(complete in conjunction with Step 4)

Service User's Name: *Date:*

Be clear:

1. Risk of <u>what</u>? (e.g., violence, sexual violence, stalking, domestic violence, etc)
2. <u>Why</u>? (i.e., what could motivate a future offence?)
3. What could <u>trigger</u> an offence in the future?
4. What could <u>inhibit</u> offending?
5. What is the <u>time frame</u> over which this formulation applies?

PREDISPOSING FACTORS / MOTIVATORS	**PRECIPITATING FACTORS / DESTABILISERS**
PROTECTIVE FACTORS / INHIBITORS	**PERPETUATING FACTORS**

Main Author:

Risk Scenarios			
	Scenario #1	*Scenario #2*	*Scenario #3*
Nature • What kind of violence is the perpetrator likely to commit? • Who are the likely victims? • What is the likely motivation — that is, what is the perpetrator trying to accomplish?			
Severity • What would be the psychological or physical harm to victims? • Is there a chance that the violence might escalate to serious or life-threatening levels?			
Imminence • How soon might the perpetrator engage in violence? • Are there any warning signs that might signal that the risk is increasing or imminent?			
Frequency/Duration • How often might the violence occur — once, several times, frequently? • Is the risk chronic or acute (i.e., time-limited)?			
Likelihood • In general, how frequent or common is this type of violence? • Based on this perpetrator's history, how likely is it that this type of violence will occur?			

Case Management			
	Scenario #1	*Scenario #2*	*Scenario #3*
Monitoring • What is the best way to monitor warning signs that the risks posed by the perpetrator may be increasing? • What events, occurrences, or circumstances should trigger a re-assessment of risk?			
Treatment • What treatment or rehabilitation strategies could be implemented to manage the risks posed by the perpetrator? • Which deficits are high priorities for intervention?			
Supervision • What supervision or surveillance strategies could be implemented to manage the risks posed? • What restrictions on activity, movement, association, or			
Victim Safety Planning • What steps could be taken to enhance the security of the victim? • How might the victim's physical security or self-protective skills be improved?			
Other Considerations • What events, occurrences, or circumstances might increase or decrease risk? • What else might be done to manage risk?			

Summary Judgements		
Issue	*Coding*	*Comments*
Case Prioritization • What level of effort or intervention will be required to prevent the person from committing violence? • To what extent is this opinion limited in light of information that is unclear, unavailable, or missing?	☐*High/Urgent* ☐*Moderate/Elevated* ☐*Low/Routine*	
Serious Physical Harm • What is the risk that any future violence will involve serious or life-threatening physical harm? • To what extent is this opinion limited in light of information that is unclear, unavailable, or missing?	☐*High* ☐*Moderate* ☐*Low*	
Immediate Action Required • Does the person pose any imminent risks? • What preventive steps were or should be taken immediately?	☐*Yes* ☐*Possibly* ☐*No*	
Other Risks Indicated • Is there evidence that the person poses other risks, such as suicide, self-harm, or failure to care for physical health? • Should the person be evaluated for other risks?	☐*Yes* ☐*Possibly* ☐*No*	
Case Review • When should the case be scheduled for routine review (re-assessment)? • What circumstances should trigger a special review (re-assessment)?	*Date for review:* _____	
Evaluator		
Name: Date:		

APPENDIX 20:
Genogram of John's Family

APPENDIX 21:
Descriptions of Psychometrics used with John

Paulhus Deception Scales (PDS; Paulhus, 1998)
This is a 40 item scale divided into two scales that yields three scores: 1) impression management score (IM); 2) self-deceptive enhancement score (SDE); and 3) a PDS total score. For each of the 40 items, the individual is asked to rate each statement on a likert scale from 1 to 5, ranging from _not true' to _very true'. The measure indicates whether someone wants to appear publicly acceptable and therefore his or her answers are not a true representation on him or her (IM) and also whether he or she has any self-insight to deal with their problems (SDE).

Millon Clinical Multiaxial Inventory, Third Edition (MCMI- III; Millon, Millon, & Davis, 1994)
This is a psychological assessment tool intended to provide information on psychopathology, including specific disorders outlined in the DSM-IV. It is a self report measure of 175 true-false questions. The test has four scales: 14 Personality Disorder scales; 10 Clinical Syndrome scales; 5 Correction scales (3 Modifying Indices that determine the individual's response style and can detect random responding; 2 Random Response Indicators), and 42 Grossman Personality Facet Scales.

Fear of Negative Evaluation (FNE; Watson & Friend, 1969)
The FNE is a self report measure consisting of 30 statements in which the individual responds true or false to. It determines the degree to which individuals experience apprehension at the prospect of being negatively evaluated by others.

State-Trait Anger Expression Inventory (STAXI-II; Spielberger, 1999)
The STAXI-II measures the experience of anger which is conceptualized as having two components; state and trait anger. The 57 items are divided in to three parts Part 1 consists of 15 statements about how they feel right now and are expected to rate each item on a likert scale from 1 to 4, ranging from _not at all' to _very much so'; part 2 consists of 10 items about how the individual generally feels and are asked to rate each statement on likert scale from 1 to 4, ranging from _almost never' to _almost always'; and part 3 consists of 31 statements about how the individual generally reacts when angry or furious. Again they are asked to rate each statement from 1 to 4, ranging from _almost never' to _almost always'.

Novaco anger Scales-Provocation Inventory (NAS-PI; Novaco, 1994)
The NAS-PI explores the psychological aspects of the experience of anger (NAS) as well as anger intensity and generality across a range of provocations (PI).

Robson Self -Concept Questionnaire (Robson SCQ; Robson, 1989)
The Robson SCQ consists of 30 items categorized as follows: significance (5 items); worthiness (5 items); appearance/social acceptability (5 items); resilience and determination (5 items); competence (4 items); control over personal destiny (4 items); value of existence (2 items). Each item is scored on a likert scale from 1 to 7, ranging from completely disagree to completely agree. A score for global self-esteem is obtained.

Thornton short self-esteem questionnaire (Thornton, unpublished)
The Thornton short self-esteem questionnaire is an 8-item questionnaire regarding how individuals feel about themselves. Thornton reported that the scale had high internal

reliability, and the higher the score, the higher the individual‘s self-esteem. There are 4 additional items related to a separate Lie Scale.

Locus of Control (LoC; Nowicki & Strickland, 1973)
This is a 40 item questionnaire which measures _the extent to which subjects feel that events are contingent on their behaviour and the extent to which they feel events are controlled externally‘. It therefore assesses whether an offender will blame their offending on external circumstances and may see little reason as to why they should change. The higher the score, the more external the locus of control orientation and a low score will indicate that the individual has owned responsibility for one‘s actions.

Interpersonal Reactivity Index (IRI; Davis, 1980)
The IRI measures four dimensions of empathy.1) perspective taking (PT), a cognitive measure of the ability to appreciate other people‘s point of view; 2) empathic concern (EC), an affective measure of the ability to feel compassion and concern for others having negative experiences; 3) fantasy (FS), a measure of the ability to identify fictitious characters; and 4) personal distress (PD), a measure of the extent to which an individual shares the negative emotions of others. Items are scored on a 5-point likert scale from 0 (_does not describe me well‘) to 4 (_describes me very well‘).

Hospital Anxiety and Depression Scale (HAD Scale; Zigmond & Snaith, 1983)
This is a self-report questionnaire designed to detect adverse anxious and depressive states. There are two subscales, one measuring Anxiety (A-Scale) and one measuring Depression (D-Scale). The HAD scale is a useful screening measure and may be used to monitor change in symptoms over time. The scale does not set out to be a diagnostic measure and therefore acts as a pointer rather than providing a definitive answer in the clinical assessment.

Impulsivity Questionnaire (IM Questionnaire; Eysenck & Eysenck, 1978)
This is a self-report measure consisting of 22 questions which examine the likelihood of behaviours that are not mediated by considered thought regarding behaviour or its consequences.

The Insight Questionnaire (David, 1990)
The Insight Questionnaire is an 8-item self-report assessment, which measures the level of an individual‘s insight into their mental illness. The level of insight is rated on three scales including the ability to re-label experiences, awareness of illness and the need for treatment.