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Social climate and staff based interventions in forensic mental health settings. A research portfolio

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Portfolio Thesis Abstract

Aims: The aims of this thesis were focused on the social climate of inpatient forensic mental health settings. Firstly, the study reviewed the literature of qualitative studies of staff and patient experiences of social climate. Secondly, the utility of a case study methodology to examine innovations to practice in forensic mental health settings are discussed. Thirdly, a longitudinal case study aimed to examine the impact of a Mentalization based treatment (MBT) training and case consultation intervention on the functioning of a low secure ward.

Method: A systematic review and qualitative synthesis of social climate in forensic mental health settings was completed using the 'best-fit' framework approach. Secondly, a critical analysis of case study methodology was presented based on key decision points. A longitudinal ward case study with staff (n=37) and patient (n=7) participants examined the impact of staff MBT training and MBT based case consultation sessions. MBT based case consultation sessions ran on the ward over an eight month period. Data was collected through a range of methods including questionnaires, semi-structured interviews, ward observations and routinely reported data. The case study data was tested through a pattern matching approach with reference to rival explanations.

Results: The systematic review identified 20 papers that met the inclusion criteria. The framework synthesis identified 22 themes related to social climate, which were organised in a conceptual model. Ten themes were seen to represent the experience of social climate. Consideration of the applicability of the case study method to forensic settings found the method to be feasible and acceptable to staff though a limitation is that outcomes are tentative and open to rival explanations. Positive impacts of the training and case consultation intervention included an increase in enthusiasm for working with patients with a personality disorder diagnosis and evidence of some increased team cohesion. The main rival explanation identified was the impact of changes to the composition of the staff and patient group.

Conclusions: The systematic review findings highlight that current quantitative measures of social climate may not fully represent the construct. The conceptual model developed allows for generation of potential interventions to improve social climate. In the case study, staff reported positive perspectives of both MBT training and the case consultation sessions. The intervention did not appear to impact on patient motivation, though patients reported positive changes in staff behaviour. The case study method was seen as applicable to forensic mental health settings and provided interpretable data useful for analytical generalisations, and clinically in considering innovations to practice.

Lay Summary of thesis

This thesis is in three parts and is focused on the social climate of inpatient forensic mental health settings. Social climate is a term that describes the atmosphere of a ward.

The first part is a systematic review, which looked for published research examining social climate of inpatient forensic mental health wards through staff and patient descriptions of their experience. This review identified 20 research papers that described social climate from a mixture of staff and patient accounts. 22 themes related to social climate were identified in these papers. These themes were combined to form a model to describe social climate. This model identified ten factors as being part of social climate. The findings of the study suggest that it is possible to change and influence the social climate of inpatient forensic wards.

The second part of the thesis examined the usefulness of the case study method for examining interventions in forensic mental health settings. This study talked about the decisions made by the researcher in the case study of the low secure ward. This paper shows that case study methods are acceptable to staff and patients and can provide detailed information on how changes to practice occur.

The third part described the case study of a low secure inpatient forensic mental health ward. This case study looks at the impact of a training course and staff group based on a psychological approach called Mentalization Based Treatment (MBT). The proposed effect of this intervention was to improve the social climate, increase patient motivation, reduce staff stress and improve staff attitudes. The case study data was collected over 12 months and included questionnaires; interviews; observations; and routine data. Many of the measurements of the ward were positive at the start of the study, and these were mostly maintained at the end of the study. Staff reported that the training was helpful and that the staff group was a good place to talk about their experiences of working on the ward. Staff were found to have increased enthusiasm for working with patients with personality disorders. There were no changes found in patient motivation. Apart from the intervention, other factors that influenced the ward included changes in staff and changes in the patient group. Overall the study indicates that the intervention may have had a positive impact on staff resilience.

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Acknowledgements

First, I would like to thank all the patients and staff from the ward, the study participants. You have diligently completed questionnaire after questionnaire after questionnaire as part of the research and I hope that I have accurately represented your experiences. The managerial staff from the ward were keen and welcoming, ensuring the smooth running of both the intervention and data collection; willing to free up their staff to attend the training and facilitate staff attending the case consultation sessions. Thank you all.

A lot of people have had a hand in bringing this thesis to this point, they can all share in any credit and I will take responsibility for all faults, though they are welcome to take my place in viva. Moira Scott was instrumental in the first steps of the project, in identifying what was feasible. Viv Barnett was a willing and able observer and co-rater.

Jon Patrick and Clare MacLean provided input in the development stage of the project and then enthusiastically delivered three excellent training days. Claire went above and beyond in providing case consultation sessions which were appreciated by the staff team.

Lynda Todd, my clinical supervisor, was instrumental in getting the study off the ground, and in somehow convincing the other contributors to take part. She also drank enough coffee for both of us and provided extremely welcome feedback.

Emily Newman and Ethel Quayle were both fantastic supervisors, neither had a perfect record of looking at their diaries, but were always available for advice and support. My inability to meet a deadline was accounted for with speedy, thorough and thoughtful feedback.

Thanks to my friends and family, for all their support. I have not seen many of you for several months but I should have slightly more time… for the next few months anyway. Special acknowledgment to study buddy Cait, I knew things were getting bad when I arrived in the study room before you!

Finally Ruth, thanks for all you do for me, from reading drafts to taxi duties to all the things you do for me each day. Thanks for being there. I think now we should have a year or two off from doing theses, and work on a different project.

I couldn't think of a decent epigraph, so thought a quote on the process would have to do:

I was working on the proof of one of my poems all the morning and took out a comma.

…In the afternoon—well, I put it back again." (Oscar Wilde)

Outline of thesis

This thesis is in three parts. The focus of the thesis is on inpatient forensic mental health wards, on how they function and how they may potentially be influenced for the positive benefit of patients and staff. The concept of social climate is central to this thesis, it is the focus on the systematic review and a key measurement in the primary research paper. Social climate broadly refers to the experienced atmosphere of a setting, and has had periods of research focus over the last 50 years, most notably in therapeutic community and milieu therapy traditions.

The systematic review seeks to understand and synthesise the perspectives of staff and patients in forensic mental health wards on the components of social climate, through the best-fit framework synthesis method. This review led to some suggestions on the means through which social climate could be influenced.

There are challenges to implementing and researching interventions in forensic mental health settings. One potential method to research interventions is the case study method. The second paper in this thesis describes the decisions that come after deciding to use the case study method to examine an intervention, illustrated with reference to the primary research study. The case study method does not allow for generalisations in the same way as "harder" research designs, though it does allow for an understanding of contextual factors that are likely to impact on the success of implementation of any practice development.

The primary research paper describes an intervention based on mentalization based treatment. The intervention involved staff training for all members of staff on a low secure mental health ward, followed by two-weekly case consultation sessions led by an external facilitator based on developing mentalizing skills. The outcomes of the case study were examined using pattern matching approaches, with reference to rival explanations.

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Designing a case study approach to implementation of practice development in forensic mental health settings.

A case study of Mentalization based staff training and case consultation on a forensic mental health ward**.**

Social climate in forensic mental health settings: A systematic review of qualitative studies

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Written in Style of Aggression and Violent Behaviour. Figures and tables included in text as per University of Edinburgh guidance. Author guidelines in Appendix G.

Abstract

Social climate is a commonly evaluated aspect of inpatient forensic mental health settings. However, there is little clarity in the literature on the components of social climate. To identify these components, qualitative studies of staff and patient experiences of social climate were systematically reviewed using best fit framework synthesis. An *a priori* framework was developed based on nine existing models of social climate. A systematic search identified twenty studies of sufficient quality to be included in the review. These studies included staff and patient perspectives across all levels of inpatient forensic settings. In all twenty-two themes were identified in the review papers. From these themes, a model of social climate was developed. Ten factors were identified as part of the social climate, including the physical environment, therapeutic relationship, care and treatment orientation, the secure base and six aspects of the ward environment. The findings indicate that common measures of social climate may not fully represent the construct. Themes related to the patient group, the staff group and system level factors were identified as influencing social climate. The model described allows for consideration of interventions to positively influence social climate.

Highlights

- Social climate was defined as a multifactorial construct with ten factors
- Existing measures do not account for all aspects of social climate
- Patient, staff and system level factors can influence the social climate
- Social climate contains dimensional constructs potentially amenable to intervention

Keywords: Social climate, ward atmosphere, staff support, forensic mental health

1. Introduction

Although social climate has been a concept in inpatient mental health research for over 50 years the essential elements of the construct remain unclear (Brunt & Rask, 2007). The variety of terms used to describe the 'quality' of the environment, such as therapeutic milieu, ward atmosphere and social environment (Brunt & Rask, 2007) is in part due to the interest in social climate across several disciplines including psychology (Moos, Shelton, & Petty, 1973), psychiatry (Clark, 1974) and nursing (Peplau, 1989). The current study will use the term social climate, referring to both the physical conditions of the ward, as well as the context and the social relationships between its members. Social climate can be seen as a dynamic characteristic of inpatient settings that influences or impacts upon the members of the ward, both staff and patients (Milsom, Freestone, Duller, Bouman, & Taylor, 2014).

Social climate is not synonymous with organisational culture (Duxbury, Bjorkdahl, & Johnson, 2006) which can be seen as "the way we do things around here" (Miller, 2015, p.74) and describes the organisation, management and informal structures that surround the functioning of the ward. While the culture of the ward is likely to impact on the social climate, the concept covers the social and emotional experience of the ward (Schalast, Redies, Collins, Stacey, & Howells, 2008). Similarly, the presence of a safe environment is important, though does not appear to be sufficient for a positive social climate. Social climate has been linked with levels of violence (Cutcliffe & Riahi, 2013; Nijman, 2002; Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013). Furthermore, a recent systematic review of qualitative studies identified safety and security as a condition necessary for recovery in forensic mental health care (Shepherd, Doyle, Sanders, & Shaw, 2015). Social climate may be better understood as a multifactorial construct, which in forensic settings includes: safety from violence, supportiveness of therapeutic gain, and provision of opportunities for personal growth (Tonkin, 2015).

The breadth of the construct of social climate is also unclear. Moos' (1989) definition of social climate sees it as one of five factors within the dynamic system of inpatient psychiatric care, along with the physical environment, organisational structure and both staff and patient characteristics (Brunt, 2008). However, therapeutic milieu traditions include the physical and organisational structures as part of social climate or therapeutic milieu (Mahoney, Palyo, Napier, & Giordano, 2009). Theoretical perspectives and intervention strategies related to social climate include therapeutic community (Haigh, 2013) and milieu therapy approaches (Gunderson, 1978), that see the structure and

environment as the means to engender change Therapeutic community approaches have been utilised in both prison and hospital settings (e.g. de Boer-van Schaik & Derks, 2010) and variations in the relative focus of different aspects of social climate are seen as indicative of different types of treatment environments. It has also been suggested that different populations benefit from different treatment atmospheres (Duxbury et al., 2006).

1.1.Social climate in forensic settings

The focus on social climate, both in research and clinical practice has changed over time, with therapeutic milieu approaches being supplanted by a focus on individual treatments (Duxbury et al., 2006; Oeye, Bjelland, Skorpen, & Anderssen, 2009). Despite this, social climate may be particularly relevant to forensic mental health settings, which can be highly structured and are often characterised by long-stay, static populations (Willmot & McMurran, 2013). Within forensic settings, a balance between security and therapy is often evident (Jacob, 2012). This dual focus, which incorporates the need to maintain awareness of the potential for community harm, may lead to difficulties in maintaining a recovery focus, over and above difficulties experienced in different areas of the mental health system (Mann, Matias, & Allen, 2014; Shepherd et al., 2015). The physical security of forensic settings (such as a 17 foot high fence; C. Taylor, 2011) may also impact on the social climate. Most patients are involuntarily detained, and in a UK context their treatment may also be subject to governmental oversight, which can lead to a sense of powerlessness in patients (Livingston, Nijdam-Jones, & Brink, 2012).

Whilst social climate has been researched over the last 50 years, there is a lack of conceptual clarity around the components and factors that influence social climate. In both research and clinical practice, the range of theoretical perspectives of social climate and lack of a shared definition has led to a somewhat unbounded concept. This can be evidenced by the range of descriptive studies (for review see: Tonkin, 2015) and the limited number of intervention studies based on social climate. A source of evidence that may add to the conceptualisation of social climate is qualitative literature. For the majority of the time where social climate has been a topic of research forensic service users' voices were largely absent from the research literature (Coffey, 2006). However, there has been a growth in research in forensic settings giving voice to service user perspectives (e.g. Clarke, Lumbard, Sambrook, & Kerr, 2015; Shepherd et al., 2015). Given this source of evidence, returning to the perspectives of those who experience the

atmosphere to identify its constituent components would seem a first step towards solidifying social climate.

Reviewing the qualitative evidence is also important due to the differences in coverage of the measures used in quantitative studies of social climate. The two most commonly used measures in Tonkin's (2015) review are the Ward Atmosphere Scale (WAS) and the Essen Climate Evaluation Schema (EssenCES). Do these measures accurately capture the extent to which a climate is therapeutic? Do they provide a basis for intervention to alter social climate? Tonkin (2015) suggests that further research to examine the theoretical construct of social climate is warranted to understand what is measured by current questionnaires. The WAS (Moos, 1989) has ten subscales, though it was developed over 50 years ago and may no longer be relevant to current forensic mental health environments (Rossberg & Friis, 2003; Schalast et al., 2008). In contrast, the EssenCES (Schalast et al., 2008) is a brief measure, developed as a screening instrument for forensic settings, with three subscales covering therapeutic hold, experienced safety, and patient cohesion and mutual support. Tonkin (2015) reviews the evidence for the convergent validity of both the WAS and the EssenCES and suggests that both are valid measures of social climate.

However, the lack of definitional clarity and the wide range of measures used makes it difficult to compare findings. This is particularly evident when significant differences are found in studies comparing staff and patient experiences of a shared environment (Livingston et al., 2012; Long et al., 2011). Though this may relate to differing perspectives or measurement error, it may also be due to differences in the perceived therapeutic nature of the unit. This highlights a further difficulty in defining social climate, that is the extent to which the staff members' experience of their working environment differs from the patient experience of care and confinement on the ward. The extent of measurement of social climate suggests we have moved beyond the perspective of the World Health Organisation's (1953) view of social climate as intangible. However, a model describing the elements of social climate remains elusive (Brunt & Rask, 2007).

1.2.Research Aim

The review focused on qualitative studies of social climate in forensic mental health settings. Due to an identified lack of clarity in the definition of social climate the review sought to identify how the concept is described by patients and staff in forensic mental

health settings. The aim was not to identify an optimal social climate, but to develop an understanding of the factors of the shared environment that contribute to staff and patient understandings of social climate. It was expected that both helpful and unhelpful aspects of social climate would be identified in the literature.

2. Systematic Literature review

While there are many available methods to synthesise qualitative studies (Barnett-Page & Thomas, 2009; Dixon-Woods, Booth, & Sutton, 2007), as the current review seeks to examine the links between theory and lived experience framework synthesis was identified as the most suitable method. Framework synthesis allows for the development of a conceptual model of the phenomenon of interest (Carroll, Booth, & Cooper, 2011; Dixon-Woods, 2011) and has been identified as a means to inform health related decision making and practice, through identifying the likely sources of intervention (Barnett-Page & Thomas, 2009).

'Best fit' framework synthesis is a two stage review process, with the first stage being *a priori* selection of an initial framework of themes (Figure 1; Carroll et al., 2011; Carroll, Booth, Leaviss, & Rick, 2013; Cooper, Squires, Carroll, Papaioannou, & Booth, 2010). A systematic approach to developing the initial framework reduces the risk of bias in a framework based on the authors' prior experience or own theoretical preference (Booth & Carroll, 2015; Carroll et al., 2013). In the second stage of the framework synthesis, studies that meet the inclusion criteria for the main review are appraised, and then coded against the framework. Themes that do not fit within the framework are added to the framework through a process of interpretation similar to thematic analysis for primary research data (Booth & Carroll, 2015). From this final framework, a conceptual model is derived through synthesis of the relationships between the themes present in the framework.

2.1. Identifying the Initial Framework

A BeHEMoTH search strategy was used to identify models and theories for the framework (Booth & Carroll, 2015). The search terms relate to the Behaviour of Interest, Health context, Exclusions and Models or Theories, with each search string combined with the AND operator (Appendix A). The BeHEMoTH review search was limited to MEDLINE, and psycINFO. One potential difficulty with BeHEMoTH reviews is that the searches identify empirical studies which meet criteria for the main review, leading

to a circular process. Therefore, primary qualitative empirical papers in the area of interest of the review were not included in the development of the initial framework. To be considered for the conceptual framework the model, theory or framework had to provide an explanation of social climate in institutional settings. This was broader than the main review question to ensure that theories from other areas of mental health and prison settings were not excluded. Further papers were added to the initial framework review if they were cited in papers in the BeHEMoTH search, though not described with sufficient detail to contribute to development of an initial framework.

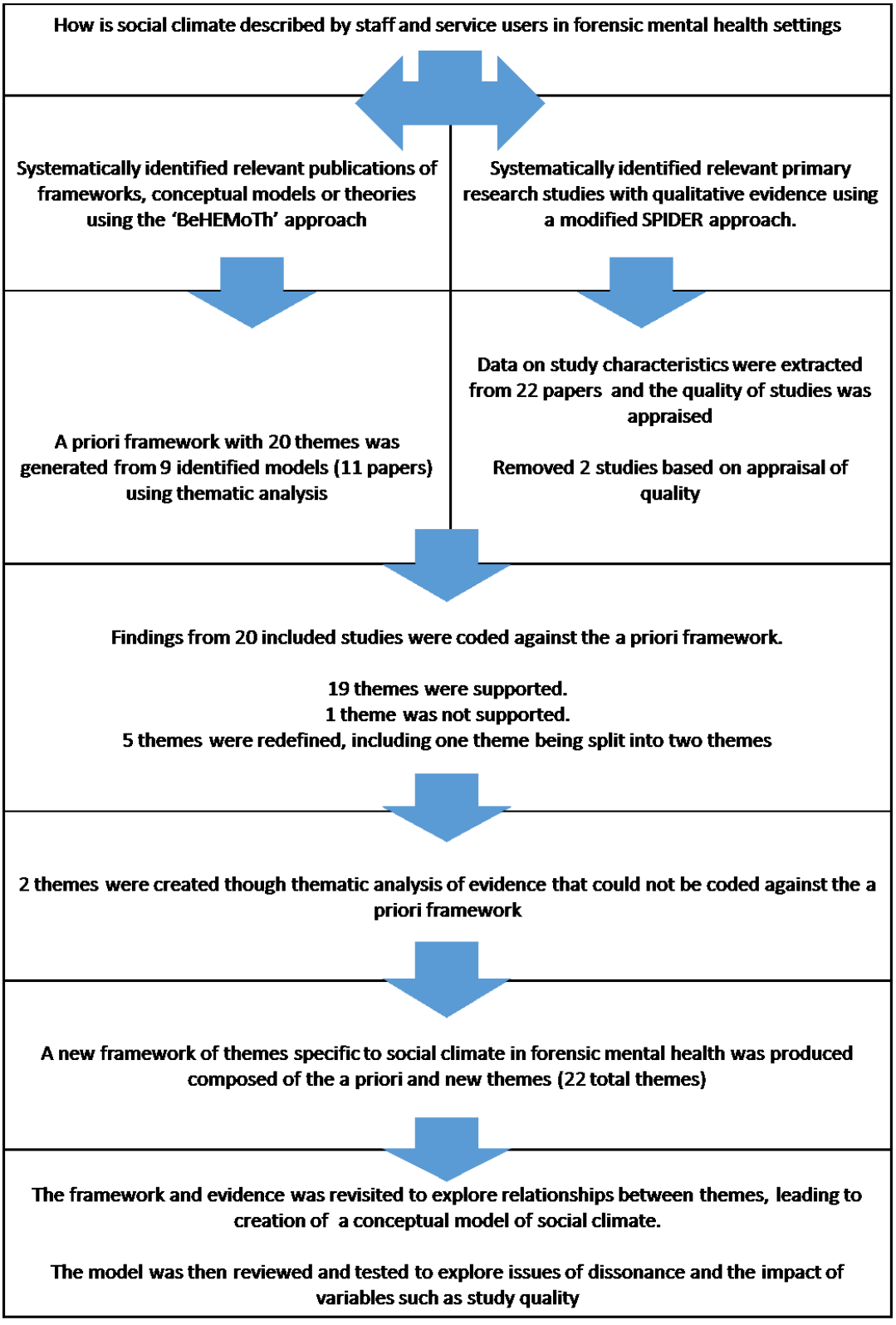


Figure 1: Summary of Framework synthesis review steps based on Carroll et al. (2013)

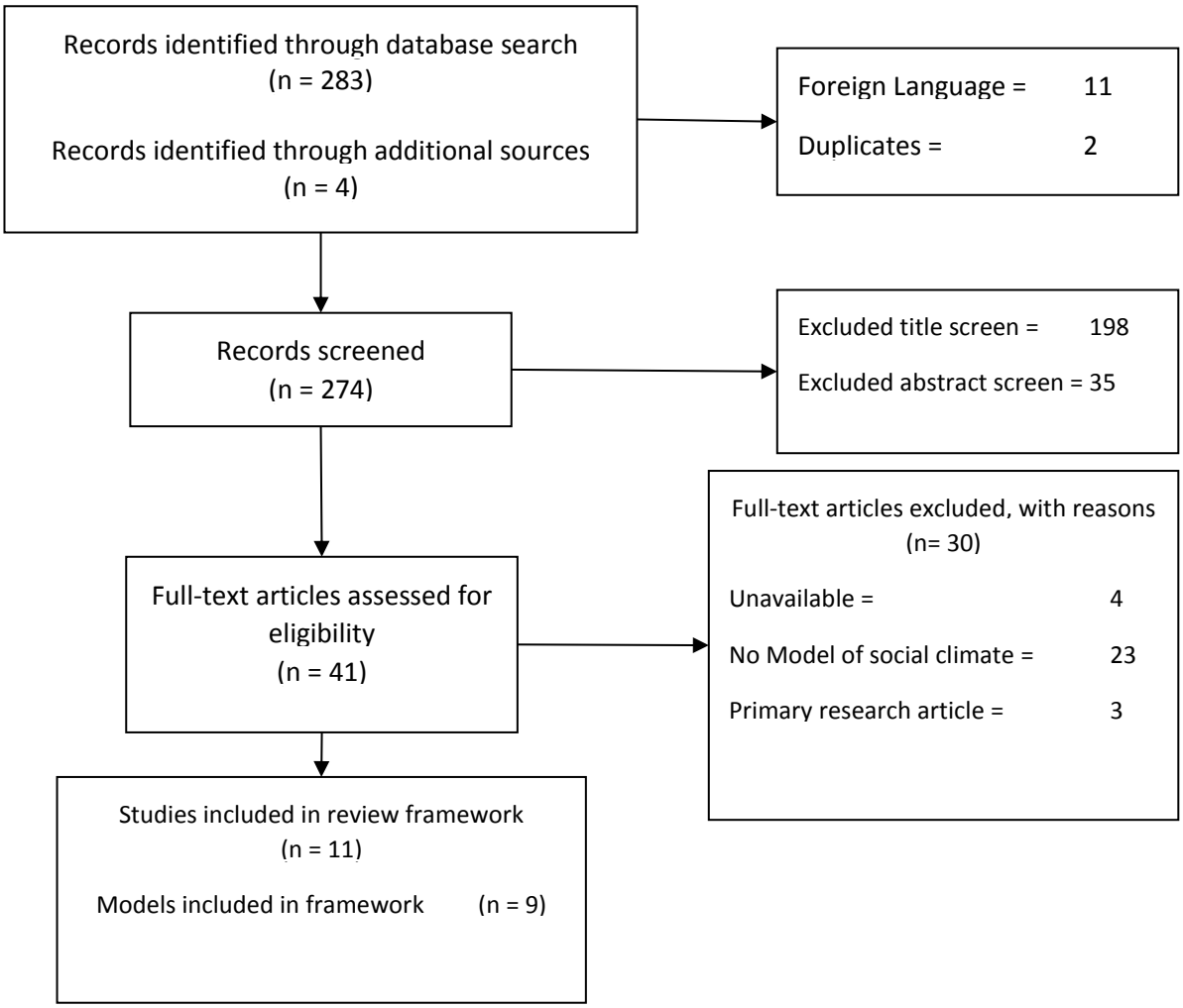


Figure 2: Flow Diagram for BeHEMoTH search

In all, nine models were identified from eleven papers (Figure 2). There were five models developed in forensic settings and four from non-forensic settings. Three of these models were based on measurement instruments and were seen as relevant to the review question, as questionnaires are the primary means through which social climate is studied (Tonkin, 2015). Models of social climate based on the Ward Atmosphere Scale (WAS; Moos, 1989) were outlined in two articles (Brunt, 2008; Eklund & Hansson, 2001). The Essen Climate Evaluation Schema (EssenCES; Schalast et al., 2008) was described in two articles (Alderman & Groucott, 2012; Tonkin et al., 2012). The Prison Group Climate Inventory is described in one paper (PGCI; van der Helm, Stams, & van der Laan, 2011). An adapted therapeutic community model was described in one paper based on a Dangerous and Severe Personality Disorder unit (DSPD; C. Taylor, 2011). One paper described a model for forensic settings for individuals with intellectual disabilities, including both therapeutic community principles and processes related to Livesley's (2007) recommendations for treatment of individuals with personality disorders (PD) (J. Taylor & Morrissey, 2012).

The Therapeutic Community model in non-forensic settings was described in two papers (Haigh, 2002, 2013). A World Health Organisation (WHO, 1953) report including recommendations on ward atmosphere was cited by two papers (Brunt, 2008; Haigh, 2013). Oeye et al. (2009) reported on milieu therapy, which is entered in the framework based on Gunderson's (1978) description of milieu therapy. A reconceptualization of milieu therapy - the optimal healing environment, is also entered into the framework (Mahoney et al., 2009). Though three models are based on a therapeutic community framework, all are included in the framework to allow for a more complete conceptualisation (Carroll et al., 2011).

The concepts of these nine models were compared and combined to develop an initial framework of twenty themes (Table 1; Appendix B). No sorting or grouping of themes was completed at this point of the review. This was to reduce the level of interpretation at this stage, which would be more usefully applied once a final framework had emerged from the main literature review. The initial themes are described in Appendix B, with the final framework themes described in Table 3.

Table 1: Contribution of models to Framework themes

Framework (# of times identified)	**WAS**	**WHO (1953)**	**Therapeutic Community Model**	**Therapeutic Community /DSPD**	**Prison Social Climate**	**EssenCES**	**TC and Social Milieu**	**Milieu Therapy**	**Optimal Healing Environment**
Involving (5)	**X**		**X**	**X**			**X**	**X**	
Supportive (6)	**X**				**X**	**X**	**X**	**X**	**X**
Containing (4)			**X**	**X**			**X**	**X**	
Tolerance of Expression (3)	**X**			**X**			**X**		
Empowerment (4)	**X**	**X**	**X**	**X**					
Focus on developing Life skills (2)	**X**								**X**
Personal development opportunities (6)	**X**	**X**		**X**	**X**		**X**		**X**
Safety (3)	**X**					**X**	**X**		
Organisational Structure (5)	**X**	**X**		**X**				**X**	**X**
Clarity of ward ethos (5)	**X**	**X**	**X**	**X**					**X**
Staff control (4)	**X**			**X**	**X**		**X**		
Challenging of Difficulties (2)				**X**			**X**		
Physical Environment (2)					**X**				**X**
Connectedness to Community (1)		**X**							
Validation (1)								**X**	
Occupation (1)		**X**							
Service Attachment (2)			**X**	**X**					
Staff Therapeutic Orientation (3)				**X**		**X**			**X**
Patient Motivation (1)				**X**					
External environment Factors (1)									**X**

2.2.Search Strategy for qualitative synthesis

The current study sought to increase specificity through use of an adapted SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type) search strategy, to overcome the limitations of PICO (Population, Intervention, Comparison, Outcome) in identifying qualitative or mixed methods research (Cooke, Smith, & Booth, 2012). PICOS models, incorporating study design, can provide greater specificity to target qualitative studies (Methley, Campbell, Chew-Graham, McNally, & Cheraghi-Sohi, 2014). However, a SPIDER search strategy may provide a more relevant approach through further increasing specificity (Cooke et al., 2012).

For the sample of interest three broad concepts were identified: social climate, forensic mental health and inpatient settings. To ensure broad coverage of relevant terms, systematic reviews of inpatient settings were examined to identify appropriate search terms (Hallett, Huber, & Dickens, 2014; Papadopoulos et al., 2012). Potentially non-forensic terms 'psychiat*' and 'mental*' were included to maximise sensitivity (Appendix A). As SPIDER searches can have poor sensitivity Design, Experience and Research Type were combined using the OR indicator (Methley et al., 2014) and a wide range of databases were searched, through OVID (MEDLINE, psycINFO, EMBASE, Health management Information Centre (HMIC), Cochrane Library); EBSCOHost (CINAHL, PBSC, ERIC) and Proquest (PILOTS, ASSIA, Social Services Abstracts). Grey literature was also searched through OpenGrey, Proquest: Dissertations and Theses Global and Sociological Abstracts. The reference lists of included papers were hand searched to identify any additional articles.

2.3.Inclusion and Exclusion Criteria

Studies were included in the review if they reported on qualitative analysis of the lived experience of service users or staff members in forensic mental health inpatient settings. The review aimed to identify studies which reported on perspectives of the ward atmosphere or social climate. Both peer reviewed empirical work and doctoral theses were considered for inclusion in the review. Only studies in English were considered. Studies reporting on quantitative data, studies based in settings not explicitly identified as forensic mental health and studies on non-adult samples were excluded. Studies concerning community based samples, reviews, conference abstracts, dissertations and letters to the editor were also excluded.

Due to the lack of conceptual clarity around social climate, studies which were not explicitly seeking perspectives on social climate were included if their focus was on aspects of the treatment setting rather than on internal factors, illness factors or structured therapeutic input. Qualitative studies identified during title screening as assessing perspectives on aggression, violence, hostility and recovery in forensic mental health settings were reviewed at the abstract or full text level to ascertain if they provided coverage of themes related to the *a priori* framework. Studies which assessed the impact of single factors such as; respect (Rose, Peter, Gallop, Angus, & Liaschenko, 2011) or experiences of trauma (Rossiter, 2015) were excluded at the full text review level as their specific focus was not seen to not assess the review question (Appendix C).

A data extraction form incorporating quality criteria was developed (National Collaborating Centre for Mental Health, 2007) (Appendix D). Papers were appraised using bespoke quality criteria based on the Cabinet Office Framework (Spencer, Ritchie, Lewis, & Dillon, 2003) and Critical Appraisal Skills Programme (2014) tool for rating quality of qualitative research. Consideration was given to quality of reporting of items on study design, participant selection, method of data collection and analysis method (Carroll, Booth, & Lloyd-Jones, 2012). The final quality assessment contained 12 items covering study design, analysis methods, findings and reporting quality. Each item was rated on a three point scale: not covered (-); adequately covered (+); and fully covered (++). The quality criteria aimed to examine the study design, the rigour with which studies were conducted, as well as the credibility of claims (Spencer et al., 2003). Studies with low reporting quality (5 or more criteria not covered) were excluded from the review to ensure trustworthiness of findings. Where two search results referred to the same data set, papers in peer reviewed journals were given priority and rated for quality, for example, a record based on thesis results and a later published empirical article (E.g. Nijdam-Jones, 2012; Nijdam-Jones, Livingston, Verdun-Jones, & Brink, 2015).

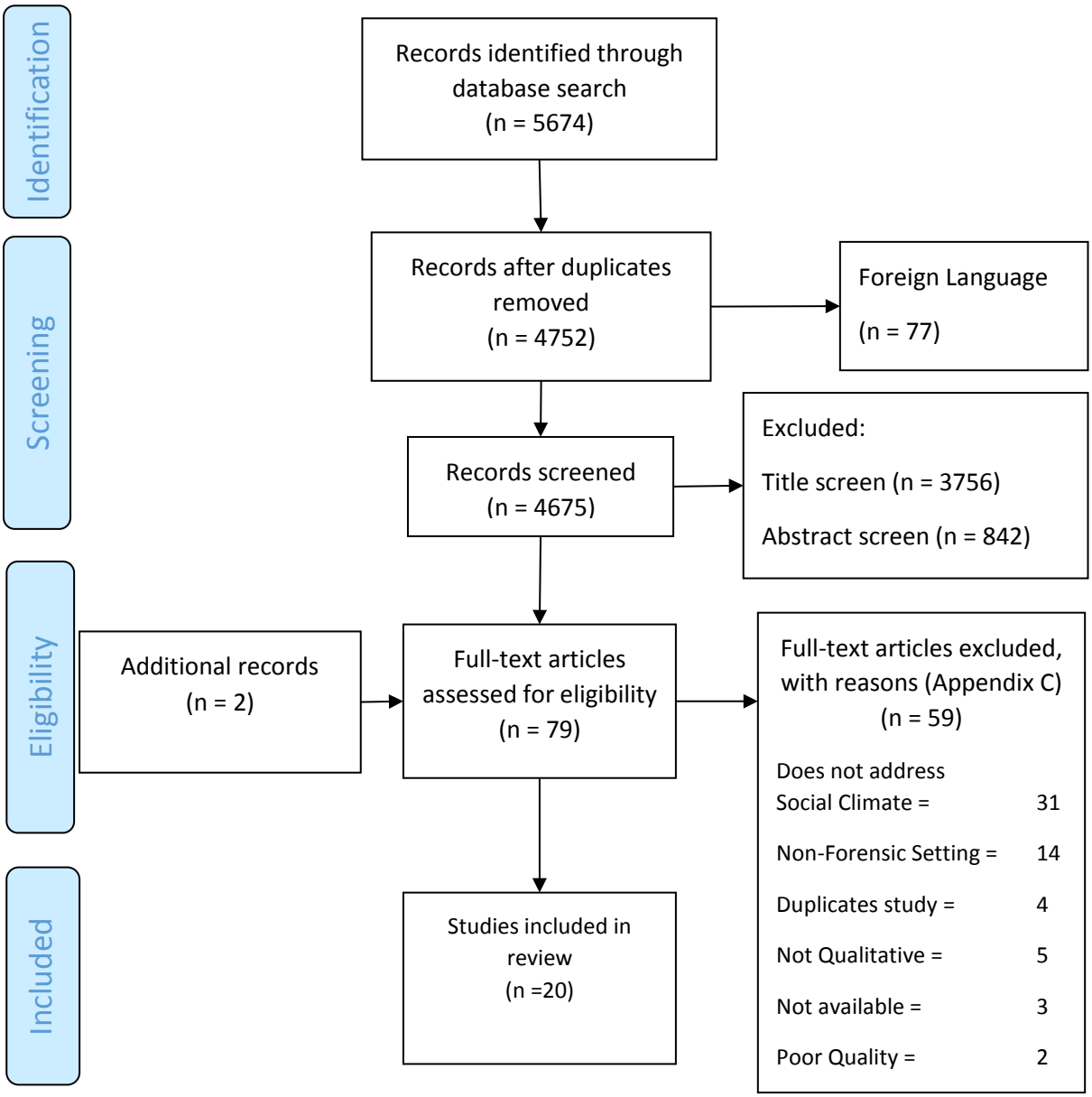


Figure 3: Flow diagram for qualitative synthesis

3. Results

22 studies met the inclusion criteria (Figure 3). Two papers were excluded based on low reporting quality (Barsky & West, 2007; Riordan & Humphreys, 2007) leaving 20 in the final review (Table 2). Riordan and Humphreys (2007) did not report on the analysis methods used, while Barsky and West (2007) provided insufficient detail on the design of the study and method of data collection. The two excluded papers did not contain any themes or perspectives related to social climate that were not captured in the included studies. The included studies were from UK (n=9), Sweden (n=5), Canada (n=2), Australia, New Zealand, Belgium and South Africa (each n=1). The studies were drawn from a range of settings across forensic mental health including high security hospitals (n=9) and medium secure units (n=5). Two studies reported on data across medium and low levels of security (Barnao, Ward, & Casey, 2015a; Long, Knight, Bradley, &

Thomas, 2012). Four papers did not provide specific information on the setting. Within the sample, four papers identified specific Personality Disorder services (Abel, 2012; Kurtz & Jeffcote, 2011; Millar, 2011; Sainsbury, Krishnan, & Evans, 2004). No samples related to intellectual disability patients were assessed as meeting the inclusion criteria. Both staff and patient voices were present in the included papers. The papers explored a range of constructs, including social climate, recovery, violence and aggression, motivation, hostility and the task of nursing.

11 studies reported on patient perspectives. Seven studies reported on staff perspectives. Two studies reported both staff and patient perspectives. In all 676 participants' views are reflected in the review, incorporating 221 patients (Male = 167; Female = 53; 1 not recorded) and 454 staff (Male = 273; Female = 160; 19 not recorded). Most studies ranged in number of participants from 6 – 30 with the exception of two survey studies with samples of 139 (Rask & Aberg, 2002) and 246 (Brunt & Rask, 2007). Studies mainly utilised individual interviews (n=16), though focus groups (n=2) and surveys (n=2) were also used. A range of analysis methods were utilised across the data including: thematic analysis (Braun & Clarke, 2006) (n=7); Grounded theory (Charmaz & Smith, 2003) (n=4); content analysis (Graneheim & Lundman, 2004) (n=4); Interpretative Phenomenological Analysis (Smith, 2004) (n=2); Reflective Lifeworld Approach (Karin, Nyström, & Dahlberg, 2007) (n=1); Tesch's open coding (Hsieh & Shannon, 2005) (n=1); Interpretive Descriptive approach (Thorne, Kirkham, & O'Flynn-Magee, 2004) (n=1).

3.1.Refining themes

Nineteen of the initial factors in the framework were supported by the study data (Table 3, Table 4). The theme *focus on developing life skills* was not identified in the papers and so was removed from the final review. The data suggested that initial definitions should be revised for several themes (Table 4). The theme *supportive*, captured perspectives related to both the therapeutic relationship and mutual support. Seventeen of the reviewed papers identified a primacy of the therapeutic relationship, both directly as part of social climate and as a facet of the experience of recovery, motivation and aggression. However, supportive also incorporated experiences of mutual support between patients, present in ten studies, suggesting that separate themes of the *therapeutic relationship* and *mutual support* may more accurately describe the data. The theme of *tolerance of expression*, which in the initial framework described therapeutic

community concepts of open expression (Haigh, 2002) was only supported in the model by descriptions of tolerating diversity and individuality (Long et al., 2012). Consequently, this theme is refined to *tolerance of diversity*. The theme of service attachment was cited in one study (Millar, 2011). The theme was renamed *secure base* to reflect this account. The theme of *personal development opportunities*, which in the framework described a range of therapeutic actions, was described in the model in terms psychological and medical interventions and so was redefined as *formal treatment*.

In addition, five papers reported themes that were not coded in the initial framework: person centred approach, respecting individuality, treating service user as a whole person, collaboration in care, and gender (Barnao et al., 2015a; Long et al., 2012; Millar, 2011; Tapp, Warren, Fife-Schaw, Perkins, & Moore, 2013; Wright, Duxbury, Baker, & Crumpton, 2014). Through a process of thematic analysis the framework themes of *person centred approach* and the role of *gender* were identified (Carroll et al., 2013). Definitions of these themes are provided in Table 3. The review data associated with *gender* is further described under the heading *Attitude to diversity, cultural and gender issues*. *Person centred care* is further described under *care and treatment orientation.*

Table 2: Included studies for Systematic literature review

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
1	Abel (2012) **UK**	Medium Security PD unit **Staff**	To provide insight into the experiences of staff working with patients with personality disorders in a secure inpatient environment	**N = 8** Interviews with Nursing staff analysed using IPA.	Four superordinate themes, each with subthemes. **The diagnosis:** Interest and identification, Assumption of early experiences, Value of a label **Language and Communication**: Finding the 'right' way to communicate, Language and reflection, **Roles on the ward:** Responsibility and control, Expectations, Risk and safety **Difficulties and challenges:** Boundaries, Perceptions and the impact of emotions, The Team	++
2	Barnao et al. (2015a) **New Zealand**	Two medium secure wards and an open rehab ward **Patient**	To explore the lived experiences of a group of service users undergoing rehabilitation in a forensic hospital. To understand the key issues regarding rehabilitation from the perspective of service users to inform service development.	**N = 20** Thematic analysis of semi structured interviews with 17 male and 3 female patients all resident for at least six months within the service	Four external themes: **Person-centered approach** **Nature of relationships with staff** **Consistency of care** **Awareness of rehabilitation pathway** Three internal themes**:** **Self-evaluation** **Agency** **Coping strategies**: passive (compliance and disengagement) and active (problem-focused and emotion-focused coping)	++
3	Brunt & Rask (2007) **Sweden**	Maximum security forensic psychiatric hospital **Staff & Patients**	To contribute to the body of knowledge on ward atmosphere/milieu in psychiatric settings	**N = 139** N = 35 patients (12 female) N = 104 staff (39 female) Manifest content analysis of a survey	**Internal or central characteristics emanating from the ward itself**: (1) pre-conditions for inter relations; (2) Interpersonal relations; (3) order, organization and rules; (4) feeling good/feeling secure: **External influences emanating from outside the ward itself:** (1)staff—qualifications and organization; (2) treatment and pre-conditions for treatment (3) daily activities; (4) physical environment	+

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
4	Horberg et al. (2012) **Sweden**	Forensic Inpatient Clinic **Patient**	To describe patients' experiences of their life situation in forensic psychiatric wards, with a focus on care, experiences of care and perspectives on the components of care.	**N = 11** 6 male and 5 female patients completed interviews analysed using a Reflective Lifeworld Approach.	**non-caring care**; **pockets of good care**; **strategies;** **a struggle against resignation;** **an existence characterized by tensions;** **longing**.	+
5	Jacob & Holmes (2012) **Canada**	Medium Security Hospital **Staff**	To understand how fear influences nurse–patient interactions in a forensic psychiatric setting.	**N = 18** 13 female and 5 male staff members interviews, analysed using grounded theory	Four themes, with the theme of ***othering*** linked to the other three themes as the basic social process through which the ward functions. **Context; Nursing Care; Fear; Othering**	++
6	Kurtz & Jeffcote (2011) **UK**	Two medium secure units, including one Personality Disorder Unit **Staff**	To understand the relationship between staff members' experiences of external factors, the organisation & the wider environment and experiences resulting from the nature of the clinical task and contact with patients.	**N = 25** 13 male; 12 female Grounded theory study of semi-structured interviews with nursing staff.	Overarching Theme: 'Everything contradicts in your mind' **Experience of the Clinical Task** Difficulty in achieving task integration Motivation to build relationships, work through difficulty and bring about change Minimal sense of risk and anxiety at the centre **Experience of the Organisation** A distant and difficult relationship with Outside Preoccupation with Staff Relationships Feeling Unsafe	+
7	Long et al. (2012) **UK**	Medium and Low secure service **Patient**	To identify service users' views of components of an effective therapeutic milieu for women in secure settings to inform future service planning	**N= 19** Thematic analysis. Two focus groups with 19 female patients. Focus group sessions were led by a service user and service user involvement worker	11 categories were identified across five themes: **Interpersonal relationships** (a) Key points of contact (b) Therapeutic relationship/trust (c) Personal qualities and attitudes of staff **Treatment programming** (a) Treatment planning (b) Motivational treatment engagement (c) Pacing and delivery of treatment (d) Emphasis on physical & mental health needs **Empowering patients** (a) Respecting individuality (b) Facilitating the patient voice **Place of safety, Hope**	++

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
8	Mason & Adler (2012) **UK**	High Security Hospital **Patient**	To consider the past experiences of therapeutic group-work and the impact/influence of the participants' previous relationships with practitioners on their choices regarding engagement in treatment	**N = 11** Male inpatients interviewed using semi-structured protocol with data analysed using Interpretative Phenomenological Analysis	Six themes, with an interwoven theme of ***the culture of the environment*** **Motivation** **Content of group-work** **Choice** **Expected outcomes** **External locus of control** **Relationships**	++
9	Meehan et al. (2006) **Australia**	High Security Hospital **Patient**	To capture the views of patients on the interpersonal and contextual factors that contribute to aggressive behaviour	**N = 27** 22 male and 5 female inpatients. Content analysis of five audiotaped focus groups	Five themes of factors that influence aggression: **The environment; Empty days; Staff interactions; Medication issues; Personal characteristics of the patients themselves:** **Effective management strategies:** **Early Intervention**: Dealing with aggressive patients; Activities to relieve boredom; Patient Control; Staff attitudes	+
10	Millar (2011) **UK**	Medium Secure PD unit **Staff**	To develop an explanatory model for staff working in secure units for women diagnosed with personality disorder	**N = 11** Staff members completed a semi structured interview, analysed using grounded theory	Developed an explanatory model incorporating the five identified themes and accompanying subthemes. **Balancing Tensions**: Negotiating service factors; Making links with the external world; Managing emotional impact of work **Secure Base**: Creating a homely environment; Recovery culture and allegiance; Working as a team **Therapeutic Relationship**: Way of being; Treating service-user as a whole person; Being alert **Initiating recovery**; Service-user inputting into their recovery; Timing; Working alongside **Nurturing Recovery:** Future orientation; Enabling and empowering; Doing it safely; Breaking institutionalisation	+

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
11	Nijdam-Jones et al. (2015) **Canada**	Forensic Psychiatric Hospital **Patient**	To understand the qualities of the service in a forensic hospital that were identified as being important and meaningful to recovery and to investigate if social bonding theory was a useful framework	**N = 30** 24 males and 6 female patients. Thematic analysis of semi-structured interviews	Five themes identified (1) **involvement in programmes**; (2) **belief in rules and social norms**; (3) **attachment to supportive individuals**; (4) **commitment to work-related activities**; (5) **length of stay in hospital**. *Themes 1-4 linked to social bonding theory (Hirschi, 2002)*	+
12	Olsson et al. (2014) **Sweden**	Maximum security forensic psychiatric hospital **Staff**	To describe forensic nursing staffs' perceptions and experiences of forensic psychiatric patients turning towards recovery	**N = 13** 6 female and 7 male staff purposively sampled, completed semi structured interviews analysed using interpretive description approach	Overall theme of **Promoting a turning Point**: Three subthemes: **Experiencing the start of a transformation** **Being responsive and adaptable** **Working together for a salutary health care environment**	+
13	Olsson et al. (2015) **Sweden**	Maximum security forensic psychiatric hospital **Patient**	To understand forensic inpatients' perceptions of factors believed to contribute to a decreased or increased risk of violent behaviour.	**N = 13** 10 male and 2 female (1 unidentified) inpatients completed semi structured interviews which were analysed using an interpretive description approach	Three themes identified each with three subthemes. 1) **staff's attitudes and actions**: Availability of psychiatric nurses; Being met with respect or nonchalance; Patients' perception of staff´s ability to manage conflicts 2) **patients' insight and actions**: Being insightful and managing the situation; Dealing with aggression; Attending to signs of warnings 3) **Interactions in the health care environment**: Experiences of the physical environment; Being co-creator of the psychological climate; Sensing manifestations of power	++

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
14	Rask & Aberg (2002) **Sweden**	Data collected from five psychiatric hospitals **Staff**	To investigate forensic nurses' perspectives of how nursing care could contribute to improved care, and which knowledge they regarded as necessary in order to meet demands	**N= 246** Mixed methods study using a questionnaire with a sample of 246 forensic (171 male) nursing staff. Analysed using content analysis	Four categories were identified with ten sub categories. **Humanistic basis in nursing care**: (a) Basis of nurse–patient interaction; (b)The view of the patient' **Organisation of care** (a) nursing care oriented organisation; (b) clinical supervision (c) Personal and professional network **The nurses' need for knowledge**: (a) Further education with focus on nursing care-specific issues (b) Knowledge about treatment modalities (c) Documentation **Essence of the nurses' work**: (a) Create meaning in daily life; (b) Nurses personal recourses and tacit knowledge	+
15	Sainsbury et al. (2004) **UK**	Personality Disorder Directorate of High Security Hospital, **Patient**	To identify the aspects of an inpatient forensic Personality Disorder Directorate that influence the patient's motivation to engage in treatment.	**N = 6** Semi structured interviews with male inpatients analysed using grounded theory	Seven dimensional themes: **Support**: encouragement to engage in treatment; encouragement to remain in treatment; help with difficulties; feedback **Treatment**: waiting for treatment; relevance of assessment process; coaxing it out safely (the therapist's approach); preparation for and support during treatment; treatment content; exposing vulnerabilities **Safety**: Practical methods; psychological methods **External belief** **Belonging** **Internal Motivation** **Therapeutic relationship**	+
16	Tapp et al. (2013) **UK**	High Security hospital **Patient**	To explore perceptions of experiences in high security that had helped or hindered progress to discharge	**N=12** Thematic analysis. Interviews with 12 male patients close to discharge.	Eight Themes identified: **Temporary suspension of responsibility; Collaboration in care; Learning from others; Talking therapies; Supportive alliances; Living in a non-toxic milieu; Medical treatments; Opportunities for work**	++

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
17	Tema et al. (2011) **South Africa**	Forensic ward **Staff**	To explore and describe psychiatric nurses' lived experience of hostile behaviour by patients in a forensic ward, and make recommendations for nurse managers to empower psychiatric nurses in the forensic ward.	**N=9** 7 male and 2 female staff interviews with data analysed using Tesch's open coding method	Five themes identified: **Challenges in therapeutic relationships with patients:** ineffective communication; unpredictable behaviour; frustrated aspiration **Fear related to threats from the patients:** Verbal aggression, physical aggression **Disempowerment related to lack of recognition;** lack of sufficient knowledge and skills; Shortage of male nurses; Lack of support by management **Emotional and physical distress:** **Defence and coping mechanisms to maintain mental health:** Suppression; Rationalization; displacement; use of cigarettes/alcohol	+
18	To et al. (2015) **Belgium**	Eight Medium Secure wards, two Correctional Institutions **Patients**	To understand how mentally ill offenders, experience their admission and treatment. To understand the differences in service users' experiences of medium-secure forensic institutions versus correctional institutions	**N=17** 16 males and 1 female participated with 13 from mental health and 4 from correctional settings. Semi-structured interviews analysed using Thematic Analysis	Seven themes of the participants' experiences in treatment settings: **The feeling of lacking control,** **The pressure to perform,** **Their label of interned Mentally Ill Offender (MIO)** **The feeling of responsibility and trust** **Privacy** **Staff** **Living with other MIOs.**	+
19	Wilmott & McMurran (2013) **UK**	High Security hospital **Patient**	To explore the views of patients with a diagnosis of personality disorder on the process of change during treatment	**N= 12** Thematic analysis. Interviews with 12 male patients, all of whom were identified as having made progress in therapy	Themes relevant to social climate were grouped under superordinate themes of **the process of change**: **Self**: staff members giving accurate feedback on participants' behaviour, demonstrating trust in them and showing care and a non-judgemental attitude. **Other people**: Other people listening to them, being reliable, helping with problem solving, self-disclosure and demonstrating trust. **The future**: talking about the future.	+

#	Study, Year, Country	Setting, Sample	Aims	Design, methods	Main Findings	Quality Rating
20	Wright et al. (2014) **UK**	High Security Hospital **Staff & Patient**	This study aimed to identify nursing staff and patients attitudes to the management of violence and aggression within a high security hospital	**N =18** 10 staff (7 male, 3 female) and 8 male inpatients completed semi-structured interviews, analysed using thematic analysis	Seven themes identified, with staff and patient accounts in each theme: **The establishment** **Relationships** **Gender** **The construction of difference;** **Medication** **Environmental stimuli** **Identity**	+

Table 3: Final themes following literature review

Themes	Definition
Challenging of Difficulties	Mechanisms through which patients receive feedback and are challenged on their behaviour
Clarity of ward ethos	The shared understanding of how the ward approaches the task of care and treatment.
Connectedness to Community	The means through which contact with the outside world (family, friends, community) is facilitated
Containing	The nature of the ward as containing of difficult emotional experience and as a space where difficult experiences can be understood
Empowerment	The extent to which patients feel empowered and have a sense of personal agency
External environment Factors	The systemic factors that can impact on the functioning of the ward.
Formal Treatment*	Availability of interventions to facilitate personal development
Gender	The extent to which male and female voices are heard on the ward
Involving	Patients are involved in the running of the ward and feel part of the ward
Mutual support*	The nature of the relationship between patients on the ward and opportunities for mutual support
Occupation	The provision of meaningful and purposeful activity
Organisational Structure	The structure of the staff team and the available mechanisms for staff support The procedures and formal structures of how the ward runs
Patient Motivation	The internal motivation of the patient
Person-Centred Care	The extent to which care in seen as collaborative and holistic
Physical Environment	The nature of the ward physical environment and the extent to which it is experienced as therapeutic and comfortable
Safety	The experience of personal safety on the ward
Secure base*	The role of the ward as a secure base, a place where patients are accepted
Staff control	The means through which staff exercise control in the ward environment The extent of staff control behaviours.
Staff Therapeutic Orientation	The level of focus of staff members on their caring role
Therapeutic relationships*	The extent and nature of staff-patient relationships
Tolerance of Diversity*	The ward respects difference
Validation	Actions that affirm the individuality of the patient and acknowledge their personal experiences.

*indicates change from the *a priori* framework

Table 4: Themes identified for each study

Themes	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**#**
Challenging of Difficulties															x	x			x		**3**
Clarity of ward ethos	x	x				x	x			x									x		**6**
Connectedness to Community										x	x			x		x					**4**
Containing															x						**1**
Empowerment		x		x			x	x		x				x		x		x		x	**9**
External environment Factors						x								x							**2**
Formal Treatment*		x	x				x	x			x		x		x	x					**8**
Gender																				x	**1**
Involving			x	x						x			x		x						**5**
Mutual support*			x					x	x		x	x	x		x	x		x	x		**10**
Occupation			x	x					x		x			x		x				x	**7**
Organisational Structure	x		x	x		x				x	x	x	x	x			x			x	**11**
Patient Motivation		x		x			x	x		x	x		x		x			x			**9**
Person-Centred Care		x					x			x						x					**4**
Physical Environment			x		x				x	x			x					x			**5**
Safety	x		x		x	x	x		x	x			x		x	x	x				**11**
Secure base*										x											**1**
Staff control	x			x					x	x			x				x			x	**7**
Staff Therapeutic Orientation	x	x	x	x	x	x	x		x	x		x	x	x	x		x	x		x	**16**
Therapeutic relationships*	x	x	x	x			x	x	x	x	x	x	x	x	x	x		x	x	x	**17**
Tolerance of Diversity*							x														**1**
Validation	x	x		x	x	x								x							**6**

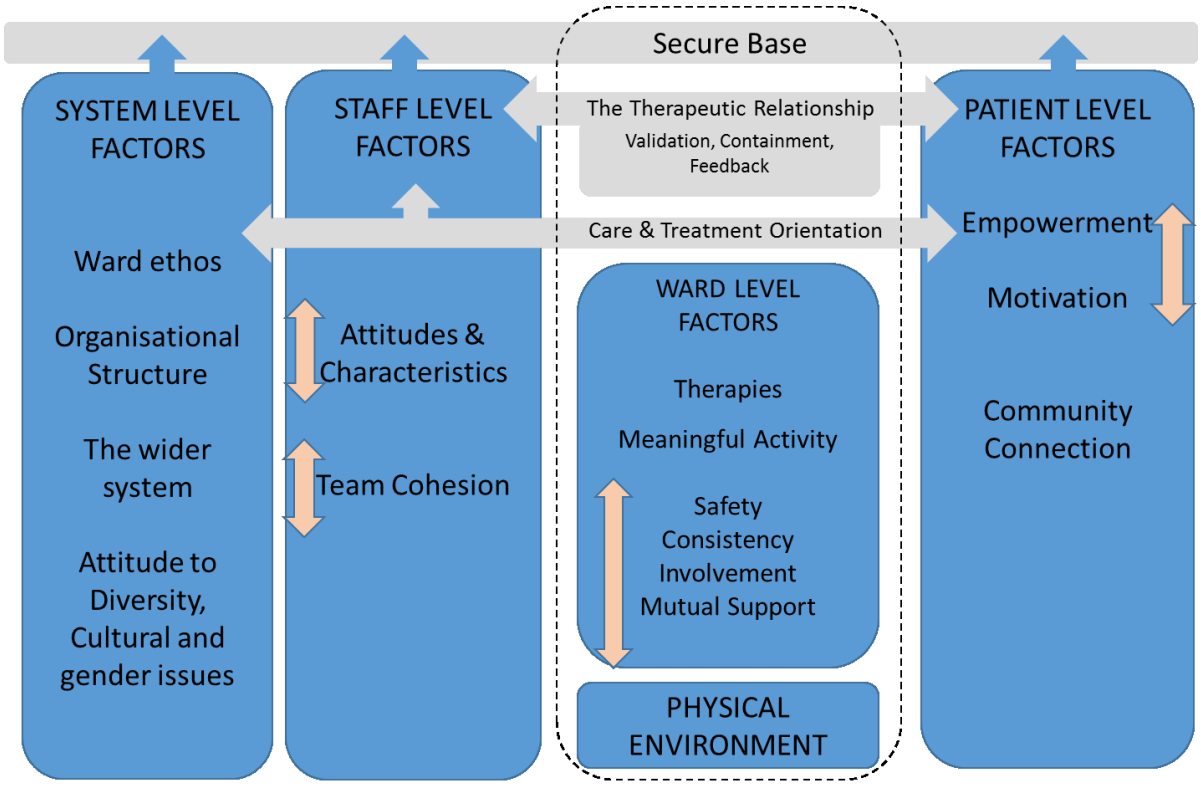
3.2.Conceptual model of social climate from synthesis

To develop a conceptual model the framework was examined for linkages across themes and across studies (Carroll et al., 2011). This led to an initial grouping into factors that appeared to occur at a systemic/cultural level, staff factors, patient characteristics and shared factors (Appendix E). The conceptual model that emerged from the data contained five different areas relevant to social climate: the system, the staff team, the patients, the ward (the shared space) and the physical environment (Figure 4). These areas were linked through the processes of the *secure base*, the *therapeutic relationship*, and *care and treatment orientation*. The model aims to describe both the facets of social climate of forensic inpatient settings, as well as the wider factors that operate on the social climate.

The three processes of *secure base*, *therapeutic relationship* and *care and treatment orientation* as well as the *ward level* factors and *physical environment* are seen as the core of social climate in the model. Ward level factors include *involvement, consistency, safety* and *mutual support;* the social and emotional experiences of the ward (Schalast et al., 2008). These dimensional constructs are open to influence by staff and patient characteristics. Hence, the shared ward environment is contingent on the functioning of the wider model factors, including the staff team and the patient group (Hörberg, Sjögren, & Dahlberg, 2012; Olsson, Strand, Asplund, & Kristiansen, 2014). The *physical environment* and availability of suitable interventions, including *therapies* and *meaningful activity* are more concrete, though facilitated by wider systemic factors such as staff training and patient motivation (Brunt & Rask, 2007; Long et al., 2012; Sainsbury et al., 2004; Tapp et al., 2013).

The three processes are dynamic and the nature of each of the processes is seen as an aspect of the social climate of the ward. The *secure base,* can be seen as the necessary setting conditions from which the social climate is created. The extent to which the ward functions as a secure base is related to the functioning of the staff and patients as well as to the functioning of the system. The *care and treatment orientation* is impacted by systemic factors, in particular the extent of focus on security and risk management, and the extent of focus on recovery oriented approaches. These two approaches are not necessarily oppositional, though they can cause dilemmas for staff in both the therapeutic relationship and approach to care (Barnao et al., 2015a; Millar, 2011). The therapeutic relationship is related to the care and treatment orientation of the service, but

is also dependent on staff and patient characteristics. It is separated from the ward level factors in the model as the relationship is understood as an individual experience for the patient.



(- - - represents experienced social climate, ↕ defines dimensional constructs, ▭ denotes processes)

Figure 4: Conceptual Model of Social Climate

3.3.System Level Factors

3.3.1. Ward Ethos

Ward ethos, described in six papers, was seen as related to the staff team's approach to care and treatment, though this was seen as determined at an organisational level. Ethos is related to the ward culture with a treatment orientated culture identified as a factor that differentiated mental health settings from prison (Willmot & McMurran, 2013). The lack of a shared model was identified as a source of frustration by patients due to this causing a lack of consistency in the staff approach (Barnao et al., 2015a). Patients emphasised that well planned treatment and discharge planning were important, alongside consistent staffing numbers (Long et al., 2012). Managerial support was seen as central to the development of recovery focused care (Millar, 2011), with a lack of clarity between recovery and risk management approaches at a management level seen to impact on staff members' task integration (Kurtz & Jeffcote, 2011). Ward ethos is

linked to other areas of the model, and in particular can be seen as related to team cohesion and consistency.

3.3.2. Organisational structure

Organisational structure was identified in 11 papers and refers to ward procedures and staff supports in the functioning of the ward. This theme encompasses support structures including clinical supervision, space for reflection and training and development opportunities (Millar, 2011; Rask & Aberg, 2002; Tema, Poggenpoel, & Myburgh, 2011). Having the right language to reflect, was identified as important (Abel, 2012; Millar, 2011). A flat organisational structure and knowledge of role are potential means through which the system acts to contain staff (Abel, 2012; Rask & Aberg, 2002). The structures and procedures of the ward link to the process of *secure base*, creating a structured institutional environment (Jacob & Holmes, 2011; Wright et al., 2014). A lack of organisational support and acknowledgment was reported to lead to difficulties in staff relationships, particularly between different professional groups, and low levels of containment (Abel, 2012; Kurtz & Jeffcote, 2011; Tema et al., 2011). Patients experience the *organisational structure* through rules and regulations, which can be experienced as disempowering (To, Vanheule, De Smet, & Vandevelde, 2015) and dehumanising (Meehan, McIntosh, & Bergen, 2006).

3.3.3. The wider system

The wider system, described in two papers, accounted for systemic factors that influence ward functioning based on the framework theme of *External Environment Factors*. The wider system could be seen as hostile and distant (Kurtz & Jeffcote, 2011), though external organisations were also identified as potential sources of support in planning discharge and maintaining family contact (Rask & Aberg, 2002). Education and training of healthcare staff was also identified within this theme (Rask & Aberg, 2002). External factors also influenced aspects of care and treatment; through restraining the extent of recovery as a care and treatment orientation (Millar, 2011); and through legal orders enforcing an indeterminate stay in hospital; reducing motivation and leading to hopelessness (Nijdam-Jones et al., 2015; To et al., 2015).

3.3.4. Attitude to diversity, cultural and gender issues

This theme contains *gender* (1 paper) and *tolerance of diversity* (1 paper). Gender was described as the value of having a female perspective in male dominated spaces (Wright et al., 2014) suggesting that traditional views of male staff as protective and authoritative

and female staff as maternal are prominent on forensic mental health wards (Jacob & Holmes, 2011). Gender and diversity appeared to have a wider role than described in relation to the staff mix on feelings of safety and in suggestions that the need for control in forensic psychiatric nursing leads to a "masculization" of staff (Jacob & Holmes, 2011; Tema et al., 2011). Papers based on female only units described the value of culturally competent services that account for the needs of their client group (Long et al., 2012; Millar, 2011).

3.4.Staff level factors

3.4.1. Staff attitudes and characteristics

Staff attitudes and characteristics was defined from the framework theme of *staff therapeutic orientation*, identified in 16 papers. Staff attitudes can be understood on a continuum with some attitudes promoting a positive social climate and some negatively impacting social climate (Olsson, Audulv, Strand, & Kristiansen, 2015). For example, Millar's (2011) description of a "human approach" to care contrasts to the "non-caring care" and "security oriented care" identified in some papers (Hörberg et al., 2012; Jacob & Holmes, 2011). This theme also illustrates the difficulty in defining a "good social climate" as aspects of care and treatment seen as useful by staff (e.g. psychiatric diagnoses; Abel, 2012) may be seen negatively by patients (Barnao et al., 2015a).

The attitude and characteristics of staff were seen as the foundation of the therapeutic relationship (Brunt & Rask, 2007; Millar, 2011) and also influence the care and treatment orientation. Patients valued staff characteristics of consistency and respect (Barnao et al., 2015a); listening skills and empathy (Long et al., 2012); and having belief in the patient (Sainsbury et al., 2004). Negative staff characteristics included being seen as patronising and cynical (To et al., 2015); holding superior attitudes, being inflexible and lacking in empathy (Meehan et al., 2006). Staff characteristics were also relevant to self-care. Harmful processes to manage the impact of the work included suppression and displacement of emotions (Tema et al., 2011) suggesting the value of system level factors and team cohesion in promoting positive attitudes and coping strategies.

3.4.2. Team Cohesion

The factor of team cohesion was described in six papers within the framework theme of *organisational structure*. Team cohesion links to the process of the *secure base* through impacting on staff feelings of emotional safety (Kurtz & Jeffcote, 2011; Olsson et al., 2014). Conflict was identified between professional groups in some papers (Abel, 2012;

Kurtz & Jeffcote, 2011), with effectiveness of team working seen to directly impact on the quality of care (Olsson et al., 2014; Rask & Aberg, 2002).

3.5.Patient Level Factors

3.5.1. Empowerment

Empowerment, identified in nine papers, represents the extent to which patients experience a sense of agency and are given opportunities to make decisions. Empowerment was identified as a valued aspect of the treatment environment (Barnao et al., 2015a; Long et al., 2012; Mason & Adler, 2012). However, several papers described to a lack of agency, most notably Hörberg and colleagues (2012) description of forensic inpatient care as "a struggle against resignation". A lack of control and a lack of rights were salient aspects of the patient experience (Barnao et al., 2015a; Hörberg et al., 2012; Mason & Adler, 2012) with patients feeling treated in a childlike way (To et al., 2015; Wright et al., 2014). However, while this external control was generally conceptualised as negative, one paper reported that patients valued a temporary lack of autonomy, due to the freedom from responsibility it offered (Tapp et al., 2013).

Achieving autonomy was seen as a goal for patients and was generally defined as increased responsibility, respect for individuality and involvement in care and treatment plan (Barnao et al., 2015a; Long et al., 2012). Staff perspectives highlighted a desire to empower patients in a structured way, gradually increasing autonomy alongside increased trust (Millar, 2011; Rask & Aberg, 2002). This demonstrates the links between empowerment and the processes of care and treatment orientation and the therapeutic relationship.

3.5.2. Motivation

Patient *motivation*, reported in nine papers, was in part defined by a desire for freedom from the system of forensic care (Hörberg et al., 2012; Sainsbury et al., 2004). Some accounts of patient motivation indicated patients would do what is necessary to achieve discharge (Barnao et al., 2015a). Uncertainty about length of stay in hospital tended to reduce motivation (Nijdam-Jones et al., 2015; To et al., 2015). However, encouragement, validation, acknowledgement of effort and hope for the future were identified as important interpersonal factors that increased motivation towards recovery and engagement in treatment (Long et al., 2012; Mason & Adler, 2012; Millar, 2011).

3.5.3. Community Connection

Community connection, reported in four papers, encompasses contact with family members, carers and the wider community. For patients, family support was a source of motivation and a key factor in recovery (Nijdam-Jones et al., 2015; Sainsbury et al., 2004; Tapp et al., 2013). A holistic view of treatment was linked to building community or family supports, and the importance of family knowledge of the patient and role in post-discharge support was recognised (Barnao et al., 2015a; Nijdam-Jones et al., 2015; Rask & Aberg, 2002).

3.6.Social Climate Factors

3.6.1. Therapies

Therapies, from the theme of *formal treatment* was described in eight papers. Medication and psychological therapies were the most commonly cited treatments. Medication was identified as a means to manage symptoms of mental illness and regain self-control (Tapp et al., 2013). Psychological therapies, including group and individual interventions, were seen as a way to develop new ways of coping (Nijdam-Jones et al., 2015), though they could also lead to patients feeling vulnerable (Mason & Adler, 2012; Sainsbury et al., 2004). Patients highlighted a preference for an individualised approach to treatment rather than being placed into "one-size fits all" programmes (Barnao et al., 2015a; Long et al., 2012).

3.6.2. Meaningful Activity

Meaningful activity, reported in seven papers, describes the framework theme of *occupation* understood in terms of personally meaningful activity (Kielhofner, 2002). Patients described their interests being supported as important, linking to a person centred treatment approach (Barnao et al., 2015a). Boredom and a lack of available activities were identified as a negative aspect of forensic mental health settings (Meehan et al., 2006; Wright et al., 2014). Meaningful occupation provided a route to autonomy, a source of personal meaning and opportunities for social interaction (Nijdam-Jones et al., 2015; Rask & Aberg, 2002; Tapp et al., 2013).

3.6.3. Safety

Safety was identified in 11 papers and could be seen as an outcome of other aspects of the social climate (Brunt & Rask, 2007). Staff were seen as responsible for safety, which could lead to dilemmas in providing care (Abel, 2012). Staff actions to maintain safety varied from valuing fear and alertness (Jacob & Holmes, 2011; Millar, 2011) to a sense

of physical safety supported by downplaying incidents of violence (Kurtz & Jeffcote, 2011). Violence and aggression could have a negative impact on the therapeutic relationship, leading to mistrust, fear and anxiety in staff members (Tema et al., 2011). Patients also identified a need to be alert to both their own and other patients 'warning signs' in order to maintain safety (Olsson et al., 2015). For patients, safety was identified both in terms of safety from other people but also in terms of safety from the self (Long et al., 2012). Patients identified the role of procedures, de-escalation and clear boundaries in maintaining a settled environment (Tapp et al., 2013).

3.6.4. Consistency

Consistency was identified in four accounts across a range of framework themes including *organisational structure*, *therapeutic relationships*, and *team cohesion*. Consistency was seen at an individual level as 'remaining the same' (Abel, 2012) and at a ward level as consistency of approach and implementation of rules (Jacob & Holmes, 2011; Long et al., 2012). For patients, inconsistency in approaches to care and a lack of follow though were identified as frustrations, while consistency provided a sense of security and predictability (Barnao et al., 2015a).

3.6.5. Involvement

Involvement, identified in four papers, refers to the patients' experience of being included on the ward. The papers describing *involvement* varied from patients opting out of the shared environment (Hörberg et al., 2012), to patients identifying a sense of belonging through being granted responsibility or through experiences of influencing the social climate (Olsson et al., 2015; Sainsbury et al., 2004). *Involvement* was perhaps ideally described in participant descriptions of creating a "homely" normalised environment on a medium secure ward for women (Long et al., 2012).

3.6.6. Mutual Support

Mutual support amongst patients, described in ten papers, could generate optimism in the staff team and help maintain a tolerant atmosphere (Meehan et al., 2006; Olsson et al., 2015; Olsson et al., 2014). Supportive mutual relationships could also be a source of motivation, providing learning experiences and opportunities for personal growth (Mason & Adler, 2012; Sainsbury et al., 2004; Tapp et al., 2013). However, fellow patients could also be difficult and dangerous, and a source of stress in the ward environment (Meehan et al., 2006; Olsson et al., 2015; To et al., 2015).

3.6.7. Physical Environment

The physical environment was identified in five papers. Privacy and the availability of personal space were significant aspects of the physical environment for patients (Brunt & Rask, 2007; Meehan et al., 2006; To et al., 2015). Patients expressed a preference for less 'sterile' environments (Long et al., 2012; Olsson et al., 2015). For staff, visibility and practical safety features were the sole aspect of the physical environment identified (Jacob & Holmes, 2011).

3.6.8. Secure Base

The *secure base* is described in Millar's (2011) model of applying a recovery approach with women in a secure personality disorder service. Within the current model, the *secure base* is seen as an overarching feature of social climate developed through the system, staff and patient domains. Through the *secure base*, staff support structures, team cohesion, a shared culture and ethos and patient empowerment can contribute to the ward being identified as a place where staff can promote rehabilitation and recovery, and where patients can develop skills and work though difficulties. This containing function of the *secure base* is consistent with both milieu therapy and therapeutic community models of care (Gunderson, 1978; Haigh, 2013).

3.6.9. Therapeutic relationship

The *therapeutic relationship* between staff and patients, identified in 17 papers, was the most commonly identified theme in the review. 'Good' therapeutic relationships are a central aspect of a positive social climate, from both patient and staff perspectives. Aspects of the therapeutic relationship seen as important included; communication (Abel, 2012; Long et al., 2012), boundaries (Abel, 2012), trust (Barnao et al., 2015a; Long et al., 2012; Mason & Adler, 2012; To et al., 2015; Willmot & McMurran, 2013), respect (Barnao et al., 2015a; Brunt & Rask, 2007), containment (Sainsbury et al., 2004), empathy (Tapp et al., 2013) and validation (Hörberg et al., 2012; Jacob & Holmes, 2011). This links the framework themes of *validation* (6 papers) and *containing* (1 paper) as qualities of the *therapeutic relationship*.

Staff interest and encouragement was seen to support recovery, while nonchalance or disinterest could be disruptive to the therapeutic relationship and patient motivation (Millar, 2011; Nijdam-Jones et al., 2015; Olsson et al., 2015; Sainsbury et al., 2004). For staff, developing therapeutic relationships required the presence of supportive colleagues (Olsson et al., 2014) and skills in engaging patients (Abel, 2012; Rask & Aberg, 2002). A particular skill identified was in *challenging of difficulties* (3 papers),

which was described in patient accounts as receiving corrective feedback from staff on behaviour in a supportive manner (Sainsbury et al., 2004; Willmot & McMurran, 2013). The constraints of the environment were also recognised as influencing the therapeutic relationships, in particular, the need to balance risk management and rehabilitation roles (Brunt & Rask, 2007; Jacob & Holmes, 2011).

3.6.10. Care and treatment orientation

Care and treatment orientation encompasses the themes of *staff control* (7 papers) and *Person centred care* (4 papers). *Person centred care* described the patient being part of an individualised treatment approach. This person centred approach includes having a shared understanding of treatment goals (Tapp et al., 2013) and involved patients having "care delivered in a way that was personal to them" (Long et al., 2012, p.572). Person centred care was also seen as holistic, looking beyond offending and diagnosis (Millar, 2011). The alternative to person centred care was seen as the "cookie cutter mentality" (Barnao et al., 2015a, p.1031) with staff making all decisions about care and treatment. *Staff control* could be exercised positively in relation to maintenance of safety in the ward, through setting limits and intervening at an early stage (Abel, 2012; Millar, 2011). Patients expressed frustration at the staff use of power to manage situations, through use of alarms and restraint, rather than through working alongside the patient (Olsson et al., 2015; Wright et al., 2014). Care and treatment orientation, is influenced by the *ward ethos* and impacts on other themes in the model including: *involving*, *empowerment*, and the *therapeutic relationship*.

3.7.Testing the synthesis

The final stage of the synthesis was to review the model to assess the extent to which it reflected the framework. All 22 framework themes were included within the model. *Challenging of difficulties*, *containing* and *validation* are subsumed within the therapeutic relationship. The care and treatment orientation contained the themes of *staff control* and *person centred care*. *Consistency* is identified as an outcome of the organisational structure and care and treatment orientation and was drawn from these themes to describe an experienced aspect of social climate.

Issues of low quality studies influencing the framework were overcome through excluding papers identified to be of inadequate quality (Carroll et al., 2012). The frequency with which themes were identified within the included papers can give confidence in their relevance to the conceptual model. The jurisdiction of studies is also

important to consider with the framework themes of *challenging of difficulties* and *containing,* and the model themes of *secure base* and *Attitudes to diversity, cultural and gender issues* only supported by UK based studies. As *challenging of difficulties* and *containing* are subsumed within *therapeutic relationships* in the conceptual model this does not appear to unduly influence the model. *Secure base* was described in an unpublished doctoral study (Millar, 2011). It would be prudent to consider the role of the *secure base* as tentatively supported, though conceptually it is a useful overarching theme to describe connections between themes and in understanding how wider factors influence the social climate. *Attitudes to diversity, cultural and gender issues* is only reflected in two papers (Long et al., 2012; Wright et al., 2014). However, tolerance of diversity would seem to be relevant in populations not represented in the current review, as well as for minority ethnic groups.

The identified papers cover a range of levels of security from high security (e.g. Wright et al., 2014) to open rehab wards (Barnao et al., 2015a) and the papers include both male and female patients and personality disorder specific units. However, the lack of studies examining the lived experience of patients and staff from intellectual disability services is a limitation of the model. Intellectual disability samples may identify different aspects of social climate as important and may experience greater difficulties with the forensic mental health system than other groups (Howard, Phipps, Clarbour, & Rayner, 2015). Similarly, units for individuals with neuro-behavioural difficulties are not represented. Social climate is important in these settings, where operant based responses to positive and challenging behaviours are emphasised (Alderman & Groucott, 2012), perhaps suggesting the relevance of factors unrepresented in the current review.

The model and framework only partially cover patient characteristics linked to social climate in quantitative studies, which include mental health diagnosis, gender, antisocial characteristics and risk status (de Vries, Brazil, Tonkin, & Bulten, 2015; Dickens, Suesse, Snyman, & Picchioni, 2014). In particular, patient mental health was not identified as a theme through the review process. This is surprising given the samples were drawn from mental health settings and mental health concerns are central to the patients' hospital placement. References to unpredictability and volatility (Meehan et al., 2006; Tema et al., 2011) may reflect the impact of fluctuations in mental health though this is not explicitly addressed in accounts. In contrast a recent thematic synthesis of the causes of aggression in mental health settings identified that patient mental health was a primary factor in aggression (Cutcliffe & Riahi, 2013).

4. Discussion

Perhaps inspired by Coffey's (2006) identification of an absence of service user views in forensic mental health, the current review found thirteen studies describing patient experiences in forensic mental health settings, with nine studies incorporating staff accounts. All but four of the included studies had been published since 2010, indicating a recent growth in qualitative investigation of social climate similar to the recent quantitative interest reviewed by Tonkin (2015). The initial framework drew from a range of models and questionnaires, leading to a broad perspective of social climate. The utility of the *a priori* framework can be seen in its ability to accommodate the majority of the data from the primary research studies.

4.1.Social Climate

Consistent with existing definitions, social climate was described as a multifactorial construct, with ten factors related to the physical, social and emotional of the ward (Schalast et al., 2008; Tonkin, 2015). The model maps onto Moos (1989) model of treatment settings with interlinked levels of physical conditions, staff, patient and system factors which influenced the social climate. These four wider domains are also described in a systemic model of violence and aggression on mental health wards (Cutcliffe & Riahi, 2013), though the emphasis in the systemic model is on factors that influence aggression, rather than the overall social climate. The model developed through the review process is consistent with factors identified as necessary for development of a caring approach in forensic mental health, highlighting the role of staff supports, such as reflective practice and staff availability (Hörberg, 2015).

The relationship between patient characteristics and social climate is complex (Dickens et al., 2014). For example, de Vries and colleagues (2015) suggest that patients with very poor experiences of safety and support in the past may attribute even low levels of support in inpatient settings as positive. Acknowledgement of the adversity that patients may have faced prior to treatment highlights the potential negative impact of a restrictive and stern treatment environment, and the need for services to be sensitive to patients' histories (Abel, 2012; Hörberg et al., 2012).

4.2.Social Climate Interventions

The need to balance security and therapy has a profound influence on the delivery of care in forensic mental health. This tension can impact on the therapeutic relationship, with the relationship building behaviours such as small talk contrasting with a need to

monitor patients and enforce rules (Gildberg, Bradley, Fristed, & Hounsgaard, 2012). Failure to manage these tensions can lead to 'othering' (having difficulty seeing the patient as a person) and a lack of care (Barnao et al., 2015a; Brunt & Rask, 2007; Hörberg et al., 2012; Jacob & Holmes, 2011; Tema et al., 2011). A shared model of care and opportunities for reflective practice are recommended approaches to overcome some of the difficulties in working with forensic patients (Hörberg, 2015; Moore, 2012), and may contribute to *team cohesion* and the *secure base*. Papers in the current review linked the absence of staff support with staff burnout and displacement of difficult feelings (Kurtz & Jeffcote, 2011; Tema et al., 2011), while models of care that failed to emphasise collaborative approaches led to patients feeling disempowered (Barnao et al., 2015a). Staff training interventions were cited in the sample as a potential means to improve social climate (Rask & Aberg, 2002; Tema et al., 2011). One such intervention, involving staff training in therapeutic milieu principles demonstrated improvements in patients' perceptions of the social climate (Nesset, Rossberg, Almvik, & Friis, 2009).

The *ward ethos* may be central to the idea of consistency in care, through provision of clear therapeutic objectives (de Vries et al., 2015). Consistency is conceptually linked to the attachment understanding of the secure base (Adshead, 2002). Consistency of care can provide a safe environment that increases the patients' sense of comfort and provides the conditions for rehabilitative progress. Consistency can be increased through the staff team being predictable, rules being implemented consistently and patients receiving a consistent response from the environment. In considering a *ward ethos* that may help to generate a positive social climate, two models appear to present a developed perspective. The Good Lives model is a strengths based model of offender rehabilitation (Ward & Brown, 2004) increasingly applied to forensic mental health settings (Barnao, Ward, & Casey, 2015b). The Good Lives model may provide a model of care that emphasises empowerment while maintaining a focus on risk management. Therapeutic community approaches have also been used in forensic personality disorder (C. Taylor, 2011) and intellectual disability services (J. Taylor & Morrissey, 2012). The therapeutic community model of care emphasises empowerment and involvement to promote a recovery focus (Haigh, 2002, 2013).

4.3.Issues of measurement

The fit of the model with the predominant measures of social climate, the WAS and EssenCES was evaluated (Appendix F) to assess whether the measurement of social

climate matches the experience of social climate. The three factors of the EssenCES appear to cover themes identified as part of social climate in the current model. Therapeutic hold evaluates the nature of the *therapeutic relationship*. Patient cohesion and mutual support links with *mutual support*. Experienced safety maps neatly onto *safety*. This suggests the EssenCES provides an overview rather than in-depth evaluation of social climate (Tonkin, 2015). This overview may explain differences in therapeutic hold commonly found between staff and patients (de Vries et al., 2015; Long et al., 2011; Milsom et al., 2014). Patients may rate therapeutic hold lower due to experiences of a lack of control (de Vries et al., 2015), captured in the model of social climate as *involvement*, *empowerment* and *care and treatment orientation,* which are not measured by the EssenCES.

The ten factors of the WAS (see Appendix A for description of factors) cover a further range of factors including *therapies*, *meaningful activity and involvement*. However, the WAS does not differentiate *mutual support* from the *therapeutic relationship*. Several of the WAS factors appear to partially link to *care and treatment orientation* (Staff Control, Spontaneity, Autonomy, Order and Organisation, Program Clarity) consistent with findings that the WAS can differentiate units with different treatment approaches (Brunt, 2008). These WAS factors could also be understood as themes at different levels of the current model, with program clarity linking to *ward ethos*, autonomy to *empowerment* and order and organisation to system level factors.

The areas of *consistency*, *secure base* and *physical environment* are not covered by the WAS or EssenCES. This suggests that comprehensive measurement of social climate may require use of multiple measures, or alternative means to assess whether these factors are present. *Consistency* does not seem to link to any of the measures developed for mental health settings reviewed by Tonkin (2015) and so may be difficult to assess currently. In considering the *secure base* the Service Attachment Questionnaire (Goodwin, Holmes, Cochrane, & Mason, 2003) may provide a means to measure the service attachment of patients, though it does not provide a means to measure the extent to which staff feel supported by services. The extent to which the ward provides a *secure base* may be identified in part by the presence of effective clinical supervision and reflective practice (Hörberg, 2015; Yakeley & Adshead, 2013). Similarly, the presence of evidenced based therapies, and therapies staff can be a means to assess *meaningful activities* and *therapies*.

A therapeutic physical environment may include the presence of private treatment rooms, single room accommodation and clear lines of sight for staff (Cutcliffe & Riahi, 2013; Jacob & Holmes, 2011; To et al., 2015) Ward layouts that promote contact between staff and patients may offer more therapeutic environments (Eggert et al., 2014).

5. Conclusion

Social climate is a complex and multifactorial construct, which can influence aggression and engagement in rehabilitation. Given the lack of clarity about the constituent parts of social climate (Brunt & Rask, 2007; Tonkin, 2015), this review offers a useful framework taking account of the views of staff and service users. Accommodating the views of service users is particularly important given that forensic mental health patients are a marginalised and stigmatised group (Coffey, 2006). A range of organisational level factors as well as staff and patient characteristics were seen to potentially influence social climate. Altering these factors through provision of staff supports, providing a clear ward ethos and focusing on a person centred approach to care that empowers patients may be key to a therapeutic social climate. These factors may help develop the secure base and care orientation that facilitates growth and change in the patient group while maintaining staff members' ability to form beneficial therapeutic relationships with patients.

The review found that commonly used measures may not measure all aspects of the social climate, suggesting a need for an assessment approach to comprehensively evaluate social climate. The applicability of the model should be examined, both in mainstream forensic mental health settings and in specialist populations such as personality disorder, neuro-behavioural and intellectual disability settings. This could potentially be achieved through examining the impact of treatment interventions operating at different levels of the model, for example staff training interventions, reflective practice groups or changes to care and treatment orientation on the social climate.

6. References

Abel, S. E. (2012). *A qualitative investigation of the experiences of nursing staff working in a secure personality disorder unit.* (U613497 D.Clin.Psych.), University of Hull (United Kingdom), Ann Arbor. Retrieved from http://search.proquest.com/docview/1557568919?accountid=10673 ProQuest Dissertations & Theses Global database.

Adshead, G. (2002). Three degrees of security: Attachment and forensic institutions. *Criminal Behaviour and Mental Health, 12*(S2), S31-S45.

Alderman, N., & Groucott, L. (2012). Measurement of social climate within neurobehavioural rehabilitation services using the EssenCES. *Neuropsychological Rehabilitation, 22*(5), 768-793. doi: http://dx.doi.org/10.1080/09602011.2012.689683

Barnao, M., Ward, T., & Casey, S. (2015a). Looking Beyond the Illness: Forensic Service Users' Perceptions of Rehabilitation. *Journal of Interpersonal Violence, 30*(6), 1025-1045. doi: http://dx.doi.org/10.1177/0886260514539764

Barnao, M., Ward, T., & Casey, S. (2015b). Taking the Good Life to the Institution Forensic Service Users' Perceptions of the Good Lives Model. *International Journal of Offender Therapy and Comparative Criminology*, 60(7), 766-786.

Barnett-Page, E., & Thomas, J. (2009). Methods for the synthesis of qualitative research: a critical review. *BMC Medical Research Methodology, 9*(1), 1.

Barsky, J. S., & West, A. G. (2007). Secure settings and the scope for recovery: service users' perspectives on a new tier of care. *British Journal of Forensic Practice, 9*(4), 5-11 17p.

Booth, A., & Carroll, C. (2015). Systematic searching for theory to inform systematic reviews: is it feasible? Is it desirable? *Health Information & Libraries Journal, 32*(3), 220-235.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp063oa

Brunt, D. (2008). The Ward Atmosphere of Single-Sex Wards in a Maximum-Security Forensic Psychiatric Hospital in Sweden. *Issues in Mental Health Nursing, 29*(3), 221-241. doi: http://dx.doi.org/10.1080/01612840701869858

Brunt, D., & Rask, M. (2007). Ward atmosphere--the scarlet pimpernel of psychiatric settings? *Issues in Mental Health Nursing, 28*(6), 639-655. doi: http://dx.doi.org/10.1080/01612840701354513

Carroll, C., Booth, A., & Cooper, K. (2011). A worked example of" best fit" framework synthesis: A systematic review of views concerning the taking of some potential chemopreventive agents. *BMC Medical Research Methodology, 11*(1), 1-9.

Carroll, C., Booth, A., & Lloyd-Jones, M. (2012). Should we exclude inadequately reported studies from qualitative systematic reviews? An evaluation of sensitivity analyses in two case study reviews. *Qualitative Health Research, 22*(10), 1425-1434.

Carroll, C., Booth, A., Leaviss, J., & Rick, J. (2013). "Best fit" framework synthesis: refining the method. *BMC Medical Research Methodology, 13*(1), 1.

Charmaz, K., & Smith, J. (2003). Grounded theory. *Qualitative psychology: A practical guide to research methods*, 81-110.

Clark, D. H. (1974). *Social Therapy in Psychiatry*. London: Penguin Books.

Clarke, C., Lumbard, D., Sambrook, S., & Kerr, K. (2015). What does recovery mean to a forensic mental health patient? A systematic review and narrative synthesis of the qualitative literature. *The Journal of Forensic Psychiatry & Psychology*, 1-17.

Coffey, M. (2006). Researching service user views in forensic mental health: A literature review. *The Journal of Forensic Psychiatry & Psychology, 17*(1), 73-107. doi: 10.1080/14789940500431544

Cooke, A., Smith, D., & Booth, A. (2012). Beyond PICO: The SPIDER Tool for Qualitative Evidence Synthesis. *Qualitative Health Research, 22*(10), 1435-1443. doi: 10.1177/1049732312452938

Cooper, K., Squires, H., Carroll, C., Papaioannou, D., & Booth, A. (2010). Chemoprevention of colorectal cancer: systematic review and economic evaluation. *Health Technology Assessment, 14*(32), 205. doi: 10.3310/hta14320

Critical Approaisal Skilsl Programme (CASP) (2014). *CASP Checklists*. Oxford: CASP.

Cutcliffe, J. R., & Riahi, S. (2013). Systemic perspective of violence and aggression in mental health care: Towards a more comprehensive understanding and conceptualization: Part 1. *International Journal of Mental Health Nursing, 22*(6), 558-567.

de Boer-van Schaik, J., & Derks, F. (2010). The Van der Hoeven Clinic: A flexible and innovative forensic psychiatric hospital based on therapeutic community principles *Shuker, Richard [Ed]; Sullivan, Elizabeth [Ed] (2010) Grendon and the emergence of forensic therapeutic communities: Developments in research and practice (pp 45-60) xxv, 333 pp Wiley-Blackwell*.

de Vries, M. G., Brazil, I. A., Tonkin, M., & Bulten, B. H. (2015). Ward Climate Within a High Secure Forensic Psychiatric Hospital: Perceptions of Patients and Nursing Staff and the Role of Patient Characteristics. *Archives of Psychiatric Nursing*. doi: http://dx.doi.org/10.1016/j.apnu.2015.12.007

Dickens, G. L., Suesse, M., Snyman, P., & Picchioni, M. (2014). Associations between ward climate and patient characteristics in a secure forensic mental health service. *The Journal of Forensic Psychiatry & Psychology, 25*(2), 195-211. doi: http://dx.doi.org/10.1080/14789949.2014.903505

Dixon-Woods, M. (2011). Using framework-based synthesis for conducting reviews of qualitative studies. *BMC medicine, 9*(1), 1.

Dixon-Woods, M., Booth, A., & Sutton, A. J. (2007). Synthesizing qualitative research: a review of published reports. *Qualitative Research, 7*(3), 375-422.

Duxbury, J. A., Bjorkdahl, A., & Johnson, S. (2006). Ward culture and atmosphere *Violence in mental health settings: Causes, consequences, management* (pp. 273-287). New York, NY: Springer Science + Business Media; US.

Eggert, J. E., Kelly, S. P., Margiotta, D. T., Hegvik, D. K., Vaher, K. A., & Kaya, R. T. (2014). Person–Environment Interaction in a New Secure Forensic State Psychiatric Hospital. *Behavioral Sciences & the Law, 32*(4), 527-538. doi: 10.1002/bsl.2127

Eklund, M., & Hansson, L. (2001). Perceptions of the real and the ideal ward atmosphere among trainees and staff before and after the introduction of a new work rehabilitation model. *European Psychiatry, 16*(5), 299-306. doi: http://dx.doi.org/10.1016/S0924-9338%2801%2900582-X

Gildberg, F. A., Bradley, S. K., Fristed, P., & Hounsgaard, L. (2012). Reconstructing normality: Characteristics of staff interactions with forensic mental health inpatients. *International Journal of Mental Health Nursing, 21*(2), 103-113.

Goodwin, I., Holmes, G., Cochrane, R., & Mason, O. (2003). The ability of adult mental health services to meet clients' attachment needs: The development and implementation of the Service Attachment Questionnaire. *Psychology and Psychotherapy: Theory, Research and Practice, 76*(2), 145-161. doi: 10.1348/147608303765951186

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*(2), 105-112.

Gunderson, J. G. (1978). Defining the therapeutic processes in psychiatric milieus. *Psychiatry, 41*(4), 327-335.

Haigh, R. (2002). Acute wards: problems and solutions: Modern milieux: therapeutic community solutions to acute ward problems. *Psychiatric Bulletin, 26*(10), 380-382. doi: 10.1192/pb.26.10.380

Haigh, R. (2013). The quintessence of a therapeutic environment. *Therapeutic Communities: The International Journal of Therapeutic Communities, 34*(1), 6-15.

Hallett, N., Huber, J. W., & Dickens, G. L. (2014). Violence prevention in inpatient psychiatric settings: Systematic review of studies about the perceptions of care staff and patients. *Aggression and Violent Behavior, 19*(5), 502-514. doi: http://dx.doi.org/10.1016/j.avb.2014.07.009

Hirschi, T. (2002). *Causes of delinquency*. London: Transaction publishers.

Hörberg, U. (2015). Caring Science and the Development of Forensic Psychiatric Caring. *Perspectives in Psychiatric Care, 51*(4), 277-284. doi: 10.1111/ppc.12092

Hörberg, U., Sjögren, R., & Dahlberg, K. (2012). To be Strategically Struggling against Resignation: The Lived Experience of Being Cared for in Forensic Psychiatric Care. *Issues in Mental Health Nursing, 33*(11), 743-751. doi: 10.3109/01612840.2012.704623

Howard, R., Phipps, E., Clarbour, J., & Rayner, K. (2015). “I’d trust them if they understood learning disabilities” support needs of people with learning disabilities in the Criminal Justice System. *Journal of Intellectual Disabilities and Offending Behaviour, 6*(1), 4-14.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Jacob, J. D. (2012). The rhetoric of therapy in forensic psychiatric nursing. *Journal of Forensic Nursing, 8*(4), 178-187. doi: http://dx.doi.org/10.1111/j.1939-3938.2012.01146.x

Jacob, J. D., & Holmes, D. (2011). Working under threat: Fear and nurse-patient interactions in a forensic psychiatric setting. *Journal of Forensic Nursing, 7*(2), 68-77.

Karin, D., Nyström, M., & Dahlberg, H. (2007). *Reflective lifeworld research*: Studentlitteratur, Lund.

Kielhofner, G. (2002). *A model of human occupation: Theory and application*: Lippincott Williams & Wilkins.

Kurtz, A., & Jeffcote, N. (2011). 'Everything contradicts in your mind': A qualitative study of experiences of forensic mental health staff in two contrasting services. *Criminal Behaviour and Mental Health, 21*(4), 245-258. doi: http://dx.doi.org/10.1002/cbm.796

Livesley, W. J. (2007). The relevance of an integrated approach to the treatment of personality disordered offenders. *Psychology, Crime and Law, 13*(1), 27-46.

Livingston, J. D., Nijdam-Jones, A., & Brink, J. (2012). A tale of two cultures: examining patient-centered care in a forensic mental health hospital. *The Journal of Forensic Psychiatry & Psychology, 23*(3), 345-360. doi: http://dx.doi.org/10.1080/14789949.2012.668214

Long, C. G., Anagnostakis, K., Fox, E., Silaule, P., Somers, J., West, R., & Webster, A. (2011). Social climate along the pathway of care in women's secure mental health service: Variation with level of security, patient motivation, therapeutic alliance and level of disturbance. *Criminal Behaviour & Mental Health, 21*(3), 202-214. doi: 10.1002/cbm.791

Long, C. G., Knight, C., Bradley, L., & Thomas, M. (2012). Effective therapeutic milieus in secure services for women: The service user perspective. *Journal of Mental Health, 21*(6), 567-578.

Mahoney, J. S., Palyo, N., Napier, G., & Giordano, J. (2009). The therapeutic milieu reconceptualized for the 21st century. *Archives of Psychiatric Nursing, 23*(6), 423-429.

Mann, B., Matias, E., & Allen, J. (2014). Recovery in forensic services: facing the challenge. *Advances in Psychiatric Treatment, 20*(2), 125-131. doi: 10.1192/apt.bp.113.011403

Mason, K., & Adler, J. R. (2012). Group-work therapeutic engagement in a high secure hospital: Male service user perspectives. *The British Journal of Forensic Practice, 14*(2), 92-103. doi: http://dx.doi.org/10.1108/14636641211223657

Meehan, T., McIntosh, W., & Bergen, H. (2006). Aggressive behaviour in the high-secure forensic setting: The perceptions of patients. *Journal of Psychiatric and Mental Health Nursing, 13*(1), 19-25.

Methley, A. M., Campbell, S., Chew-Graham, C., McNally, R., & Cheraghi-Sohi, S. (2014). PICO, PICOS and SPIDER: a comparison study of specificity and sensitivity in three search tools for qualitative systematic reviews. *BMC Health Services Research, 14*(1), 1.

Millar, H. (2011). *Recovery approaches with women with a diagnosis of personality disorder in secure care.* (U575382 D.Clin.Psych.), Canterbury Christ Church University (United Kingdom), Ann Arbor. Retrieved from http://create.canterbury.ac.uk/10263/ ProQuest Dissertations & Theses Global database.

Miller, R. (2015). Changing organisational culture: another role for self-advocacy? *Tizard Learning Disability Review, 20*(2), 69-76.

Milsom, S. A., Freestone, M., Duller, R., Bouman, M., & Taylor, C. (2014). Factor structure of the Essen Climate Evaluation Schema measure of social climate in a UK medium-security setting. *Criminal Behaviour and Mental Health, 24*(2), 86-99.

Moore, E. (2012). Personality disorder: its impact on staff and the role of supervision. *Advances in Psychiatric Treatment, 18*(1), 44-55. doi: 10.1192/apt.bp.107.004754

Moos, R. H. (1989). Ward Atmosphere Scale Manual, Consulting Psychologists Press. *Palo Alto, CA*.

Moos, R. H., Shelton, R., & Petty, C. (1973). Perceived ward climate and treatment outcome. *Journal of Abnormal Psychology, 82*, 291-298.

National Collaborating Centre for Mental Health (UK). (2007). *Dementia: A NICE-SCIE Guideline on Supporting People With Dementia and Their Carers in Health and Social Care.* Leicester (UK): British Psychological Society Retrieved from: http://www.ncbi.nlm.nih.gov/books/NBK55467

Nesset, M. B., Rossberg, J. I., Almvik, R., & Friis, S. (2009). Can a focused staff training programme improve the ward atmosphere and patient satisfaction in a forensic psychiatric hospital? A pilot study. *Scandinavian Journal of Caring Sciences, 23*(1), 117-124. doi: http://dx.doi.org/10.1111/j.1471-6712.2008.00597.x

Nijdam-Jones, A. (2012). *Patient Narratives: Understanding 'Recovery' and Social Bonding Theory in a Forensic Mental Health Hospital.* (MS22787 M.A.), Simon Fraser University (Canada), Ann Arbor. Retrieved from http://search.proquest.com/docview/1515751002?accountid=10673 ProQuest Dissertations & Theses Global database.

Nijdam-Jones, A., Livingston, J. D., Verdun-Jones, S., & Brink, J. (2015). Using social bonding theory to examine 'recovery' in a forensic mental health hospital: A qualitative study. *Criminal Behaviour and Mental Health, 25*(3), 157-168.

Nijman, H. L. (2002). A model of aggression in psychiatric hospitals. *Acta Psychiatrica Scandinavica, Supplementum*(412), 142-143.

Oeye, C., Bjelland, A. K., Skorpen, A., & Anderssen, N. (2009). Raising adults as children? A report on milieu therapy in a psychiatric ward in Norway. *Issues in Mental Health Nursing, 30*(3), 151-158. doi: http://dx.doi.org/10.1080/01612840802557246

Olsson, H., Audulv, A., Strand, S., & Kristiansen, L. (2015). Reducing or Increasing Violence in Forensic Care: A Qualitative Study of Inpatient Experiences. *Archives of Psychiatric Nursing, 29*(6), 393-400.

Olsson, H., Strand, S., Asplund, K., & Kristiansen, L. (2014). Turning towards recovery in forensic psychiatric inpatients - a study based on staff experience. *Nordic Nursing Research / Nordisk Sygeplejeforskning, 4*(3), 175-188 114p.

Papadopoulos, C., Ross, J., Stewart, D., Dack, C., James, K., & Bowers, L. (2012). The antecedents of violence and aggression within psychiatric in-patient settings. *Acta psychiatrica scandinavica, 125*(6), 425-439. doi: 10.1111/j.1600-0447.2012.01827.x

Peplau, H. E. (1989). The history of milieu as a treatment modality. In. In A. O'Toole, S. R. Welt, & p.-N. Y. S. Welt (Eds.) (Eds.), *Interpersonal theory in nursing practice: Selected works of Hildegard E. Peplau* (pp. 75-79). New York: Springer.

Rask, M., & Aberg, J. (2002). Swedish forensic nursing care: Nurses' professional contributions and educational needs. *Journal of Psychiatric and Mental Health Nursing, 9*(5), 531-539.

Riordan, S., & Humphreys, M. (2007). Patient perceptions of medium secure care. *Medicine, Science and the Law, 47*(1), 20-26.

Ros, N., Van der Helm, P., Wissink, I., Stams, G.-J., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *The Journal of Forensic Psychiatry & Psychology, 24*(6), 713-727. doi: http://dx.doi.org/10.1080/14789949.2013.848460

Rose, D. N., Peter, E., Gallop, R., Angus, J. E., & Liaschenko, J. (2011). Respect in forensic psychiatric nurse-patient relationships: A practical compromise. *Journal of Forensic Nursing, 7*(1), 3-16. doi: http://dx.doi.org/10.1111/j.1939-3938.2010.01090.x

Rossberg, J. I., & Friis, S. (2003). A suggested revision of the Ward Atmosphere Scale. *Acta psychiatrica scandinavica, 108*(5), 374-380. doi: http://dx.doi.org/10.1034/j.1600-0447.2003.00191.x

Rossiter, K. R. (2015). Victimization, trauma, and mental health: Women's recovery at the interface of the criminal justice and mental health systems. *Dissertation Abstracts*

International Section A: Humanities and Social Sciences, 75(7-A(E)), No Pagination Specified.

Sainsbury, L., Krishnan, G., & Evans, C. (2004). Motivating factors for male forensic patients with personality disorder. *Criminal Behaviour and Mental Health, 14*(1), 29-38.

Schalast, N., Redies, M., Collins, M., Stacey, J., & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. *Criminal Behaviour and Mental Health, 18*(1), 49-58. doi: http://dx.doi.org/10.1002/cbm.677

Shepherd, A., Doyle, M., Sanders, C., & Shaw, J. (2015). Personal recovery within forensic settings – Systematic review and meta-synthesis of qualitative methods studies. *Criminal Behaviour and Mental Health*, n/a-n/a. doi: 10.1002/cbm.1966

Smith, J. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative research in psychology, 1*(1), 39-54.

Spencer, L., Ritchie, J., Lewis, J., & Dillon, L. (2003). *Quality in qualitative evaluation: a framework for assessing research evidence*. London: Government Chief Social Researcher's Office.

Tapp, J., Warren, F., Fife-Schaw, C., Perkins, D., & Moore, E. (2013). What do the experts by experience tell us about 'what works' in high secure forensic inpatient hospital services. *The Journal of Forensic Psychiatry & Psychology, 24*(2), 160-178. doi: http://dx.doi.org/10.1080/14789949.2012.760642

Taylor, C. (2011). Nothing left to lose? Freedom and compulsion in the treatment of dangerous offenders. *Psychodynamic Practice: Individuals, Groups and Organisations, 17*(3), 291-306. doi: http://dx.doi.org/10.1080/14753634.2011.587638

Taylor, J., & Morrissey, C. (2012). Integrating treatment for offenders with an intellectual disability and personality disorder. *The British Journal of Forensic Practice, 14*(4), 302-315. doi: http://dx.doi.org/10.1108/14636641211283101

Tema, T., Poggenpoel, M., & Myburgh, C. (2011). Experiences of psychiatric nurses exposed to hostility from patients in a forensic ward. *Journal of nursing management, 19*(7), 915-924.

Thorne, S., Kirkham, S. R., & O'Flynn-Magee, K. (2004). The analytic challenge in interpretive description. *International journal of qualitative methods, 3*(1), 1-11.

To, W. T., Vanheule, S., De Smet, S., & Vandevelde, S. (2015). The Treatment Perspectives of Mentally Ill Offenders in Medium- and High-Secure Forensic Settings in Flanders. *International Journal of Offender Therapy and Comparative Criminology, 59*(14), 1605-1622. doi: 10.1177/0306624x14566355

Tonkin, M. (2015). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International Journal of Offender Therapy and Comparative Criminology*, 0306624X15578834.

Tonkin, M., Howells, K., Ferguson, E., Clark, A., Newberry, M., & Schalast, N. (2012). Lost in translation? Psychometric properties and construct validity of the English Essen Climate Evaluation Schema (EssenCES) social climate questionnaire. *Psychological Assessment, 24*(3), 573-580. doi:10.1037/a0026267

van der Helm, P., Stams, G. J., & van der Laan, P. (2011). Measuring group climate in prison. *The Prison Journal, 91*(2), 158-176. doi: http://dx.doi.org/10.1177/0032885511403595

Ward, T., & Brown, M. (2004). The good lives model and conceptual issues in offender rehabilitation. *Psychology, Crime & Law, 10*(3), 243-257.

Willmot, P., & McMurran, M. (2013). The views of male forensic inpatients on how treatment for personality disorder works. *Journal of Forensic Psychiatry & Psychology, 24*(5), 594-609.

World Health Organisation (1953). *Expert Committee on Mental Health: 3rd Report.* Geneva: WHO.

Wright, K., Duxbury, J., Baker, A., & Crumpton, A. (2014). A qualitative study into the attitudes of patients and staff towards violence and aggression in a high security hospital. *Journal of Psychiatric and Mental Health Nursing, 21*(2), 184-188.

Yakeley, J., & Adshead, G. (2013). Locks, keys, and security of mind: psychodynamic approaches to forensic psychiatry. *J Am Acad Psychiatry Law, 41*(1), 38-45.

A case study approach to examine practice developments in forensic mental health settings.

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Abstract

Case study methodologies may be particularly applicable to forensic mental health settings where environmental constraints and small pools of potential participants reduce the viability of quantitative methodologies such as randomised controlled trials. Case study methods can provide in-depth description of innovative practices in forensic mental health settings. The case study method may be applied to assess the organisation as a whole, the functioning of a ward or the implementation of an intervention. In designing and implementing a case study methodology the researcher is faced with key decision points including: the epistemological stance, case selection, data sources, sampling time, analysis methods and presentation of case study outcomes. These decision points are described with reference to a case study protocol designed to examine the impact and implementation of a staff based Mentalization based treatment intervention in a low secure forensic mental health ward. The intervention included both training and case consultation sessions for the staff team. The potential usefulness of case study methods to forensic settings, particularly in assessing best practice and novel interventions is discussed.

Keywords: Case study, forensic, inpatient, methodology, mentalization

1. Challenges of research in forensic mental health

In forensic mental health settings, heterogeneity of needs, the slow rate at which patients progress, legal considerations, the extended treatment term, attrition rates and individualised treatment make Randomised Controlled Trials (RCTs) and matched control studies difficult to implement (Davies, Howells, & Jones, 2007; Farrington & Jolliffe, 2002; Hollin, 2011). While there is a history of experimental research, including some RCTs in forensic inpatient settings (e.g. Dean, 2013), these have tended to examine the outcomes of interventions in isolation (Hollin, 2011). This risks ignoring contextual factors, such as the impact of the setting, on the intervention. Davies and colleagues (2007) suggest a broad base of methodological approaches should be used to develop evaluations of effectiveness. An in-depth, focused approach can aid in answering questions about what aspects of an intervention, or its implementation, are useful, repeatable and effective. One potential approach to frame an in-depth evaluation of a service innovation is a case study methodology (Meyer, 2001). To illustrate the potential value of the case study method, we describe the design and implementation of a research project to examine a service innovation in a forensic inpatient unit.

1. Case study research

Yin (2013) defines the case study method as a particular form of research inquiry to be used when the researcher wants to understand a real world contemporary phenomenon where aspects of the contextual conditions are important to understanding. A case study approach allows for revision to explore alternative hypotheses and rival explanations, and can aid in identifying factors impacting on the process of implementation (Barnao, Ward, & Casey, 2015; Ellard, Taylor, Parsons, & Thorogood, 2011; Yin, 2013). The method is focused on developing a detailed understanding of the selected case (Hyett, Kenny, & Dickson-Swift, 2014). The case, the unit of analysis, can be an individual, an organisation or a phenomenon of interest and must be defined and bounded (Baxter &

Jack, 2008; Stake, 1995; Yin, 2013). The features of the case study method are triangulation of multiple data sources, in-depth examination of the case and *a priori* "development of theoretical propositions to guide data collection" (Yin, 2013, p.17).

Criticisms of case study research have focused on the lack of specificity of the approach. Meyer (2001) identifies that the flexibility of the method can lead to poorly constructed research studies. Tight (2010) suggests that case study is a term of convenience and recommends more detailed description of the method as a "small sample, in-depth" study. Similarly, it has been suggested that case study research be seen as fitting within the enterprise of mixed methods research, rather than as a discrete methodology (Carolan, Forbat, & Smith, 2015). However, structured approaches to case study research, such as those described by Yin (2013), provides clear guidance of case selection, data collection, analysis and presentation of small sample in-depth studies, that allows for a methodological consistency and clarity.

Case study methods have been applied in forensic settings (McKenna, Furness, Dhital, Park, & Connally, 2011; Urheim, Rypdal, Palmstierna, & Mykletun, 2011). The approach has been used to examine the development of the therapeutic milieu in a regional secure unit (Fuller, 1985). Prebble et al. (2011) presented a case study on the implementation of healthy living programs on forensic wards. Urheim et al. (2011) presented a case study of a Swedish secure ward over an 18 year period, allowing an examination of the effect of policy changes and new approaches to care on ward functioning. Barnao et al. (2015) used a case study approach as an exploratory methodology to examine the use of the Good Lives Model in forensic rehabilitation.

1.1. Generalisability of Case Study research

The focus of case study research, on holistic understanding of a phenomena in its context, leads to questions of generalisability (Clarke & Reed, 2013; Small, 2009). Yin (2013)

identifies that cases are not a sample, or representative of a larger population, and so ideas related to generalisation based on empirical research are not possible. The selection of the method is based on the relative value of generalisability as compared to detailed description. Replication is one means of developing external validity in case study research (Yin, 2013). However, Stake (1995) discusses the instrumental case study as one which is examined to draw generalisations or provide wider insights.

Small (2009) suggests that case study methods should aim to generate logical inference, which Yin (2013) further describes as analytic generalisations. These analytical statements are theories, hypotheses or principles that may apply in both clinical and theoretical contexts. The illustrative study described in this paper aimed to understand the feasibility of an innovation to practice as well as studying the impact of the innovation. There is value to richer description at the cost of generalisability for these exploratory research aims with the rich description of the implementation and evaluation process allowing for future replication to increase generalisability.

2. The Illustrative study

The current study describes an intervention on a Low Secure forensic mental health ward in Scotland. This ward opened in 2013 in a refurbished section of a large psychiatric hospital. The ward has 10 beds, in single room accommodation. The patient area of the ward consists of individual bedrooms, a day area, a fenced outdoor garden and smoking area, a dining room, a quiet room, bathroom area, dispensary, and telephone room. There is also a relaxation room which can be converted to accommodation for patients requiring special observations. The quiet room and telephone room are also used for individual clinical sessions. Outside of the patient area are several staff offices, a gym area, an occupational therapy kitchen, an art room, and two group rooms. As well as

nursing staff, the ward receives input from Psychiatry, Psychology, Occupational Therapy and Music Therapy.

The aim of the study was to examine the impact of Mentalization Based Treatment (Bateman & Fonagy, 2006) case consultation sessions for staff on the functioning of the ward. The case study sought to understand the mechanisms through which the intervention influenced staff and patient factors and the social climate. The intervention occurred in two phases. Firstly, a one-day accredited MBT Skills and Awareness training session, was run for all staff involved in direct patient care (Bateman & Treliving, 2013). The second stage of the intervention was a MBT staff group case consultation (CC) session facilitated by an MBT Scotland accredited practitioner external to the ward. The sessions were facilitated by an external facilitator, ran once every two weeks for nine months and lasted one hour. The group CC session focused on the practice of working with patients who present with difficulties in interpersonal relationships. The sessions were held during shift handover and were available to all clinical staff. Group membership rotated due to shift patterns.

The focus on mentalizing, the core process of MBT, was seen as potentially beneficial in forensic mental health settings (Adshead, Moore, Humphrey, Wilson, & Tapp, 2013). As research into MBT staff training and case consultation is at an exploratory stage, a case study approach allowed us to uncover processes by which the intervention may impact on social climate, staff stress and patient motivation, as well as exploration of how contextual factors impact on implementation (McAndrew, Chambers, Nolan, Thomas, & Watts, 2014). This investigation was also relevant to wider clinical needs as the Forensic Network, the leading body for Forensic Mental Health in Scotland, were considering the value of structured approaches to care for working with inpatients with personality difficulties (Russell, 2016). The study received a favourable opinion from

an NHS Research Ethics Committee (14/SS/1105) and the local Research and Development Committee (Appendix J, K, L).

3. Key Decision Points in Case Study research

A case study methodology was employed to examine a real world innovation to practice while taking account of contextual factors. Difficulties in identifying an adequate comparison group and the focus on implementation and process reinforced the case study method as appropriate. In part, the study was a test of the viability of case study designs as a methodological approach for measuring change in forensic inpatient settings.

From the point of choosing a case study methodology, the researcher was left with several key decisions to make. Published reports on the case study method identify decisions associated with: epistemological stance; the selection of cases; sampling time; determining case study components; the analysis plan; and the mode of presentation of outcomes (Carolan et al., 2015; Hyett et al., 2014; Meyer, 2001).

3.1. Research epistemology

A case study may be approached from social constructionist or post-positivist perspectives (Hyett et al., 2014; Yin, 2013). Carolan and colleagues (2015) highlight the need to explicitly identify both the stance and the role of the researcher and to maintain awareness of this throughout the research process. The stance of the researcher may be implied through citation of one of the key figures in describing the case study method: Yin, Stake or Merriman (Yazan, 2015). The approach to case study research outlined by Stake (1995) and Merriam (1998) focuses on a constructivist perspective, linking the approach with qualitative research traditions (Yazan, 2015). Yin (2013) has also been viewed within the constructivist tradition (Barnao et al., 2015; Baxter & Jack, 2008), though he suggests that case study methodology can allow for comparison of the realist perspective of the researcher and the relativist perspective of the participants. Yin's

description of case study research as focusing on answering specific types of research questions may align him with the concept of pragmatic research (Onwuegbuzie & Leech, 2005). Yazan (2015) suggests Yin's approach can be seen to be more aligned with a positivist, or post-positivist perspective.

In the current study, the researchers adopted a post-positivist perspective, recognising subjectivity in research, the influence of context and limitations of data collection (Davies, Sheldon, & Howells, 2011). The methodology was developed with reference to Yin (2013). Subjectivity is particularly relevant to case study research, which has been accused of having a confirmatory focus (Tight, 2010). A further risk to subjectivity is the dual role of researcher and clinician, which leads to different relational perspectives across the multiple viewpoints collected (Carolan et al., 2015).

3.2. Case selection

Bounding of cases is an essential component of case study research (Baxter & Jack, 2008; Hyett et al., 2014; Tight, 2010). Within the current study, a key decision was on identifying the case as the ward, rather than as individual staff or patients. The case was bounded by sampling time (4.3) and by a focus only on the experiences of those working on the ward. Contextual factors, such as changes in the wider hospital, were not evaluated. An advantage of focusing on individuals is that it allows for a multiple case study design which can generate new theoretical understandings (Barnao et al., 2015). However, with reference to the concept of social climate (Moos, 1989), a key outcome in the illustrative study, individual level analysis may obscure the shared nature of the construct.

The current study utilised an embedded single case design (Yin, 2013). The representativeness of the ward was difficult to assess, given the relative rarity of low secure mental health wards in Scotland (18 in total). The case selection was based in

part on convenience, though the focus of the case study was on the opportunity to introduce a new method of practice.

3.2.1. Participants

The study recruited both staff and patients. Given the whole ward focus, randomisation procedures were not employed. Exclusion criteria focused on factors that would impact on individuals' ability to complete the study measures, being unable to speak English and being under 18 years of age. For staff, only those working in a clinical role on the ward for at least one session (1/2 work day) per week were considered, so that they would have sufficient exposure to the social climate (Tonkin, 2015). No potential participants were excluded based on these criteria.

Seven patients consented to take part in the research, from a potential pool of 14 patients. The staff sample included all clinical staff with input to the ward. The total available sample of staff participants was 41. In total 37 staff consented to take part in the study.

The training day was delivered three times with group attendances of 9, 10 and 11. The sessions were also available to staff who did not consent to take part in the study. 15 Reflective Practice / Case Consultation sessions were held during the study period. The mean number of attendees was 7.27 (Range: 4-12; median=8, mode=7).

3.3. Sampling Time

The length of data collection influences how much can be observed (Meyer, 2001). Longer periods of data collection add value and depth to the study but are more onerous in terms of researcher and participant time (Barnao et al., 2015). For the illustrative study, a longitudinal perspective was taken. The research design included sampling over one calendar year (January – December 2015). The study included monthly data collection, with periods of more extensive data collection at four points linked to the introduction of staff training and case consultation sessions (Table 1).

The length of the intervention led to challenges in ensuring return rates for questionnaires. The reduction in return rate of questionnaires across the term of the study (Figure 1, Table 1) was in part due to the departure of several staff members from the ward, whom were still counted as participants. The average return rates for questionnaires was relatively high in comparison to a comparable longitudinal study of psychiatric staff, where response rates for staff of 49-51% were found across three time points (Nesset, Rossberg, Almvik, & Friis, 2009).

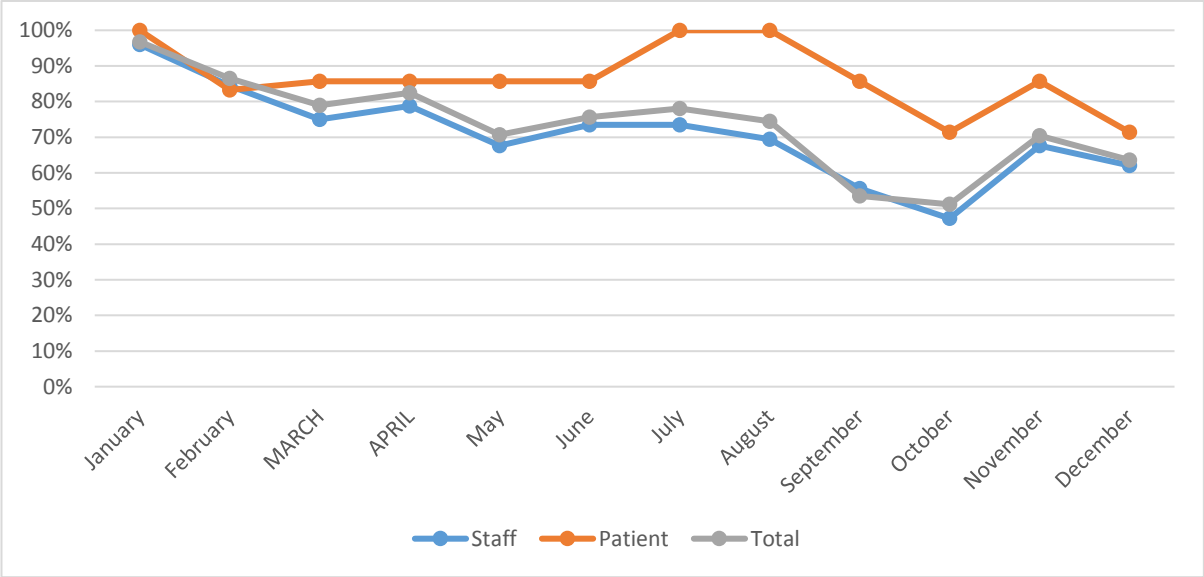

Figure 1: Response rates to Questionnaires across term of the study

Table 1: Response rates at each study phase

Phase:	Baseline		Post Training	Start of RP / CC				Midpoint				Post Intervention	Full data sets /Totals
Month	**Jan 2015**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Staff EssenCES	24/25 (96%)	27/32 (84.4%)	24/32 (75%)	26/33 (78.8%)	23/34 (67.6%)	25/34 (73.5%)	25/34 (73.5%)	25/36 (69.4%)	20/36 (55.6%)	17/36 (47.2%)	25/37 (67.6%)	23/37 (62.1%)	3 (8.1%)
APDQ	32/32 (100%)		24/32 (75%)	26/33 (78.8%)				25/36 (69.4%)				23/37 (62.1%)	14 (37.83%)
WES-10	32/32 (100%)			26/33 (78.8%)				24/36 (66.7%)				23/37 (62.1%)	14 (37.83%)
Staff Interviews	S: 2 M: 2							S: 4 M: 2				S: 5 M: 1	S: 11 M:5
Patients EssenCES	6/6 (100%)	5/6 (83.3%)	6/7 (85.7%)	6/7 (85.7%)	6/7 (85.7%)	6/7 (85.7%)	7/7 (100%)	7/7 (100%)	6/7 (85.7%)	5/7 (71.4%)	6/7 (85.7%)	5/7 (71.4%)	3/7 (42.9%)
PMI	6/6 (100%)			6/7 (85.7%)				7/7 (100%)				5/7 (71.4%)	4/7 (57.1%)
Patient Interviews	3							3				2	8
Minutes of Observations:	60			120				150				120	450
Intervention:		Training		MBT RP sessions									

3.4. Data Sources

The triangulation of multiple data sources to corroborate findings is a central element of case study research (Yin, 2013). Triangulation allows for stronger conclusions to be drawn from the study findings in the absence of a control group (Bergen & While, 2000). The study phases included a baseline period, ongoing collection during the intervention period and post intervention data collection. There were five main sources of data: staff questionnaires, patient questionnaires, ward observations, routinely collected information, and qualitative interviews. Data collected was organised within a database to enhance reliability and to preserve linkages to the results presented in the study report (Yin, 2013). Utilising a variety of data collection methods aids in exploratory research aims of identifying possible effects of the intervention.

Yin (2013) describes six potential data sources, though the illustrative study used three data sources: *interviews* (including questionnaires and qualitative interviews; 4.4.1 & 4.4.2), *direct observation* (4.4.3) and *archival records* (incident reports and sickness absence; 4.4.4). *Document analysis* is a common source of information in studies of inpatient settings (e.g. Prebble et al., 2011; Urheim et al., 2011). This source was excluded in the current study as the small research team limited the volume of data that could be collected. *Physical artefacts* were not collected as it was unclear how they could aid in answering the study questions. Though *participant observation*, where the observer interacts with the environment is a more common approach in case study research (Meyer, 2001) it was not seen as viable in the illustrative study due to members of the research teams' clinical role on the ward likely leading to bias. Verschuren (2003) argues that the use of quantitative methods is incompatible with case study methodologies. However, Yin (2013) argues that quantitative data sources are useful in some contexts, can add to efforts at triangulation and develop construct validity. This is

consistent with the pragmatic position that "the research question should drive the method(s) used" (Onwuegbuzie & Leech, 2005, p.377).

3.4.1. Qualitative Interviews

Qualitative interview methods are common in case study research (Meyer, 2001; Yin, 2013) and can provide a means to explore the complex interpersonal and organisational factors that influence quality of care and outcomes in forensic settings (Gordon, 2011; Howitt, 2011).

The semi-structured interviews focused on perspectives on the ward (Appendix M). Staff interviews also had an additional focus on the acceptability of the intervention and the process of implementation. In all, 24 interviews were completed with 8 patient interviews, 5 managerial interviews and 11 staff interviews (Table 1). Gathering interviews from a range of sources provides multiple perspectives on the case (Meyer, 2001). Consistent with process studies (Ellard et al., 2011) attempts were made to purposively select participants to represent different viewpoints. Due to their low numbers all consenting patients were invited to take part in interviews at each time point. Interviews with managerial staff also focused on the process of implementation. Framework analysis (Dixon-Woods, 2011) was used to organise and understand information from interviews, as the summarising of data to a framework appeared to be the most suitable approach to examine both differences in participant's accounts over time, as well as providing a means to triangulate interviews with other data sources.

3.4.2. Questionnaires

Questionnaires were aggregated to provide a mean score for each measure at each time point. Four questionnaires were collected in the study.

The **Essen Climate Evaluation Schema** (EssenCES; Schalast, Redies, Collins, Stacey, & Howells, 2008) is a 17 item measure of social climate with three factors; therapeutic

hold, patient cohesion and experienced safety. It has demonstrated good reliability and validity across different forensic settings in the UK (Milsom, Freestone, Duller, Bouman, & Taylor, 2014; Tonkin et al., 2012)

The **Working Environment Scale** (WES-10; Rossberg, Eiring, & Friis, 2004) is a ten item scale developed for inpatient psychiatric staff measuring morale and stress in the work environment with four subscales; Workload, Self-Realisation, Conflict and Nervousness. It has been commonly used in research alongside the EssenCES (e.g. Alderman & Groucott, 2012).

The **Attitudes to Personality Disorder Questionnaire** (APDQ; Bowers & Allan, 2006) is a measure of attitudes held by staff towards patients with PD diagnoses. The APDQ has 37 items and confirmatory factor analysis supports a structure of five subscales: Enjoyment/Loathing, Security/Vulnerability, Acceptance/Rejection, Purpose/Futility and Enthusiasm/Exhaustion and a total score (Bowers & Allan, 2006).

The **Patient Motivation Inventory** (PMI; Gudjonsson, Young, & Yates, 2007) consists of 16 'true' or 'false' statements and was developed from a UK sample of mentally disordered offenders. The PMI has three subscales: internal motivation, no confidence in the unit, and feelings of failure.

3.4.3. Observations

Direct observations were carried out as a complete observer, that is without interacting with the environment (Ostrov & Hart, 2014). The use of a systematic approach to observation was seen as a means to utilise observations as an ecologically valid measure of the environment and minimise bias. Bias by the rater and reactivity of subjects are two of the main challenges to validity and reliability in observational data collection (Harris & Lahey, 1982a, 1982b). Structured observation schedules were developed to minimise bias due to the researchers' role in the service. Field notes can aid in

maintaining awareness of the researchers role in observations and can also serve as a source of informal observations to supplement the interpretation and analysis of study data (Carolan et al., 2015; Yin, 2013).

Observations measured the proportion of time spent by staff interacting with patients using Momentary Time Sampling (MTS). The method of observation selected does not allow for comment on the quality of interactions. MTS involves recording the occurrence of a behaviour if it is present at the end of a recording period (Saudargas & Zanolli, 1990). Behavioural categories for observation were operationally defined and developed through pilot observations by two researchers. Inter observer agreement (IOA) was measured and behavioural categories refined until acceptable levels of IOA were found (Ostrov & Hart, 2014). A Cohen's kappa of 0.88 was found following 75 minutes of shared observations, indicating a high level of agreement.

450 minutes of observations were completed through multiple 15 minute periods across four occasions during the study period (Table 1). All staff members and patients were asked to provide informed consent, with observations only recorded for consenting patients and staff (Appendix M). Data was presented for the proportion of time in which there were patients present in the day area of the ward. Observations were only impacted by a participant talking to an observer on one occasion. There may have been an impact of being observed during the baseline phase, with significantly more interactions observed during this period.

3.4.4. Routinely collected information

Routinely collected data are a form of archival record which are not created due to the case study, though complete accuracy of recording should not be assumed (Yin, 2013). Routine data has commonly been used alongside quantitative measures in studies of

inpatient staff stress (Richards et al., 2006). Rates of sick leave absence and number of ward incidents (DATIX) were collated monthly throughout the study period.

3.5. Analysis methods

Yin (2013) cautions on the need to have a clear analysis plan at the outset of case study research. Frequently, case study reports provide limited detail on the analysis making it difficult for readers to determine how conclusions were derived (Hyett et al., 2014; Meyer, 2001). The first stage of analysis is often data management given the large amount of data collected. Dedoose software (SocioCultural Research Consultants, 2013) was used to develop a case study database. SPSS (Ver.22; IBM, 2013) was used to complete analysis and graphical representation of quantitative data.

The case data was analysed using pattern-matching (Trochim, 1989; Yin, 2013). Pattern-matching techniques were developed from hypothesis testing approaches and involve comparing patterns of occurrences, measurements or outcomes in the raw data with hypothesised patterns based on existing theoretical knowledge (Almutairi, Gardner, & McCarthy, 2014). Matching outcome patterns to proposed patterns provides confirmation of the hypothesis, and strengthens the study internal validity (Yin, 2013). The three stages of pattern-matching in case study research are: 1) Stating the study's proposition; 2) Testing the empirically found pattern from each distinct method against the predicted one; and 3) Providing theoretical explanations and developing the research outcome (Almutairi et al., 2014, p.241).

3.5.1. Propositions

The use of propositions, drawn from existing literature, theories and generalisations aids in ensuring the case remains bounded, focuses data collection, and aids in reporting results (Baxter & Jack, 2008). The propositions for the illustrative study were developed at the stage of research protocol development (Table 2). The overall proposition was that

the intervention would have a direct impact on staff stress, attitudes and capacity to engage in therapeutic activity. This was predicted to lead to improvement in social climate and to have an indirect positive effect on patient motivation. The focus of the case study was to examine the extent to which the proposed patterns were seen in the data, as well as to develop rival explanations that impact on patterns (Almutairi et al., 2014; Barnao et al., 2015; Hyett et al., 2014).

Table 2: Proposed patterns to examine impact of intervention

Proposed Pattern	***Source of Information***
At the ward level, the intervention was predicted to have a positive influence on social climate indicated by: • Staff reporting improved social climate • Patients reporting improved social climate • Increased volume of staff-patient interactions • Reduction in violence and aggression on the ward • Reduction in level of sickness absence	EssenCES staff ratings EssenCES patient ratings Observations Interviews DATIX incident reporting Sickness absence reports
At the staff level the proposed impact was for positive changes for staff in both level of stress and in attitudes towards personality disorder, indicated by: • Reduction in levels of stress experienced by staff • Positive change in attitudes towards patients with personality disorders	WES-10 scores Staff interviews APDQ scores
The proposed impact of the intervention for patients is to demonstrate an increased motivation for treatment, indicated by: • Increased motivation to engage in treatment • Increase in engagement in therapeutic activity	PMI scores Interviews Observations Interviews

To examine potential rival explanations, a timeline was developed of major developments on the ward over the study period (Table 3). Participants in qualitative interviews were asked generally to describe any changes in the ward over the previous year and field notes were completed for any ward changes noted. This openness to rival explanations is a complex process for the researcher in the presence of much subjective data. Rival explanations which appeared in part supported by the study outcomes

included the impact of team staffing changes. Staff experiences of managerial support also had a positive influence on outcomes. Changes in the patient group also appeared to lead to a deterioration in mutual support in the patient group and appeared to link to an increase in incidents of violence and aggression. A further rival explanation is the "Hawthorne effect", the impact of being researched on outcomes (Wickström & Bendix, 2000), which appeared to influence observational outcomes. This need to consider rival explanations closely aligns with a qualitative research tradition (Yin, 2013).

3.5.2. Testing the patterns

The testing of propositions drew on a range of analysis techniques suitable for quantitative, qualitative and observational data. From the qualitative data, a shared framework across the participant groups was developed, from which five themes emerged: the therapeutic relationship; current treatment & future progress; structure, rules & restrictions; the social climate; and staff skills and supports. The research report presents results related to the study propositions rather than fully reporting on all qualitative themes. This allows a process of triangulation, with qualitative outcomes compared and contrasted to other data sources to examine for consistency in the data.

Data from questionnaires, sickness absence and number of ward incidents were used to examine relationships between social climate, rates of violence and staff absence. Mean scores at each time point were analysed and group statistics were utilised in cases where there was sufficient complete datasets. Descriptive statistics were used to report observational data. The monthly questionnaires and routine data can be understood as short time series data which was analysed using visual analysis (James, Smith, & Milne, 1996). As visual analysis can suffer from high Type I error rates (Borckardt, Murphy, Nash, & Shaw, 2004) findings were further analysed using a cross correlation co-

efficient (Borckardt et al., 2008). All outcome data was triangulated to test for the presence of the expected patterns.

3.5.3. Explanation building

The presentation of the analysis involved reference to how and why the observed patterns were found. Again, this involved reference to theoretical frameworks, contextual conditions (Table 3) and rival explanations (Yin, 2013).

Table 3: Timeline of ward events and routine data.

Month	1	2	3	4	5	6	7	8	9	10	11	12
Sickness Absence Rates	1.44	0.84	1.77	2.04	2.81	2.67	3.49	3.35	3.53	4.81	6.9	6.34
Violence & Aggression	0	0	0	1	2	0	0	0	3	9	14	3
"Serious" Violence	0	0	0	0	0	0	0	0	1	3	3	1
Restraints	0	0	0	0	1	0	0	0	2	7	5	2
Patient Changes	1 Discharge 1 Admit						1 Discharge 1 Admit			1 Discharge 1 Admit	1 Discharge 1 Admit	
Staff Changes				Psychiatry registrar left 2 Nurses left			New Junior Doctor 3 Nurses start				2 staff moved (shortages)	
RMO changes	RMO Left	Community Team Psychiatrist acting as RMO for ward					Locum RMO	New permanent RMO				
Psychology groups				Knowing me group								
					Connections Group Module 1 & 2							
Intervention		MBT Training 3 sessions			MBT reflective practice sessions							

RMO = Responsible Medical Officer – person responsible for managing patient care under Mental Health (Care and Treatment) (Scotland) Act 2003; DATIX- Incident management reporting service; Knowing Me is a low intensity formulation group; Connections is a high intensity relationship skills group

3.6. How to present case study research

In a review of articles that identified themselves as case studies, Hyett and colleagues (2014) found that many papers did not meet criteria for case study research. This

suggests that some of the difficulties in case study research are in reporting quality, and rigour in the research process, rather than difficulties in the case study as a method. Hyett et al. (2014) suggest a checklist for reporting quality based on methodological textbooks. Recent work by the National Institute of Health Research (UK) has developed guidelines on reporting quality for case study research in organisations using a Delphi method (Rodgers et al., 2015). This guidance can aid in ensuring reporting quality for case study research reports. Carolan et al. (2015) have proposed the DESCARTE model for carrying out and presenting case study research.

The illustrative study benefitted from this guidance through being explicit on the epistemological stance and the reasons for selection of a case study. Further to this the researcher developed a detailed data collection and analysis plan at the protocol development stage. Many of the criteria identified by Rodgers and colleagues (2015) relate to the interpretation and presentation of the results, in particular; identification of shortcomings of the design, avoiding over or under interpreting data and reporting caveats. Though the outcomes are not reported in this paper, consideration is given to rival explanations as part of the pattern matching approach to data analysis. Similarly the limitations in terms of generalisability are explicitly recognised.

The word limits and linear-analytic style of many journals provide a difficulty in providing a robust rationale and sufficient methodological detail to allow readers to understand and appraise the research design (Hyett et al., 2014). This ability to concisely explain complex phenomena is the key to effective reporting of case studies (Baxter & Jack, 2008). The opportunity to provide online complementary resources can add to the quality of case study reporting (Hyett et al., 2014). One recommendation would be to publish the study protocol, to allow for further examination of the research design and methodology. The empirical paper describing the outcomes of the current study will be

supplemented by this paper outlining the methodological framework as well as through making available a detailed study protocol to allow for potential replication.

A further difficulty in presenting case studies is in balancing rich description with the need for maintaining anonymity (Carolan et al., 2015). This is particularly relevant to research in forensic settings, where there are generally further ethical issues of vulnerability and competency of research participants (Ward & Willis, 2010) balanced with the need to represent patients' views in research (Coffey, 2006).

4. Conclusions

A longitudinal case study is a feasible approach to examine innovations in forensic mental health practice. Though there have been other longitudinal case studies in forensic mental health (e.g. Urheim et al., 2011), this study directly addresses the impact of an intervention. There is a recognition that there are areas left uncaptured by the case study design, which incorporated three of the six sources of data described by Yin (2013). Further to this, consideration on the qualitative measures suggests that a measure of reflective functioning (e.g. Taubner et al., 2013) for staff may have been useful. Document analysis of care plans and observations of 1:1 sessions or of MDT meetings may have also added to the completeness of measurement of the ward and provided an opportunity to focus on the implementation of MBT to practice. However, the demands of completing this work are beyond the means of a single researcher. Further case studies based on this approach may benefit from an increased focus on staff and patient composition, which were identified as influencing social climate in the illustrative study. A longer evaluation period would also allow for more in-depth analysis, with a longer baseline allowing for monthly data to be statistically analysed as short time series data (Borckardt et al., 2008).

The case study method is not without drawbacks (Rodgers et al., 2015). In particular, there is a deficit in generalisability and a need to capture a range of possible confounding variables. This is in contrast to "harder" quantitative controlled designs, which remove the impact of confounding variables. Recently developed guidelines and standards for reporting quality (Carolan et al., 2015; Rodgers et al., 2015) can provide a useful framework for the reporting of case study research.

Case studies can provide outcomes helpful in validating theoretical perspectives (Barnao et al., 2015) and so are suited to exploratory stages of innovations in forensic mental health. The case study method allows for rich description of the context in which intervention takes place and so may also highlight issues in implementation that may be of interest to those working in clinical practice. This is particularly relevant given the growing evidence that the benefits of health innovations found in research trials are difficult to replicate in clinical practice (Chaudoir, Dugan, & Barr, 2013; Damschroder et al., 2009). The case study method may provide the means with which to understand the factors particular to both the context and to the innovation that impact on implementation. However, this must be weighed against the limitations of generalisability of case study methods. Case study methods should be seen as part of a spectrum of approaches including RCTs and qualitative studies that can aid practitioners, researchers and decision makers in developing and implementing new ways of working in forensic mental health.

5. References

Adshead, G., Moore, E., Humphrey, M., Wilson, C., & Tapp, J. (2013). The role of mentalising in the management of violence. *Advances in Psychiatric Treatment, 19*(1), 67-76. doi: 10.1192/apt.bp.110.008243

Alderman, N., & Groucott, L. (2012). Measurement of social climate within neurobehavioural rehabilitation services using the EssenCES. *Neuropsychological Rehabilitation, 22*(5), 768-793. doi: 10.1080/09602011.2012.689683

Almutairi, A. F., Gardner, G. E., & McCarthy, A. (2014). Practical guidance for the use of a pattern-matching technique in case-study research: A case presentation. *Nursing & Health Sciences, 16*(2), 239-244.

Barnao, M., Ward, T., & Casey, S. (2015a). Taking the Good Life to the Institution Forensic Service Users' Perceptions of the Good Lives Model. *International Journal of Offender Therapy and Comparative Criminology*, 60(7), 766-786.

Bateman, A. & Treliving, L. (2013) *MBT Skills for Mental health Professionals - a skills taining manual.* London: Anna Freud Centre.

Bateman, A., & Fonagy, P. (2006). *Mentalization Based Treatment: A Practical Guide for borderline personality disorder: A practical guide*. Oxford: Oxford University Press.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544-559.

Bergen, A., & While, A. (2000). A case for case studies: exploring the use of case study design in community nursing research. *Journal of Advanced Nursing, 31*(4), 926-934.

Borckardt, J. J., Murphy, M. D., Nash, M. R., & Shaw, D. (2004). An empirical examination of visual analysis procedures for clinical practice evaluation. *Journal of Social Service Research, 30*(3), 55-73.

Borckardt, J. J., Nash, M. R., Murphy, M. D., Moore, M., Shaw, D., & O'Neil, P. (2008). Clinical practice as natural laboratory for psychotherapy research: a guide to case-based time-series analysis. *American psychologist, 63*(2), 77.

Bowers, L., & Allan, T. (2006). The attitude to personality disorder questionnaire: psychometric properties and results. *Journal Of Personality Disorders, 20*(3), 281-293.

Carolan, C. M., Forbat, L., & Smith, A. (2015). Developing the DESCARTE Model: The Design of Case Study Research in Health Care. *Qualitative Health Research*, *26(5),* 626-639. *doi*: 10.1177/1049732315602488

Chaudoir, S. R., Dugan, A. G., & Barr, C. (2013). Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci, 8*(1), 22.

Clarke, C. L. & Reed, J (2013). Case study research. In K. Gerrish & Lacey, A. (Eds.) *The Research Process in Nursing,* 237-347. London: Wiley

Coffey, M. (2006). Researching service user views in forensic mental health: A literature review. *The Journal of Forensic Psychiatry & Psychology, 17*(1), 73-107. doi: 10.1080/14789940500431544

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a

consolidated framework for advancing implementation science. *Implement Sci, 4*(1), 50.

Davies, J., Howells, K., & Jones, L. (2007). Evaluating innovative treatments in forensic mental health: A role for single case methodology? *Journal of Forensic Psychiatry & Psychology, 18*(3), 353-367. doi: 10.1080/14789940701443173

Davies, J., Sheldon, K., & Howells, K. (2011). Conducting research in forensic settings: Philosophical and Practical underpinnings. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals* (pp. 3-15). Oxon: Routledge.

Dean, K. (2013). A multi-centre RCT of a group psychological intervention to reduce antisocial behaviour in a medium secure setting. *Australian and New Zealand journal of psychiatry, 47*, 18-19. doi:10.1177/0004867412486854

Dixon-Woods, M. (2011). Using framework-based synthesis for conducting reviews of qualitative studies. *BMC medicine, 9*(1), 1.

Ellard, D. R., Taylor, S. J., Parsons, S., & Thorogood, M. (2011). The OPERA trial: a protocol for the process evaluation of a randomised trial of an exercise intervention for older people in residential and nursing accommodation. *Trials, 12*(1), 28.

Farrington, D. P., & Jolliffe, D. (2002). A feasibility study into using a randomised controlled trial to evaluate treatment pilots at HMP Whitemoor. London: Home Office.

Fuller, J. R. (1985). Treatment environments in secure psychiatric units: A case study. *International Journal of Offender Therapy and Comparative Criminology, 29*(1), 63-76.

Gordon, N. (2011). Qualitative research with staff in forensic settings: A Grounded theory example. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals* (pp. 111-131). London: Routledge.

Gudjonsson, G. H., Young, S., & Yates, M. (2007). Motivating mentally disordered offenders to change: Instruments for measuring patients' perception and motivation. *The Journal of Forensic Psychiatry & Psychology, 18*(1), 74-89. doi: 10.1080/14789940601063261

Harris, F. C., & Lahey, B. B. (1982a). Recording system bias in direct observational methodology. *Clinical Psychology Review, 2*(4), 539-556. doi: http://dx.doi.org/10.1016/0272-7358(82)90029-0

Harris, F. C., & Lahey, B. B. (1982b). Subject reactivity in direct observational assessment: A review and critical analysis. *Clinical Psychology Review, 2*(4), 523-538. doi: http://dx.doi.org/10.1016/0272-7358(82)90028-9

Hollin, C. (2011). Strengths and weaknesses of randomised controlled trials. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals* (pp. 235-249). London: Routledge.

Howitt, D. (2011). Using qualitative methods to research offenders and patients. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals* (pp. 132-158). London: Routledge.

Hyett, N., Kenny, A., & Dickson-Swift, V. (2014). Methodology or method? A critical review of qualitative case study reports. *International journal of qualitative studies on health and well-being, 9,* 1-12.

James, I. A., Smith, P. S., & Milne, D. (1996). Teaching visual analysis of time series data. *Behavioural and Cognitive Psychotherapy, 24*(03), 247-261.

McAndrew, S., Chambers, M., Nolan, F., Thomas, B., & Watts, P. (2014). Measuring the evidence: Reviewing the literature of the measurement of therapeutic engagement in

acute mental health inpatient wards. *International Journal of Mental Health Nursing, 23*(3), 212-220. doi: http://dx.doi.org/10.1111/inm.12044

McKenna, B., Furness, T., Dhital, D., Park, M., & Connally, F. (2011). Recovery-Oriented Care in a Secure Mental Health Setting: 'Striving for a Good Life'. *Journal of Forensic Nursing, 10*(2), 63-69 67p. doi: 10.1097/JFN.0000000000000027

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from*: ERIC.

Meyer, C. B. (2001). A case in case study methodology. *Field methods, 13*(4), 329-352.

Milsom, S. A., Freestone, M., Duller, R., Bouman, M., & Taylor, C. (2014). Factor structure of the Essen Climate Evaluation Schema measure of social climate in a UK medium-security setting. *Criminal Behaviour and Mental Health, 24*(2), 86-99.

Moos, R. H. (1989). Ward Atmosphere Scale Manual. Palo Alto, CA: Consulting Psychologists Press.

Nesset, M. B., Rossberg, J. I., Almvik, R., & Friis, S. (2009). Can a focused staff training programme improve the ward atmosphere and patient satisfaction in a forensic psychiatric hospital? A pilot study. *Scandinavian Journal of Caring Sciences, 23*(1), 117-124. doi: http://dx.doi.org/10.1111/j.1471-6712.2008.00597.x

Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology, 8*(5), 375-387.

Ostrov, J. M., & Hart, E. J. (2014). Observational Methods. In T. Little, D. (Ed.), *The Oxford handbook of Quantitative Methods in Psychology* (Vol. 1, pp. 286-304). Oxford: 'Oxford University Press'.

Prebble, K., Kidd, J., O'Brien, A., Carlyle, D., McKenna, B., Crowe, M., . . . Gooder, C. (2011). Implementing and maintaining nurse-led healthy living programs in forensic inpatient settings: An illustrative case study. *Journal of the American Psychiatric Nurses Association, 17*(2), 127-138.

Richards, D., Bee, P., Barkham, M., Gilbody, S., Cahill, J., & Glanville, J. (2006). The prevalence of nursing staff stress on adult acute psychiatric in-patient wards. *Social Psychiatry & Psychiatric Epidemiology, 41*(1), 34-43. doi: 10.1007/s00127-005-0998-7

Rodgers, M., Thomas, S., Harden, M., Parker, G., Street, A., & Eastwood, A. (2015). Developing a methodological framework for organisational case studies: a rapid review and consensus development process. *Health Services and Delivery Research*(In Press).

Rossberg, J. I., Eiring, O., & Friis, S. (2004). Work environment and job satisfaction: A psychometric evaluation of the Working Environment Scale-10. *Social Psychiatry & Psychiatric Epidemiology, 39*(7), 576-580

Russell, K. (2016). Position Paper: Psychological Approaches to Personality Disorder in Forensic Mental Health Settings. Carstairs: Forensic Mental Health Services Managed Care Network.

Saudargas, R. A., & Zanolli, K. (1990). Momentary time sampling as an estimate of percentage time: A field validation. *Journal of Applied Behavior Analysis, 23*(4), 533-537. doi: 10.1901/jaba.1990.23-533

Schalast, N., Redies, M., Collins, M., Stacey, J., & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. *Criminal Behaviour and Mental Health, 18*(1), 49-58. doi: http://dx.doi.org/10.1002/cbm.677

Small, M. L. (2009). `How many cases do I need?': On science and the logic of case selection in field-based research. *Ethnography, 10*(1), 5-38. doi: 10.1177/1466138108099586

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks: Sage.

Taubner, S., Hörz, S., Fischer-Kern, M., Doering, S., Buchheim, A., & Zimmermann, J. (2013). Internal structure of the reflective functioning scale. *Psychological Assessment, 25*(1), 127.

Tight, M. (2010). The curious case of case study: a viewpoint. *International Journal of Social Research Methodology, 13*(4), 329-339.

Tonkin, M. (2015). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International Journal of Offender Therapy and Comparative Criminology*, 0306624X15578834.

Tonkin, M., Howells, K., Ferguson, E., Clark, A., Newberry, M., & Schalast, N. (2012). Lost in translation? Psychometric properties and construct validity of the English Essen Climate Evaluation Schema (EssenCES) social climate questionnaire. *Psychological Assessment, 24*(3), 573-580. doi:10.1037/a0026267

Trochim, W. M. (1989). Outcome pattern matching and program theory. *Evaluation and Program Planning, 12*(4), 355-366.

Urheim, R., Rypdal, K., Palmstierna, T., & Mykletun, A. (2011). Patient autonomy versus risk management: a case study of change in a high security forensic psychiatric ward. *International Journal of Forensic Mental Health, 10*(1), 41-51.

Verschuren, P. (2003). Case study as a research strategy: some ambiguities and opportunities. *International Journal of Social Research Methodology, 6*(2), 121-139.

Ward, T., & Willis, G. (2010). Ethical issues in forensic and correctional research. *Aggression and Violent Behavior, 15*(6), 399-409.

Wickström, G., & Bendix, T. (2000). The" Hawthorne effect"—what did the original Hawthorne studies actually show? *Scandinavian journal of work, environment & health*, 363-367.

Yazan, B. (2015). Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake. *The Qualitative Report, 20*(2), 134-152.

Yin, R. K. (2013). *Case study research: Design and methods* (5th ed.). London: Sage publications.

A case study of Mentalization based staff training and case consultation on a forensic mental health ward.

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Running Head: MBT in a forensic mental health ward: A case study

Abstract

A longitudinal case study was completed to examine the impact of staff training and case consultation in Mentalization Based Treatment on a low secure forensic mental health ward. The case study involved quantitative measurement of staff stress, staff attitudes to personality disorder, patient motivation and social climate alongside semi-structured interviews and ward observation. The ward was well functioning at baseline which limited the scope for positive changes. Overall the study indicated that the intervention may have aided staff resilience in coping with the impact of increased violence and aggression on the ward over the study period.

Keywords: case study, mentalization, case consultation, forensic, social climate

1. Introduction

There are challenges in introducing innovations in health care, in particular in ensuring uptake and implementation, meaning that successful research studies can fail to translate into effective practice (Chaudoir, Dugan, & Barr, 2013; Damschroder et al., 2009). Innovations in forensic mental health settings face challenges in developing or drawing on an evidence base for interventions due to organisational factors, the individualised nature of treatment and the small potential pool of patients (Davies, Howells, & Jones, 2007; Farrington & Jolliffe, 2002).

Introducing a shared model of care in forensic mental health poses challenges including a need to balance recovery and risk management (Mann, Matias, & Allen, 2014; Nijdam-Jones, Livingston, Verdun-Jones, & Brink, 2015). Alongside this, the patient group in forensic mental health settings can present with multiple and diverse needs, tend to progress slowly in treatment and their motivation to engage in treatment is often low (Ross, Querengässer, Fontao, & Hoffmann, 2012; Smith, White, & MacCall, 2004). The risk and reality of violence can lead to barriers in providing effective treatment as interventions to ensure safety may have a negative impact on the therapeutic relationship and the experience of care (Gudde, Olsø, Whittington, & Vatne, 2015). The compulsory nature of forensic mental health settings and a focus on discipline can impact on the quality of care (Hörberg, 2015; Hörberg, Sjögren, & Dahlberg, 2012). Care may be experienced as custodial, humiliating and focused on staff members' exercise of power (Hörberg, 2015). This paper reports on a case study to examine the impact of a Mentalization Based Treatment (MBT) training and group case consultation (CC) intervention in a Scottish low secure forensic mental health ward. MBT training has been provided across a range of forensic services in Scotland. Additional case consultation sessions were offered in this intervention to build skills in promoting effective interactions with patients and to implement a shared model of understanding of patient presentations across health professionals.

1.1. Developing a framework for clinical care

The Forensic Matrix (2011), a framework for evidence based practice in forensic services in Scotland, suggests that services focus on the "organisational, physical, social and psychological environment that patients live in" (p.6). This has been further emphasised in a recent consultation paper by the Forensic Network, the leading body for forensic services in Scotland, which highlights the need for an approach to care that

supports individuals with personality difficulties (Russell, 2016). This focus on the therapeutic milieu suggests that, in general, forensic mental health services should aim to ensure that the social climate is responsive to the treatment needs of patients, in addition to being supportive of staff.

Qualitative research has highlighted the central nature of the therapeutic relationship to patient experiences of forensic mental health care (Barnao, Ward, & Casey, 2015; Long, Knight, Bradley, & Thomas, 2012; Nijdam-Jones et al., 2015). The presence of a trusting relationship with a staff member can be associated with a sense of hope (Madders & George, 2014). Interpersonal factors including encouragement, validation and recognising effort can influence patient motivation (Long et al., 2012; Mason & Adler, 2012). A meta-analysis of 71 studies found that staff-patient interactions are the most frequently reported antecedent to violence and aggression in inpatient settings, accounting for 39% of all incidents (Papadopoulos et al., 2012). Similarly, a qualitative synthesis (Gudde et al., 2015) found that staff skills in developing good relationships with patients were central to preventing aggression. Both reviews suggest that staff should be aided to develop skills in developing positive therapeutic interactions with patients, in particular in situations where they must exercise power over the patient (Gudde et al., 2015; Papadopoulos et al., 2012).

Staff members' ability to provide these supportive therapeutic relationships is likely to be impacted by their own support structures (Bowers, 2014), which can include clinical supervision (Rask & Aberg, 2002), reflective spaces (Millar, 2011) and opportunities for training and development (Tema, Poggenpoel, & Myburgh, 2011). A lack of support may lead to staff feeling disempowered and emotionally exhausted, reducing their capacity to build healthy therapeutic alliances (Tema et al., 2011) and potentially leading to tensions in the staff team (Kurtz, 2005). Burnout, described as emotional exhaustion, reduced compassion and feelings of lack of achievement, is a significant issue across psychiatric nursing settings (Khamisa, Peltzer, & Oldenburg, 2013). Burnout can lead to staff absences and high staff turnover (Ewers, Bradshaw, McGovern, & Ewers, 2002). Alongside the impact on staff and services, this can have a negative impact on patients due to the disruption to therapeutic relationships (Bressington, Stewart, Beer, & MacInnes, 2011). Contextual factors, including leadership style and social climate also influence levels of stress experienced by psychiatric nurses (Bowers, Nijman, Simpson, & Jones, 2011; Richards et al., 2006).

Providing a safe and supportive social climate, an environment of systemic psychological containment, can be challenging due to the difficulties in interpersonal relationships with forensic patients (Yakeley & Adshead, 2013). There is a recognition that difficulties with personality functioning are prominent in forensic mental health settings with identified rates of 80% for any personality disorder (PD) among an inpatient sample (de Ruiter & Greeven, 2000). In a Scottish context, the primary diagnosis in forensic mental health settings is generally a psychotic illness, though personality difficulties are suggested as relevant for as much as half of the population in high secure settings (Thomson et al., 2005). A systematic review of the impacts on staff of working with PD offenders, identified a range of potential difficulties including negative attitudes, stress, difficult counter-transference experiences and burnout (Freestone et al., 2015). Working with offenders with personality disorders can be intense and exhausting, in particular for nursing staff and nursing assistants who spend long periods of time with patients (Freestone et al., 2015; Moore, 2012).

A shared model of understanding across professional groups may provide a means to consistently provide emotional containment. Hörberg (2015) discusses the components of a caring model in forensic mental health. This includes staff education, supervision focused on the patient's experience, opportunities for staff to reflect on care, and a focus on using 'everyday' time on the ward to complement formal therapies (Hörberg, 2015). Staff training can promote improved staff attitudes towards patients (Ewers et al., 2002). These positive attitudes have been associated with increased commitment to forming therapeutic relationships (Bowers & Allan, 2006). Reflective spaces can build team cohesion aid staff in feeling contained and supported in their work (Caruso et al., 2013; Moore, 2012).

1.2. Reflective Practice Interventions

One means to provide supportive containment to staff is reflective practice (RP). Reflection involves an examination and modification of practice to better meet the demands of the environment. Formal RP groups focus on relationships between staff and patients through reflecting on staff members' experiences, their feelings towards patients and situations that evoke dilemmas (Johnston & Paley, 2013). Supervision and RP systems are recommended for forensic services, and in particular for those working with patients with Anti-Social PD (Forensic Network, 2011; National Institute for Health and Care Excellence, 2013). Group RP can help to develop understanding of

interpersonal relationships and group dynamics, with the benefits for staff including increased team cohesion, containment of staff feelings, mutual support and opportunity to share reflections on practice (Dawber, 2013a, 2013b; Thorndycraft & McCabe, 2008). RP can also have a role in improving staff wellbeing (Heneghan, Wright, & Watson, 2013), and tends to be positively experienced by participants (Paget, 2001). However, some authors have suggested that though RP can be beneficial it will not impact on the wider stressors of working in mental health settings (Johnston & Paley, 2013).

RP can increase staff capacity to work effectively with patients and may be an important process in maintaining work-life balance and reducing boundary violations, such as inappropriate staff-patient relationships (Johnson, Worthington, Gredecki, & Wilks-Riley, 2016a, 2016b). This conceptualisation of RP as a process of containment, along with the recommendations for a relational approach to RP (Royal College of Psychiatrists, 2012) suggest that Mentalization based treatment (MBT) approaches may be an effective model for RP in forensics settings.

1.3. Mentalization as a model of care

The concept of mentalizing is related to theory of mind and metacognition and has developed from a psychodynamic framework, incorporating findings from attachment theory and neuroscience (Bateman & Fonagy, 2013; Yakeley & Adshead, 2013). In considering MBT for forensic populations it must be noted that there is limited current evidence for MBT as effective as a direct treatment for those diagnosed with Antisocial PD (McGauley, Yakeley, Williams, & Bateman, 2011), though deficits in mentalizing are increasingly recognised as being a factors in a range of psychiatric difficulties (Fonagy, Bateman, & Bateman, 2011). Mentalizing can be defined as *"a set of processes by which children and adults understand themselves and others in terms of how they think, feel, perceive, imagine, react, attribute, infer and so on"* (Sharp et al., 2009, p314). The ability to mentalize develops through early attachment relationships, with early childhood adversity seen as having a potential negative impact on ability to understand mental states in ourselves and others (Yakeley & Adshead, 2013). A limited ability to mentalize includes problems in self-reflection and empathy for others which are hypothesised to be factors in interpersonal violence (Adshead, Moore, Humphrey, Wilson, & Tapp, 2013; Yakeley & Adshead, 2013). Poor abilities in mentalizing, in both staff and patients, may increase the transfer and displacement of negative feelings from patients onto staff or from staff onto patients or colleagues (transference and

countertransference) (Kurtz & Jeffcote, 2011). This can in turn lead to poor patient care as well as staff stress, burnout, boundary violations and difficult inter-staff relationships among (Yakeley & Adshead, 2013). RP for staff is a means through which mentalizing within the staff team can be promoted, improving staff members' ability to manage difficult processes (Moore, 2012).

1.4. Difficulties with traditional research paradigms

Research into the environment and training interventions on psychiatric wards has mainly focused on descriptive studies, with few studies describing interventions. One naturalistic longitudinal study found that an intervention to improve patient engagement had no significant impact on social climate (Livingston, Nijdam-Jones, Lapsley, Calderwood, & Brink, 2013). A small uncontrolled study looked at the impact of milieu therapy training for staff, and found a positive impact on social climate as reported by patients, though no staff changes were identified in terms of satisfaction or perspectives of social climate (Nesset, Rossberg, Almvik, & Friis, 2009).

Case study methods (Yin, 2013) can provide in-depth evaluations of service innovations (Meyer, 2001) and can incorporate both the service user and researcher perspective, through triangulation of multiple data sources (e.g. Urheim, Rypdal, Palmstierna, & Mykletun, 2011). Case studies do not lead to empirical generalisations, though can lead to analytic generalisations which can provide both theoretical and clinical insights (Yin, 2013).

1.5. Aims

This paper describes a case study of the implementation of a practice innovation based on principles of MBT in a Scottish low secure forensic mental health ward. The study utilised an embedded single case design (Yin, 2013). The ward as a whole is the case, with the patients and staff seen as subunits of the analysis. The case study examines the functioning of the ward over a period of one year, prior to and during the implementation of the MBT based service innovation, involving training and group case consultation (CC) with the aim of understanding its impact on ward functioning. Proposed ward level, staff and patient outcomes for the intervention were identified in advance of the study and tested using pattern matching approaches (Table 1) (Trochim, 1989; Yin, 2013). At the ward level, the intervention was predicted to have a positive influence on social climate, and on staff and patient interactions. The intervention was also proposed to and to lead to reduced violence and aggression and reduced staff sickness absence. At the

subunit level, the intervention was predicted to have a positive influence on levels of staff stress and staff members' attitudes towards people with personality disorders. Finally, the intervention was predicted to have a positive effect on patient motivation and engagement in psychosocial treatments.

1.6. Pattern Matching

Pattern-matching techniques developed from hypothesis testing approaches and involve comparing patterns in the raw data with hypothesised patterns (Almutairi, Gardner, & McCarthy, 2014). The presence of patterns in the data that match the proposed impact of the intervention provides confirmation of the hypothesis as well as strengthening the internal validity of the study (Yin, 2013). The three stages of pattern-matching are: 1) Stating the study's proposition; 2) Testing the empirically found pattern from each distinct method against the predicted one; and 3) Providing theoretical explanations and developing the research outcome (Almutairi et al., 2014, p.241). During development of the study protocol the propositions corresponding to stage one of pattern matching were developed (Table 1). These proposed patterns were used to test the outcome of the intervention.

2. Methodology

2.1. Intervention

A one-day MBT Skills and Awareness training session (Bateman & Treliving, 2013), accredited by the Anna Freud Centre, was run for all staff involved in direct patient care. This was provided by MBT Scotland through the Forensic Network and NHS Education Scotland (NES). The training day was delivered three times with group attendances of 9, 10 and 11 (Total: 30). An MBT staff group CC session ran every two weeks for nine months facilitated by an external facilitator not associated with the forensic service. The session lasted one hour and focused on the process of working with patients on the ward and on embedding MBT skills into practice. In total 15 sessions were held during the study period. The mean number of attendees was 7.27 (Range: 4-12; median=8, mode=7). The study received ethical approval from the South East Scotland Research Ethics Committee (14/SS/1405) (Appendix J, K, L).

Table 1: Summary of proposed patterns and evidence outcomes

Proposed Pattern ***Source of Information***	**Outcome**
At the ward level, the intervention was predicted to have a positive influence on social climate indicated by:	
Staff reporting improved social climate *EssenCES staff ratings Interviews*	Staff social climate ratings were high at the start of the study. Fluctuations in Experienced Safety were associated with violence and aggression. Qualitative interviews highlighted a steady, positive view of social climate, despite an increase in aggression and violence on the ward.
Patients reporting improved social climate *EssenCES patient ratings Interviews*	Reduction seen in ratings of Therapeutic Hold towards end of study period which appears to relate to reductions in availability of staff due to increased violence and aggression on the ward. Fluctuations in Patient Cohesion may reflect the impact of discharges on available supports.
Increased volume of staff-patient interactions *Observations, Interviews*	Observations did not identify any increase in staff-patient interaction following introduction of the intervention. The highest level of interaction was recorded at baseline (28.6%) which may have been due to changes in behaviour as a result of being observed.
Reduction in violence and aggression on the ward *DATIX incident reporting*	At baseline there were no incidents of violence and aggression in the ward. This increased towards the end of the study. Increase appears to have been associated with changes in patient population on the ward, due to the admission of patients in acute illness phases.
Reduction in Level of sickness absence across term of intervention *Sickness absence reports*	No positive pattern found for changes in sickness absence. A low rate of sickness absence at start of study moved to service wide average at end of study. Overall reduction from 2014 to 2015 in sickness absence, though both years are influenced by long term sickness absences.
At the staff level the proposed impact was for positive changes for staff in both level of stress and in attitudes towards personality disorder, indicated by:	
Reduction in levels of stress experienced by staff across term of intervention *WES-10 scores, Interviews*	Some indications of reduction in conflict amongst staff. This appears to have been influenced by a new RMO providing a clinical leadership role in the service. MBT CC sessions were also identified as a forum for discussing difficulties and coming to conclusions.
Positive change in attitudes towards patients with personality disorders *APDQ scores, Interviews*	Some increases found in subscales of Purpose/Futility, Enthusiasm/Exhaustion and Total Score with difference found between baseline and post-training scores. Increase in Enthusiasm Scale maintained to end of study. This may indicate a positive effect of MBT in promoting positive working with people with PD.
The proposed impact of the intervention for patients was to demonstrate an increased motivation for treatment, indicated by:	
Increased motivation to engage in treatment *PMI scores, Interviews*	Patients reported high levels of motivation at baseline. Over course of the study a decline in motivation and confidence in the unit was identified. This contrasted to qualitative accounts which highlighted increased motivation which appeared to be impacted by perceived progress in treatment
Increase in engagement in therapeutic activity *Observations, Interviews*	Observations did not identify any increase in staff-patient interaction. Patients reported being engaged in a range of activities and staff identified good patient attendance at psychological groups.

2.2. Participants

The study was based in a low secure forensic mental health ward. The case was selected due to convenience and access, and the opportunity to examine the implementation of a novel staff based intervention. The study recruited both staff and patients. The study did not employ randomisation procedures, as the focus was on the ward as a whole. For the patient sample, exclusion criteria included presence of an acquired brain injury, being deemed unable to give consent by their treating psychiatrist, unable to speak English and under 18 years of age. For staff, only those working on the ward for at least one session (0.5 work day) per week were considered, so that they would have sufficient exposure to the ward atmosphere. No potential participants were excluded based on these criteria.

Seven male inpatients consented to take part in the research, from a potential pool of 14. The mean age of participants was 40.14 years (SD: 9.35). All patient participants had a diagnosis of mental disorder including Schizophrenia (n=3), Bipolar Disorder (n=2) and other (n=2). Five patients were identified to have issues in personality functioning, including 3 having a formal diagnosis of Dissocial PD. Five patients were identified by their clinical team as having traits suggestive of Emotionally Unstable PD, without a formal diagnosis.

The staff sample included all clinical staff with input to the ward. The nursing staff team comprised a mixture of registered nurses and 'untrained' Nursing Assistants. During the study period four nursing staff joined the ward and three left. Fourteen other clinical staff also provided input to the ward. The total pool of staff was 43. In total, 37 staff (86.0%) consented to take part in the study, comprising 18 nurses (48.7%), 10 Nursing Assistants (27.0%) and 9 other clinical staff (24.3%).

2.3. Data Collection

Data collection occurred longitudinally with monthly data collection for one year. There were four periods of more intensive data collection at baseline, following MBT training, at midpoint of the CC sessions, and at the end of the intervention (Table 2). The data collection plan was designed to test the study propositions (Table 1) and examine for unique effects of each phase of the intervention. There are four sources of data collected in the study: observations, qualitative interviews, questionnaires and routine data. Field notes and personal reflections were recorded throughout the study period to maintain awareness of the researcher's role in the process (Carolan, Forbat, & Smith, 2015).

Table 2: Data collection summary table

Phase:	**Baseline**	**Baseline / MBT training**		**Start of RP**				**Midpoint**				**Post Intervention**
Month	January 2015	February	March	April	May	June	July	August	September	October	November	December 2015
Staff:	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES
	WES-10			WES-10				WES-10				WES-10
	APDQ		APDQ	APDQ				APDQ				APDQ
	Interviews							Interviews				Interviews
Patients:	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES	EssenCES
	PMI			PMI				PMI				PMI
	Interviews							Interviews				Interviews
Observations:	Observations			Observations				Observations				Observations
Routine:	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX	DATIX
	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate	Absence rate
Intervention:		Staff training Session x3		MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions	MBT RP sessions

2.4. Observations

Observations were completed by the two researchers acting as complete observers. All observations were carried out in the day room area of the ward, and only included data from within the room. Observational data was recorded using Momentary Time Sampling (MTS). MTS involves recording the occurrence of a behaviour if it is present at the end of a recording period (Saudargas & Zanolli, 1990). Multiple observation periods (of 15 minutes), spaced throughout the work day (9-5), were carried out on four occasions (baseline, start of RP, midpoint, end of study). All staff members and patients were asked to provide informed consent to be observed. Only data from those who consented to being included in the study were collected. The number of people present in the day area during observations was also recorded. Observations were completed using an interval timer and a paper recording sheet (Appendix N). Cohen's kappa was used to assess inter-observer agreement of the categorical data (frequency counts), with 0.70 as an acceptable level of agreement (Ostrov & Hart, 2014). High levels of agreement were found for a total of 75 minutes joint observations by two raters (Cohen's Kappa = 0.88).

2.5. Questionnaires

The **Essen Climate Evaluation Schema** (EssenCES; Schalast, Redies, Collins, Stacey, & Howells, 2008) is a 17-item measure of social climate. It has demonstrated good reliability and validity across different forensic settings in the UK and a three factor structure is supported (Howells et al., 2009; Milsom, Freestone, Duller, Bouman, & Taylor, 2014; Tonkin et al., 2012). The three factors, therapeutic hold (α= 0.76), patient cohesion (α= 0.86) and experienced safety (α= 0.74) along with the total score (α= 0.79), show good internal consistency in both staff and patient samples in a UK medium secure sample (Milsom et al., 2014). The mean scores for each month were used to assess social climate (Tonkin, 2015). Higher scores indicate a better social climate. A recent systematic review recommended the EssenCES for routine monitoring of social climate (Tonkin, 2015).

The **Working Environment Scale** (WES-10; Rossberg, Eiring, & Friis, 2004; Rossberg & Friis, 2004) is a 10-item scale measuring morale and stress in the work environment, developed for inpatient psychiatric staff. It has been commonly used in research alongside the EssenCES (e.g. Alderman & Groucott, 2012). The WES-10 has four subscales: Workload (α= 0.84) and Self-realisation (α= 0.85) scales show good internal

consistency; Conflict (α= 0.69) and Nervousness (α= 0.66) show acceptable internal consistency (Rossberg et al., 2004). Higher scores on the Conflict, Nervousness and Workload scales indicate higher work stress. Higher scores on the Self Realization scale indicate more experiences of support and job satisfaction. The Self Realization subscale correlates with the Experienced Safety and Therapeutic Hold subscales of the EssenCES (Tonkin et al., 2012) and with a measure of patient satisfaction (Rossberg, Melle, Opjordsmoen, & Friis, 2008), providing evidence of construct validity.

The **Attitudes to Personality Disorder Questionnaire** (APDQ; Bowers & Allan, 2006) is a measure of attitudes held by staff towards patients with PD diagnoses. The APDQ has 37 items (35 items scored) and confirmatory factor analysis supports a structure of five subscales: Enjoyment/Loathing, Security/Vulnerability, Acceptance/Rejection, Purpose/Futility and Enthusiasm/Exhaustion. The Total score demonstrates good test-retest reliability (r= 0.71) and high internal consistency (α= 0.94; Bowers & Allan, 2006). There are norms for the ADPQ for forensic inpatient staff (Carr-Walker, Bowers, Callaghan, Nijman, & Paton, 2004). Higher scores indicate more positive attitudes.

The **Patient Motivation Inventory** (PMI; Gudjonsson, Young, & Yates, 2007) consists of 16 true/false statements developed on a UK sample of mentally disordered offenders. The measure consists of three subscales: internal motivation (α= 0.79), no confidence in the unit (α= 0.75), and feelings of failure (α= 0.65) (Gudjonsson et al., 2007). A total score is also calculated by summing the three scores and has demonstrated a good internal consistency (α= 0.83; Beazley & Gudjonsson, 2011). The 'no confidence in the unit' and 'internal motivation' subscales correlate with the total score of the ward atmosphere scale (WAS; Moos, 1989), suggesting a link between patient motivation and social climate (Beazley & Gudjonsson, 2011). Higher scores in the Total score, Internal Motivation and Feelings of Failure indicate higher motivation. Higher scores on the no confidence in the unit subscale indicate lower motivation.

2.6. Interviews

Interviews with staff and patients were completed at baseline, midpoint and at the end of the study period (Table 2). There were three strands to research interviews; staff, patients and managerial. Semi structured interview questions were developed prior to the study (Appendix O) and adapted using emerging themes from early interviews to inform later interviews. In all, 24 interviews were conducted (7 at Baseline, 9 at midpoint and 8 at endpoint), incorporating eight patient interviews (3 baseline, 3 midpoint, 2 endpoint), eleven staff interviews (2 baseline, 4 midpoint, 5 endpoint) and five

managerial interviews (2 baseline, 2 midpoint, 1 endpoint). Two patients, two managerial staff and two staff members completed multiple interviews. The mean length for interviews was 28mins for patients (Range: 11-49mins), 24mins for managerial interviews (Range: 9-35mins) and 27mins for staff interviews (Range: 18-46mins).

Transcripts were analysed using framework analysis (Gale, Heath, Cameron, Rashid, & Redwood, 2013; Ritchie & Spencer, 2002) (Appendix P). All interviews were recorded and transcribed with a focus on accuracy of content (Ward, Furber, Tierney, & Swallow, 2013). Following familiarisation with the data, baseline patient interviews were coded using Dedoose data analysis software (SocioCultural Research Consultants, 2013) and reviewed to form an initial coding framework. This framework was applied to the remaining staff interviews from the baseline phase, with extra care given to data that did not fit the framework. The coding was reviewed, with codes further defined, clarified and grouped into categories (Gale et al., 2013). There were 67 codes across 14 categories in the initial framework. This framework of categories was examined for commonalities and grouped into five overarching themes: the therapeutic relationship, current treatment & future progress, structures, rules & restrictions, the social climate, and staff skills and supports (Table 3). This framework was applied to the remaining interviews and was framework was revisited to examine for the emergence of new codes and categories to ensure comprehensive coverage of the data (Gale et al., 2013). The final framework contained 69 codes which fit within the original five themes. A second reviewer considered the framework for each stage of the study for consistency with the final study report to ensure accurate reporting of findings. The qualitative data is integrated with other data sources in the results. Only data relevant to the study propositions or rival explanations are reported.

2.7. Routine Data

Monthly rates of staff sickness absence and number of incident reports for violence and aggression, serious violence, and episodes of restraint on the ward (Datix reports) were collected. These data streams, along with EssenCES monthly means, are short time series data. They are presented graphically and analysed using visual analysis (James, Smith, & Milne, 1996). Due to the sensitivity of visual analysis to Type II error (Borckardt, Murphy, Nash, & Shaw, 2004) a cross correlation co-efficient (CCF; Borckardt et al., 2004) was calculated in cases where visual analysis indicated potential relationships between variables. Each CCF was calculated for a Lag of 1 month for either

variable, as well as a direct relationship. Due to multiple comparisons the p-value for CCF tests was reduced using a Bonferroni Correction (p=0.01667).

Table 3: Framework Themes

Codes	Initial Categories	Overarching Theme
Staff–Consistency, Staff–Responsivity, Staff–Availability, Staff–Responsibility, Professional Support, Knowledge of Patients, ^Staff–Perspective taking	Staff behaviours	**The therapeutic relationship**
Patient/Staff Relationship, Difficult Patients, Feeling understood, Empowerment, Communication about treatment, Dilemma of sharing problems, Feedback, Shared Treatment goals, Trust	Patient/Staff Communication	
Personal Growth, Personal Journey, Emotional Experience, Mental health, Personal Motivation, Personal Responsibility, Doing what helps	Individual Patient Factors	
Family Connections, The Future, Unreality of Hospital	The Outside world	**Current treatment and future progress**
Medication, Structured Therapies, Rehabilitation, Things to do, Psychological therapy, Clinical team meetings*	Therapeutic Input	
Care and Treatment, Person Centred Care, Testing Out, Pass/Time Out, Routine, Helping Actions	Informal Structures and Supports	
Staff Control, Assertiveness, Staff Power	Staff Power and Control	**Structures, rules & restrictions**
Structures and Procedures, Flexibility of rules, Contextual Factor – Hospital, Contextual Factor – Legislation, Risk Management	Formal Structures and Processes	
Impact of "Forensic", Pace of Treatment, Being locked up	Forensic Service Restrictions	
Social Climate, Safety, Feeling part of things, Support – Mutual, Physical Environment, Patient Inter-relationships, Privacy	The Milieu	**The social climate**
Conflict, Consequences, Stressors	Conflicts	
Boundaries, Reflecting ,Staff Development, Staff Motivation	Staff Qualities and Skills	**Staff Skills and Supports**
Staff – Team, Leadership, Support for Staff	Support Structures	
MBT Training and Case Consultation intervention, Implementation, Outcomes of Research Project	The Intervention	

* Code added at midpoint of study ^ code added at endpoint of study

3. Results

The results section focuses on evidence related to the outlined propositions for changes at the case (ward) and subunit (staff and patients) level (Table 1). To contextualise the results a summary table of events on the ward was completed based on routine data and field notes (Table 4). This summary table included staffing changes, other interventions on the ward and routine data and was used to develop understanding of the study outcomes and potential rival explanations.

3.1. Ward Level outcomes

The proposition at the ward level was for the intervention to lead to: a) improvement in staff and patient reported social climate; b) increased staff-patient interaction; c) reduced sickness absence; and d) reduced levels of violence and aggression (Table 1).

Table 4: Timeline of events on ward over year of research study

Month	1	2	3	4	5	6	7	8	9	10	11	12
Sickness Absence Rates (%)	1.44	0.84	1.77	2.04	2.81	2.67	3.49	3.35	3.53	4.81	6.9	6.34
Violence & Aggression	0	0	0	1	2	0	0	0	3	9	14	3
"Serious" Violence	0	0	0	0	0	0	0	0	1	3	3	1
Restraints	0	0	0	0	1	0	0	0	2	7	5	2
Patient Changes	1 Discharge 1 Admit					1 Discharge 1 Admit				1 Discharge 1 Admit	1 Discharge 1 Admit	
Staff Changes				Psychiatry registrar left 2 Nurses left			New Junior Doctor 3 Nurses start					2 staff moved (shortages)
RMO changes	RMO Left	Community Team Psychiatrist acting as RMO for ward				Locum RMO	New permanent RMO					
Psychology groups				Knowing me group								
					Connections Group Module 1 & 2							
Intervention		MBT Training 3 sessions			MBT reflective practice sessions							

RMO = Responsible Medical Officer – person responsible for managing patient care under Mental Health (Care and Treatment) (Scotland) Act 2003; DATIX- Incident management reporting service; Knowing Me is a low intensity formulation group; Connections is a high intensity relationship skills group

3.1.1. Reported Social Climate Outcomes

Prior to the start of the intervention, scores on the EssenCES for the total sample were significantly higher for Therapeutic Hold and Experienced Safety, as compared to norms for a medium secure unit (Milsom et al., 2014) (Table 5). There were differences between staff and patients in social climate ratings subscales with patients rating the Patient Cohesion ($t_{(28)}$= 2.49, $p<0.05$) and Experienced Safety ($t_{(28)}$= 2.90, $p<0.05$) subscales higher than staff members.

Table 5: Baseline EssenCES Measurement

	Current Study			**Medium Secure unit^**		
	Patients	**Staff**	**Total**	**Patients**	**Staff**	**Total**
N (January)	6	24	30	89	112	201
Therapeutic Hold	15.17	16.08±	15.90±	11.96	14.85	13.64
Patient Cohesion	12.83*	8.92	9.70	9.90	9.72	9.80
Experienced Safety	15.17*±	11.62±	12.33±	11.69	9.95	10.70

*^ Data from Milsom et al. (2014) * Patient score significantly higher than staff rating (p<0.05) for current sample ± Significantly higher (p<0.05) than norms of medium secure unit*

The themes of *therapeutic relationship* and *social climate* were seen as relevant to social climate outcomes. At baseline, qualitative interviews expressed broadly positive views of the social climate. Patients reported positive, if detached, relationships with other patients. The atmosphere of the ward was generally described as settled, supportive and positive, with any disturbances being short lived. However, two patients shared experiences of feeling unimportant or uninvolved in the ward environment, which appeared to impact on motivation: "*I was trying to participate but I was more or less standing twiddling my thumbs"* (P1, baseline). Staff members and managers felt that tensions on the ward related to mental health difficulties:

"*The thing that causes maybe some times a bit of a tense atmosphere, obviously if someone is that unwell and they're being quite loud and aggressive and that, does tend to upset people, because obviously you cannot always get away from that especially during the day during the week"* (S1, baseline).

Visual analysis of social climate scales identified no changes linked directly to the introduction of the intervention (Figure 2). The same high level of social climate was maintained to the end of the study. However, the overall scores appeared to obscure changes in staff and patient ratings of social climate (Figure 3-5). Patient scores indicated reductions in patient cohesion across the term of the study, as well as a

reduction in therapeutic hold. Staff ratings appeared to show less change across the study term, though there were noted fluctuations on the patient cohesion and experienced safety measures.

Consistent with ratings of experienced safety and numbers of reported incidents at the midpoint of the study (August, Figure 5) staff members described a settled ward atmosphere. Deteriorations in mental health of patients were seen to lead to temporary changes to ward atmosphere:

"obviously if one of the patients or two of the patients have a wee deterioration or they're angry or whatever you can feel a bit, the ward is a bit tense" (S6, midpoint)

The settled ward atmosphere was perhaps further accentuated by patients often being off the ward during the day:

"I think what has happened is that the noisier, the more vocal patients, are the guys who have been here the longest but they are also the guys who have now attained the most time out, so therefore they are off the ward a good percentage of the day either doing therapeutic activities or using their own time out" (S2, midpoint)

Changes in the staff team (Table 4), may have reduced staff availability and was identified by staff as potentially unsettling for the patient group though were not raised by the patient group:

"Two of his nurses have left. Or old nurses. And he was quite, able to be quite open with them had a good rapport with them so I am glad I am still here for him" (S6, midpoint)

Managerial staff felt that therapeutic relationships remained positive, with one manager feeling that therapeutic relationships had possibly improved though the driver of this change was unclear:

*"I think the relationships have changed but I don't know how much it has been since MBT came in and how much was changing [anyway]" (*M2, midpoint).

3.1.2. Violence and Aggression outcomes

DATIX incident reporting demonstrated an increase in incidents of violence and aggression across the term of the intervention (Figure 2). There were six months with no reported incidents of violence and aggression. There was an increase in violence and aggression identified from month 9 of the study (September), including eight incidents of physical violence from September to December, a category covering physical assault. The data indicates a potential relationship between sickness absence and violence and aggression (Figure 1). A CCF showed that Violence and Aggression was strongly

associated with Staff Sickness (LAG:-01; r=0.79; p=0.002) with increased violence and aggression related to the following month's sickness absence.

Variation in patient and staff ratings of experienced safety appeared to reduce during the peak of aggressive behaviour in the ward. This was examined using a CCF, with increased violence and aggression being significantly related to reduced patient experienced safety (LAG: 0; r=-0.72 p=0.008). Violence and aggression was also related to staff experienced safety (LAG:-01; r=-0.68; p=0.010) indicating that the preceding month's incidence of violence and aggression was related to staff members' ratings of experienced safety. The reduction in experienced safety towards the end of the study appears to link to changes in the composition of the patient group. Patients identified that there were now *"more voices raised"* (P3, end point) with one patient making reference to the EssenCES stating that *"some patients are that excited all the time and you need to approach them with caution"* (P1, end point) leading to increased anxiety and tension on the ward. Staff members had also noticed this change:

"Three admissions since then, they have come in and ruffled the feathers of some of the other boys with their behaviours." (*S8*, end point)

"I mean you have your moments when you've got somebody that's really unwell comes in and it can really upset the balance" (S10, end point)

Staff reported needing to be aware of risks, though they generally felt safe in the environment, though one patient identified a sense that staff were frightened on the ward.

"So if a patient has an issue with me, all the staff are aware of that. So I feel quite safe." (S9, end point)

"I noticed some of the staff feel frightened of the patients… … I think that it impacts on the rest of the patients and you feel less secure" (P1, end point).

Violence and Aggression was also found to be strongly related to patient therapeutic hold (LAG:-01; r=-0.82; p=0.002) (Figure 3), indicating that changes in violence and aggression preceded changes in Therapeutic Hold. This interpretation is supported by qualitative data, with both staff and patients suggesting that the increased violence and aggression had negatively impacted therapeutic relationships through reducing staff availability:

"Last night I was trying to get a 1:1 with my nurse but I could not get a 1:1 because the staff are busy and run off their feet" (P1, end point)

"A lot of focus that had to be given to maybe one or two people which meant that other people were in the background you know really weren't getting the same level, they didn't require it but maybe they weren't getting the same level of support or sort of input as they have been." (S11, end point)

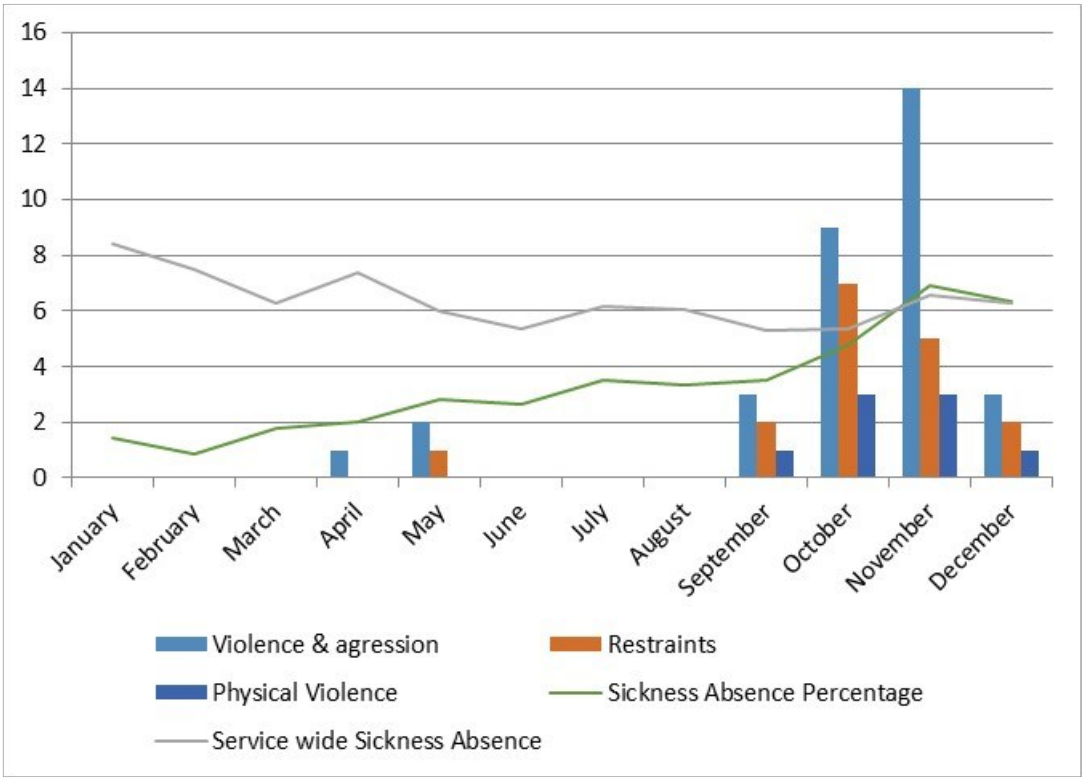


Figure 1: Routinely collected data outcomes

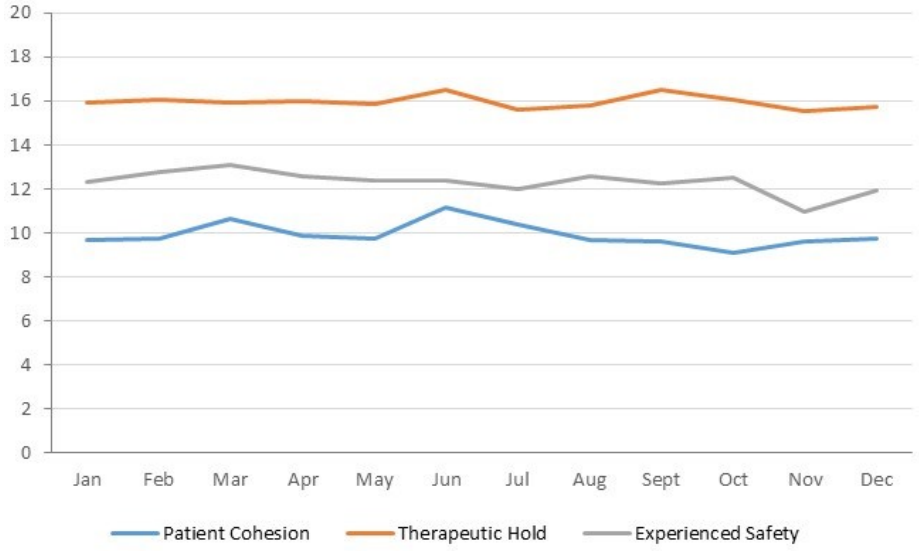


Figure 2: EssenCES results for total sample.

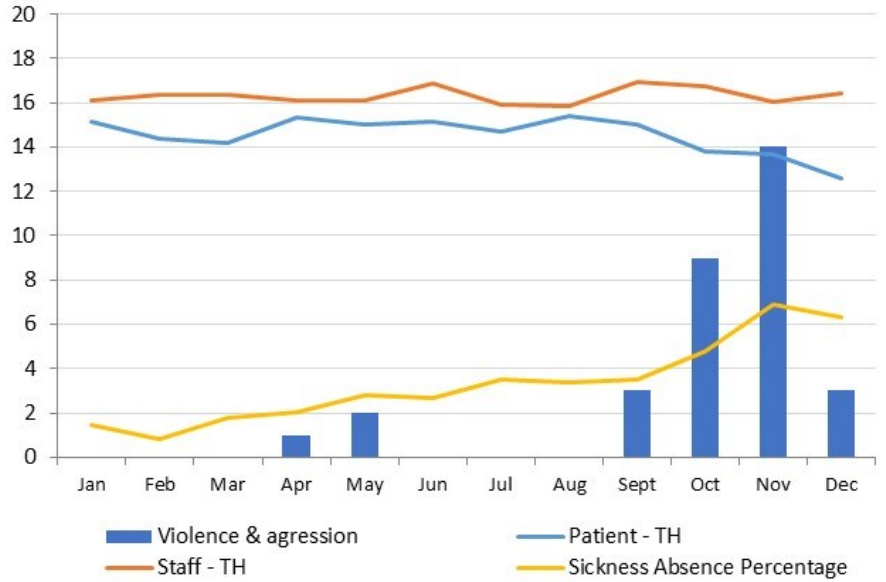


Figure 3: EssenCES Therapeutic Hold outcomes

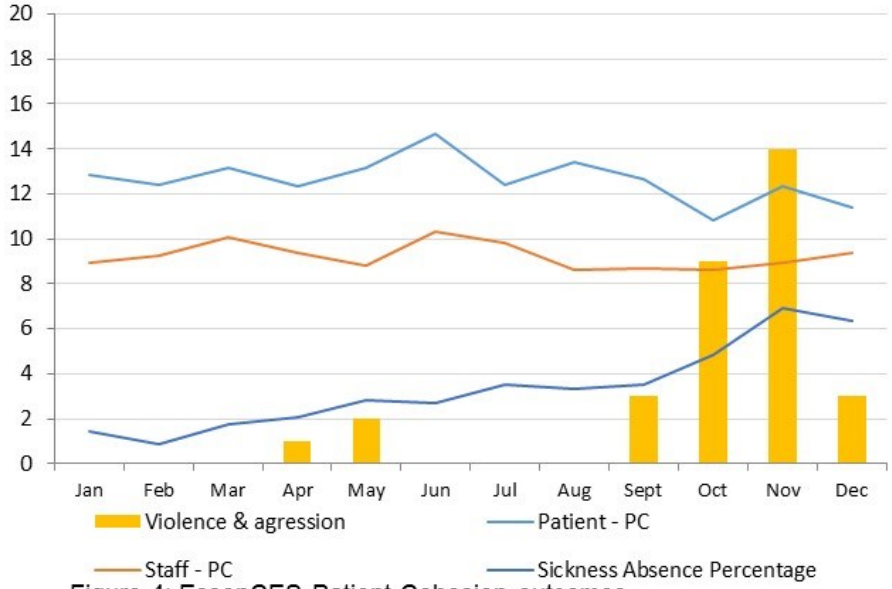


Figure 4: EssenCES Patient Cohesion outcomes.

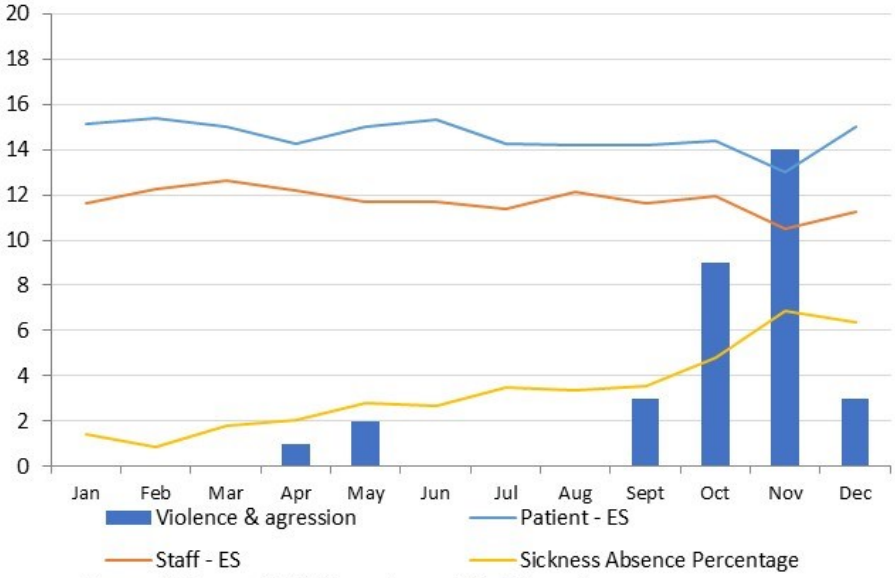


Figure 5: EssenCES Experienced Safety outcomes.

3.1.3. Staff-Patient Interactions outcomes

Observations and interview data tested the proposition that the intervention would lead to an increase in time staff spent interacting with patients on the ward. The theme of *therapeutic relationship* was particularly relevant to this proposition. At baseline, patients described relationships with their keyworkers as the central relationship. However, an overreliance on the keyworker may have led to patients feeling there was, at times, no-one available to help them with their concerns:

"I'm told it's my keyworker I have to go and see about it but she is on night shift just now you know what I mean so it's not every night she's on" (P3, baseline).

Staff members felt they had good working relationships, with talking about common interests and being open and honest with patients seen as a means of building rapport. There was recognition of a need for consistency in care with two participants highlighting the importance of staff *"singing from the same hymn sheet"* (S1, M1, baseline). However, this consistency needed to sit beside individualised treatment, which required effective communication from staff:

I think that consistency is definitely a key factor with these guys, particularly the guys who are more personality disorders you know, and explaining why there may be differences between the way one person is being treated versus how they are feeling and may be being treated you know in terms of individualised care (S2, baseline)

Table 6: Observational data outcomes

	Baseline	Post-Training	Midpoint	End of study	Total
Time Observing (mins)	60*	120	150	120	450
Excluded points (no patient present)	17	0	19	17	53
Percentage Time Interacting	28.6%	16.7%	14.2%	17%	17.3%

**5 data points removed due to participant interacting with observer*

From observations, in contrast to the proposed pattern, a reduction in proportion of time spent in interactions was found (Table 6). A chi-squared test demonstrated that the level of interaction recorded at baseline was significantly higher than expected (χ^2=10.61; $p<0.05$), with no differences between the other three time-points. This data contrasted to patient accounts that staff were more available at the end of the study, though patients did express a preference for 1:1 private conversations with staff as opposed to more general interactions in the open areas of the ward where the observations took place:

"So if you want a blether or that just go up, come for a talk mate. Alright no bother, I'll be there the now. Straight away you know what I mean, all the time" (P3, endpoint)

The decrease in patient perceptions of therapeutic hold (Figure 3) is in contrast to qualitative interviews, which report a generally improved relationship with staff across the study period. At midpoint, patients reported some improvement in therapeutic relationship with staff. This ranged from feeling supported by staff, patients valuing time with staff, and being able to share a joke. Though the baseline interviews described the keyworker relationship as central, midpoint interviews identified a wider range of positive relationships, with staff seen as more interested in the patients and willing to offer help:

"But staff told me, if you ever feel that, or hear that in your head, you can talk to, come talk to us and have a 1:1..." (P4, midpoint)

Patients also described staff feedback, openness and honesty as important, including staff sharing their thoughts about the patient needs:

"These sorts of things are always good to know, always good to know. Prove them wrong and that you know what I mean. If you are in the wrong then you ken that is how you are thinking, that's braw, so step over to the right a little bit, or to the left a little bit"
(P3, midpoint)

At the end point, despite concerns about staff availability, patients expressed satisfaction with therapeutic relationships. Staff were seen by patients to be more responsive and to be considering patient needs.

3.1.4. Sickness Absence Outcomes

The rate of sickness absence was low (1.44%) during the baseline phase (Figure 1). Routinely collected staff sickness absence data (Figure 1) demonstrated an increase in sickness absence rates as the year progressed. The service moved from a very low sickness absence rate at baseline to an average level compared to the service wide sickness absence. Visual analysis identified a potential relationship between patient therapeutic hold and sickness absence (Figure 3). Examination of CCF indicates no significant relationship between staff sickness absence and therapeutic hold as experienced by patients with the strongest value found for changes occurring at the same time (Lag: 0; r=-0.68; p=0.020). No qualitative data was seen to discuss sickness absences or their impact on ward functioning. Sickness absence data is sensitive to the

impact of long term sickness absence which accounted for 71% of total sickness absence. Comparison to the year prior to the study (2014 vs 2015) shows a decrease in sickness absence of 39.5% (hours lost to sickness absence reduced from 2857.8 in 2014 to 1729.17 in 2015).

3.2. Patient Outcomes

The proposed pattern is for the staff based intervention to have an indirect effect on patients through changes in staff practices on the ward (Table 1). This was predicted to lead to improvements in patient motivation, including increased engagement in psychosocial interventions. Information from qualitative interviews was also used to test the proposition by examining the experience of patients on the ward at different points of the study, with the themes of *current treatment and future progress* and *structures, rules & restrictions* seen as particularly relevant.

3.2.1. Patient Motivation

At baseline, patients reported higher levels of Internal Motivation ($t_{(5)}$= 11, p>0.05) and more Confidence in the Unit ($t_{(5)}$= -4.656, p>0.05); with no differences on the Feelings of Failure subscale; as compared to an open forensic ward (Gudjonsson et al., 2007).

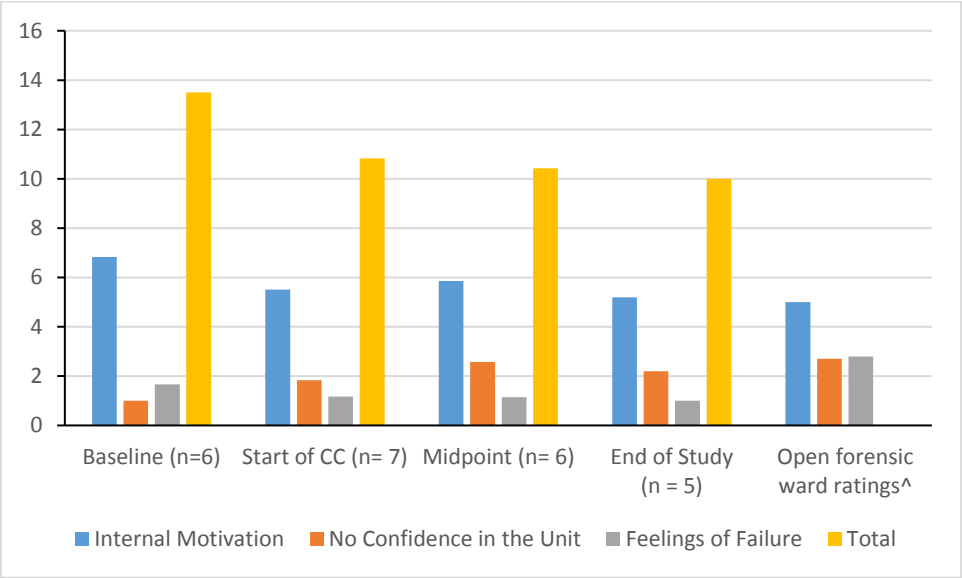


Figure 6: Patient Motivation Inventory for whole sample (^ from Gudjonsson et al. (2007))

At baseline, patients spoke positively about available interventions, in particular structured activity and distractions. Time off the ward was seen as valuable as a means to escape any tensions and as a marker of progress by both patients *"[Time out] is pretty precious to me, as it gets me out of the ward and gets me a break…from the place for a while"* (P2, baseline); and staff members:

"A lot of them have time out at the moment and stuff but it wasn't always like that, I think it was more difficult when a lot of the boys didn't have time out and they are obviously stuck in here to a certain extent" (S1, baseline).

Patients recognised that staff had a role in trying to enhance motivation: "*well, they can encourage me to do things, but it really depends on what it is, because I don't usually go and enjoy things that I don't really like doing"* (P1, baseline). There was recognition amongst staff of the frustration felt by patients at the speed of progress though staff were hopeful that many patients were starting to see "*light at the end of the tunnel"* (S2, baseline).

Quantitative data identified a reduction in patient motivation across the term of the study (Figure 6), in contrast to the proposed pattern. There was a slight reduction in internal motivation, decreased confidence in the ward and less motivation by fear of failure, though the levels of motivation were still comparable with less secure settings (Figure 6). The reduction in motivation is not mirrored in qualitative data. Patients described positive changes in treatment focus across the study period, with staff seen to be aiding patients to make progress: *"some of the staff will get some of the patients up and doing things and starting making progress"* (P1, midpoint). Staff recognised that, for patients "*motivation is encouraged by them seeing their peers move on"* (S8, midpoint). Staff identified frustrations when efforts to engage patients did not work out:

"We try to introduce different things, different types of activities, personally I have tried quite a few different ones…and try to get them interested. They just don't want to" (S7, midpoint)

Time off the ward, which continued to serve as a marker of treatment progress and was a means to relieve stress and break up boredom. Though some patients felt stuck: *"I mean 7 years I have spent every day sitting here. Imagine that"* (P4, midpoint). One patient described a sense of being involved in their treatment:

"If you had asked me this last week I would said no I have no choice I have to go to this, I have to go to that… but then [Staff member] said to me last night, [P3] you don't need to go to these things". (P3, midpoint)

Staff felt that there was variation in patient motivation with some indication that many in the patient group were motivated:

I would say maybe 60% of the patients here are motivated. But I would say maybe 40% that aren't and the reasons they aren't are in relation to maybe insight, how well

they are at the moment …and then there are a few that actually would prefer to stay in hospital anyway" (S11, endpoint)

3.2.2. Patient engagement outcomes

Patient engagement was assessed through interview data, with reference to the theme of *current treatment and future supports* and *therapeutic relationship*. At baseline, patients were seen to be engaged in activities:

"most of them are fairly motivated am and they do all have …structured days they do engage with psychology they do engage with OTs they are engaged in their active treatment their treatment plans in 1:1 with nursing staff." (M1, baseline)

However, there was some indication of a staff having difficulties in motivating patients: "*No means no and that's it, they don't go kind of go back and look at it a different way or you know, so it's a bit tricky"* (S2, baseline).

One patient described the ward as *"totally different"* (P3, endpoint) at the end of the study. This may in part be due to progression in rehabilitation, though may also relate to the positive therapeutic relationships identified. A move towards a person centred approach was also described "*I think they are more like, thinking more about me and less about risk and stuff like that"* (P1, endpoint). Staff members commented on positive changes to the clinical team meeting, including empowerment of patients and a more collaborative focus:

"I wonder if changes say in the clinical meetings, the patients not going in anymore, I certainly feel that I am falling out with patients less because I am not giving them feedback. But you are not caught in that environment where you are in that interaction where you are trying to sort of give feedback in front of a number of people which is then leading to people becoming upset" (S11, endpoint)

Though staff members identified the patient group as difficult to motivate, there was a recognition that with support patients would engage in therapeutic interventions:

"The emphasis in the last year I would say it has moved away as much from that into more toward psychology and psychology led groups and things like that. So I suppose there has been a big change and a big shift. And whereas before the patient originally would say oi just want to go to the gardens, I am not engaging in psychology and stuff, and I think that subtly they are aware that they have to do these things to progress and they have to address their offending and their relationships or whatever it actually is and they are able to do this and they're more engaging in that kind of work. I think it has been a whole team approach to make that happen but I think that it has been a natural shift because we have had psychology staff available and in post". (M1, endpoint)

"It is sometimes a wee bit like herding sheep to get them to come, but actually, generally anyone straying away they do come and staff do support that as well" (S11, endpoint)

3.3. Staff Outcomes

The proposed pattern was for the intervention to have a direct impact on staff stress and to improve staff attitudes towards working with individuals with personality disorders. The themes of *staff skills and support* and *current treatment and future progress* were seen as particularly relevant to these patterns.

3.3.1. Staff stress outcomes

Baseline staff levels of stress were not significantly different to scores found in the development study of the WES-10 for self-realisation, workload or nervousness (Rossberg et al., 2004). However, the Conflict scale was significantly higher in the current sample, indicating a higher level of inter-staff conflict and difficulties in resolving loyalties in the sample ($t_{(29)}$= 4.023, p>0.05). Staff members identified the team as cohesive and well supported by management, though managerial interviews identified some tensions in the staff team:

What feels like to me is happening is think there is two clear teams and it is split, whether that is being projected from patients or whatever, but am there is a split now which wasn't there before. And that's, that's what concerns me about the containment level and when are we moving patients on" (M2, baseline).

The ward had experienced several changes in Responsible Medical Officer (RMO) over the previous two years and this was recognised as an area for improvement:

"I think having a clinical lead, who knows what direction of travel we are going in, what direction of travel they want to take the ward down, who is quite clear of I suppose their job description, their parameters they can work under, and somebody who wants to take it forward in a direction you know, I think that, I think that's probably would be the best way forward for the ward" (S2, baseline)

Similarly, the lack of a forum for reflective practice was seen as a gap in the service, and skills in reflection were seen as fundamental, particularly in managing boundaries, building staff confidence and challenging negativity:

"*Not having that* [formal reflective practice] *I am aware of this massive gap. And, with new staff coming in, it's clear evidence that they're not, their thinking is not into that way so as teams that have actually grown up with that process, so I see a huge gap in that and that's here we don't have that, we've never had that. Even though we've tried to promote that culture they don't know what it's like. So, I just think, from team*

dynamics from morale from all the rest of it it's a vital part of the day to day job" (M2, baseline)

At the study midpoint a "*professional difference of opinion*" (S2, midpoint) remained, centred on maintaining a balance between risk and recovery focus was still apparent. There was some suggestions of improvement in this area by the study midpoint:

"I think it is getting better, because I think there was definitely two camp… certain staff were more recovery focused than others, from a nursing point of view that is definitely the way we are encouraged to think am, and it was difficult to all be on the same page at the same time but I think we have overcome that through discussion and you know listening to each other and you know justifying why we think a certain decision should be made and in the end the team has all kind of come together am and, and agreed on the way things should progress for any given individual" (M3, midpoint)

Table 7: WES-10 (n=14) scores for staff members with full data sets

	Baseline (Jan / Feb)		**April**		**August**		**December**			**Effect Size**
	M	SD	M	SD	M	SD	M	SD	F±	η_p^2
Self-Realisation	3.61	0.67	3.77	0.49	3.63	0.81	3.77	0.65	0.675	0.049*
Conflict	2.68	0.85	2.50	0.62	2.39	0.79	2.18	0.67	1.905	0.128**
Workload	3.21	0.80	3.43	0.70	3.57	0.73	3.43	0.87	2.694	0.172**
Nervousness	1.82	0.61	1.75	0.61	1.57	0.58	1.86	0.66	2.656	0.170**

± *d.f. (3, 13)* **small effect size* ***medium effect size*

A repeated measures ANOVA was completed on the WES-10 subscale scores for all participants with full data sets (n=14; Table 7). A medium effect size was found for Conflict (η^2_p= 0.17), Workload (η^2_p= 0.172) and Nervousness (η^2_p= 0.128) though these effects did not reach statistical significance (Figure 8). Post-hoc comparisons of means indicate that the differences in Conflict are greatest between Baseline and End of study, though this effect was not found when all participants who completed the baseline and end of study measures are compared ($t_{(20)}$=0.98; Cohen's d=0.26) (Figure 7).

In qualitative interviews, staff described that the new RMO on the ward had given the staff team an opportunity to engage in treatment planning from a fresh perspective as well as help to formalise treatment planning and provide direction. This was tentatively welcomed by patients who also valued the opportunity for a "*different set of opinion"* (P1, midpoint). The new RMO was also described as helping the staff team feel more contained:

"I think we have also filled obviously the consultant post aswell and I think that has had a big impact as it has meant maybe the other members of staff who were having to do multiple roles are actually now able to go back to what their job is, because they were having to do some of the consultant stuff. So I think in that sense that has provided some containment for everybody, because everybody can then feel they can sit back in their seat and do their bit working with each other rather than doing bits of other people's job" (S11, endpoint)

At the end of the study, the impact of MBT CC sessions was identified as a forum for promoting reflections, sharing problems and building team cohesion:

"I think as a team we are much more together because we have sort of spent time in the room putting it out there you know and discussing things and that is what is what I'm saying. That is extremely valuable… …I mean I wouldn't like to lose it because it is a great forum just to get things off your chest and discuss things as a team so that everyone else knows what position you are in and it's not just them feeling in that sort of way" (M1, endpoint).

"it's kind of like that clinical group supervision - just to have the chance as a team to sit down and just air all our thoughts, and not really coming to a solution but just having that ability to do that" (S10, endpoint)

One patient attributed positive changes in staff behaviour tentatively to the MBT CC group though he was unsure about the means through which the group impacted the ward:

"I dinnae ken what it is, I think it is that group they have all been doing or something like that I: alright so this is the MBT group P: I don't ken what it is called or anything like that. But I ken that they go to it... It is good though. Excellent." (P3, midpoint)

Staff had begun to use MBT as a means to take the perspective of the patient and one staff group had decided to trial an MBT approach with a patient that identified the approach as helpful. Staff members provide examples of using MBT skills, including staff support and challenging using mentalizing as a means to consider staff-patient interactions:

"So we have talked about it in our nursing groups about how we have used it, what was the benefit what was the disadvantages of using it and we have talked about it within our groups and from that, our little group of nurses if you like is going to take that forward with a certain patient because it obviously has some sort of benefit to him" (S10, endpoint)

"I certainly find it very useful with patients who have personality disorder and patients who I feel with them I am going round and round in circles." (M1, endpoint)

However, there were some stresses associated with the CC group, which appeared to centre on finding solutions through the process:

"It could feel like a little bit of a moan, like everybody was just having a moan, but sorry when you do something, it is not about sitting and moaning, and everybody has an opinion on what is troubling people, but it, it is like it needs to be a little bit more constructive"

(S9, endpoint)

3.3.2. Attitude Outcomes

Staff demonstrated a generally positive attitude to personality disorder at baseline (Figure 9). The mean at baseline was higher than that found in a sample of Dangerous and Severe Personality Disorder Unit staff for the subscales Enjoyment/Loathing ($t_{(31)}$=6.78, $p<0.05$), Acceptance/Rejection ($t_{(31)}$=5.773, $p<0.05$) and Purpose/Futility ($t_{(28)}$=4.35, $p<0.05$) (Carr-Walker et al., 2004). A repeated measures ANOVA was completed on the subscale scores for all participants with full data sets (n=12; Table 8, Figure 10). A medium effect size (η^2_p=0.21) was found for the Enthusiasm vs Exhaustion subscale (this difference also reached statistical significance). Post hoc comparisons indicate that the difference in scores was found between baseline and Post training time-points, tentatively indicating an effect of the MBT Skills and Awareness training. A medium effect was also found for total score (η^2_p=0.166) and Purpose vs Futility (η^2_p=0.129) though this did not reach statistical significance. Again the main differences in means occur between baseline and the post-training time-points (Figure 9) indicating a possible effect of the MBT skills and Awareness training. Further analysis with the larger sample of participants who completed the baseline and post training measures confirmed a statistically significant effect for total score ($t_{(20)}$=-3.187; Cohen's d=-0.45); Enthusiasm/Exhaustion ($t_{(23)}$= -4.322; Cohen's d=-0.67) and Purpose/Futility ($t_{(20)}$=-2.098; Cohen's d=-0.50). The change found on scales measuring enthusiasm and optimism would suggest a beneficial impact of the training intervention. However, the changes are only maintained at the study endpoint for staff enthusiasm (Figure 10).

Table 8: APDQ (n = 12) scores for staff members with full data sets

	Baseline (Jan / Feb)		March		April		August		December		F^	Effect Size η^2_p
APDQ	M	(SD)	M	(SD)	M	(SD)	M	(SD)	M	(SD)		
Total	21.29	2.20	22.28	1.95	22.60	2.38	22.28	1.86	21.89	1.83	2.197	0.166**
Enjoyment / Loathing	3.46	0.47	3.47	0.44	3.53	0.73	3.59	0.58	3.44	0.66	0.297	0.026*
Security / Vulnerability	4.79	0.53	4.92	0.59	5.00	0.59	5.00	0.48	4.92	0.54	0.890	0.075*
Acceptance / Rejection	5.25	0.43	5.12	0.51	5.20	0.50	5.12	0.48	5.20	0.53	0.372	0.033*
Purpose / Futility	4.33	0.80	4.78	0.59	4.75	0.67	4.69	0.54	4.50	0.58	1.632	0.129**
Enthusiasm / Exhaustion	3.46	0.68	4.00	0.67	4.13	0.68	3.88	0.83	3.92	0.56	2.920Ŧ	0.210**

^d.f. (4, 11) *small effect size **medium effect size

Ŧ = Significant at .05 level

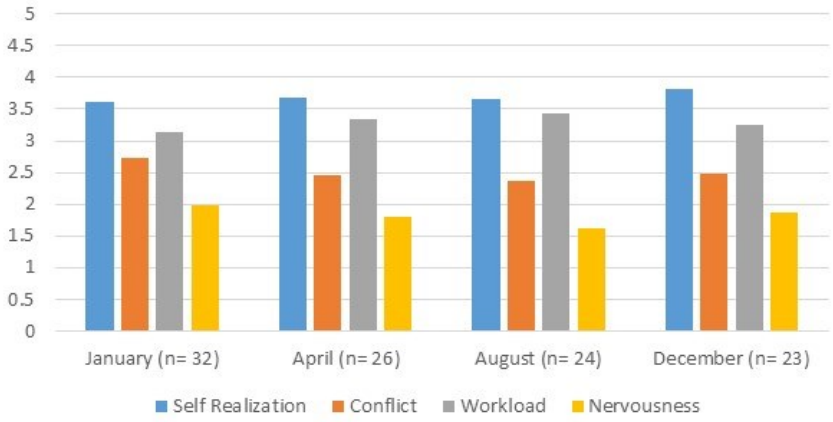


Figure 7: WES-10 subscales for whole sample (each time-point)

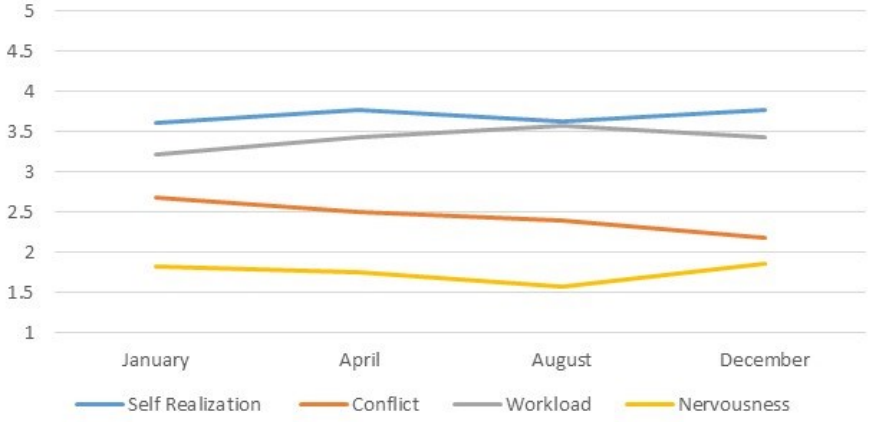


Figure 8: WES-10 scores for participants with complete data-sets (n=14)

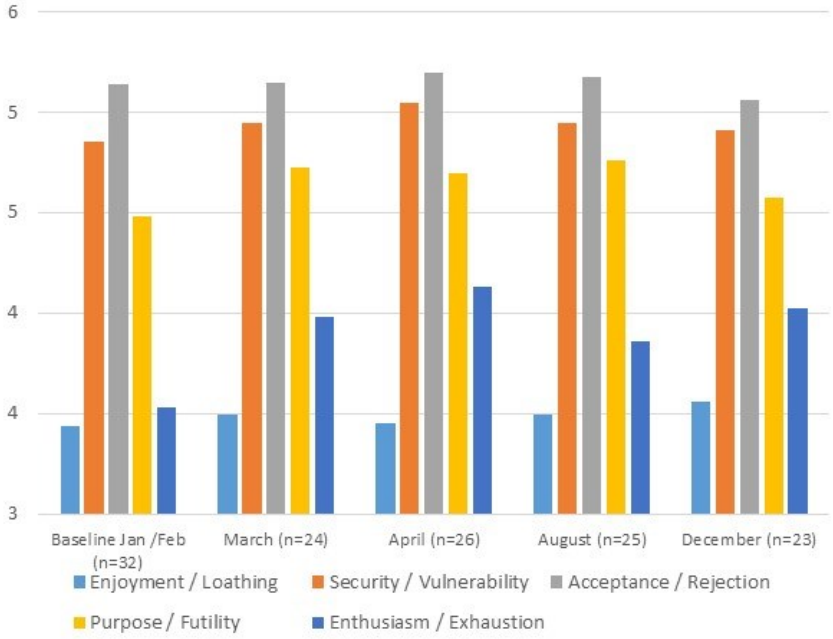


Figure 9: APDQ scores for whole sample (each time-point)

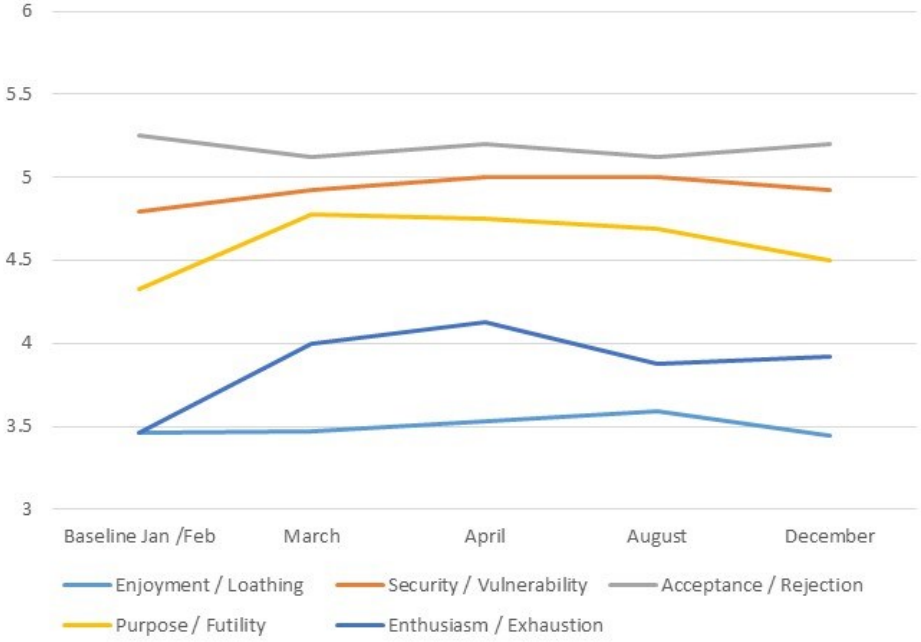


Figure 10: APDQ scores for participants with complete datasets (n=12)

3.4. Summary of Results

At the ward level, the overall positive functioning of the ward at baseline impacted on likelihood of finding differences in quantitative measures. Though overall scores for social climate indicate few changes (Figure 2), examination of patient and staff outcomes demonstrated changes in patients' perceptions of patient cohesion and therapeutic hold. Fluctuations were also identified in staff experienced safety which appeared linked to levels of violence and aggression on the ward. The increases in sickness absence and in violence and aggression were associated, through triangulation of data, with changes in the patient composition rather than being related to the intervention. Violence had negatively impacted on the therapeutic relationships on the ward through reducing staff availability. There was also a significant reduction in the time staff were observed to interact with patients between baseline and later assessment points. Nonetheless, by the end of the study patients identified a wider range of positive relationships and viewed staff as more responsive and considerate of their needs.

At the patient subunit level, there was some reduction in patient motivation with a reduction in internal motivation, decreased confidence in the ward, and less motivation by fear of failure. In contrast, qualitative responses indicated that patients described positive changes in their treatment across the course of the study and staff felt that patients had engaged well in structured activities and interventions.

At the staff level, there was a trend towards reduced conflict in the team across the course of the study. Qualitative interviews indicated that the new RMO provided direction and assisted treatment planning, and MBT CC sessions were viewed as promoting reflections, and as a space for sharing problems and building team cohesion. Positive outcomes were found for overall attitudes to personality disorder, with an increase in enthusiasm and sense of purpose. This was linked with the MBT staff training day. The increase in Enthusiasm was maintained at the end of study, perhaps indicating a positive role for MBT CC in supporting a hopeful attitude towards the patient group.

4. Discussion

4.1. Explanation building

The pattern of results suggests that the healthy functioning of the ward evident at baseline had started to fray towards the end of the study. This appears to occur under the weight of increased violence and aggression on the ward. This increase in aggression can be associated with individual patient changes rather than being caused by the social climate. Indeed, it appears that the healthy social climate was maintained for patients, who reported good relationships with staff, and staff members who continued to report low levels of stress. For patients, change in the ward atmosphere may link to changes in the patient group, which can lead to a break in mutual support (Olsson, Strand, Asplund, & Kristiansen, 2014).

MBT skills and Awareness training was linked to an increase in enthusiasm and purpose for working with people with personality disorders. This enthusiasm was maintained throughout the study period. The use of mentalizing skills did not lead to changes in patient motivation as measured by the PMI. However, there was some evidence of improved therapeutic relationships between staff and patients, which was in part attributed to MBT CC.

4.2. Rival Explanations

Rival explanations for changes include natural variation in social climate and the progression of patients through treatment leading to a positive and hopeful attitude on the ward. At baseline, it was apparent that patients more advanced in their rehabilitation held more positive views of the ward. This may have influenced some of the positive views identified. The discharge of patients who had been resident in the ward for a long period may have instilled hope for the remaining patients.

The provision of psychotherapeutic groups may also have had an influence on the ward. Though these groups may have had a positive impact on patients it is difficult to see how they could impact on staff views of working with people with personality disorders. Groups also began following the observed increases in staff members Enthusiasm and Purpose (Table 4, Figure 10).

Some staff were undertaking “New to Forensic” (Walker, Langton, & Thomson, 2011), a training programme for staff introducing the essentials of work in forensic mental

health. This programme was well established on the ward, with the majority of staff having completed this prior to the commencement of the current study.

The appointment of a permanent RMO was seen to have a positive impact on the ward. One staff member described this as providing containment for the ward. Alongside the valued support from ward management, this may have provided a more clear focus for staff members' work with patients through clarification of treatment plans and allowed staff members to focus on their routine roles. This appears to be the strongest rival explanation for the observed resilience of the ward, given that the change in RMO occurred prior to the observed increases in Violence and Aggression. However, this change cannot be linked to the changes seen in attitudes to PD, which occurred prior to the appointment of the RMO (Table 4, Figure 10), though it may have helped to maintain the changes.

The involvement of the researcher on the ward, in the setting up of the innovation and as a member of the treatment service introduces potential biases. The researcher did not engage in any individual work with patients on the ward, though was involved in facilitating a group intervention following initial recruitment to the study. The researcher was also a frequent presence on the ward while collecting data for the study. The effect of being observed may also have impacted the baseline observations, skewing the outcomes. Similarly, the effect of being offered the intervention, being valued, may also have led to an increase in esteem in the staff team, due to their role as a test case for the intervention. This may have introduced a bias towards positive responses among the staff group.

4.3. Implications of study

Though MBT has proven successful in a day hospital model of treatment (Bateman & Fonagy, 2009), this study examines the utility of MBT informed practice and reflection in an inpatient forensic mental health setting. However, in essence the initial training and reflective practice approach may be better described as promoting mentalizing in staff and in their approach to interactions with patients. Staff were able to implement an MBT focused approach in interactions with patients to varying extents, based both on their confidence and in patient response to this approach. This approach also allowed staff to challenge each other in a supportive manner and provided a shared language with which to discuss interactions with patients (Yakeley & Adshead, 2013). This approach may foster an openness about the process of care that may be protective against some of

the potential negative impacts of working with this client group (Johnson et al., 2016a, 2016b; Moore, 2012). This may be seen in volumes of interactions being maintained across the three later interaction points, despite the impact of increased aggression on staff availability for therapeutic contacts. The reflective practice function of the CC group, provided a space to air frustrations, receive support, discuss practice and develop understandings of the patient perspectives (Thorndycraft & McCabe, 2008).

The case study approach allowed for consideration of the contextual factors that influenced implementation, including managerial support, previous positive experiences of training in the staff group and a motivated staff group (Chaudoir et al., 2013). However, these factors also limit the changes that could be produced as a result of the intervention. Therefore, the factors that make the ward an ideal test site also make it a poor exemplar to demonstrate effectiveness. Here, the case study method again proves fruitful as the changes identified and the lack of sustained change in social climate ratings of staff imply a potential protective role of the intervention. Similarly, the availability of qualitative accounts highlight both the positive perception of MBT but also allows for understanding of its developing influence on ward functioning.

The ability to examine rival explanations through the case study approach is also valuable, in particular as the rival explanation of the role of leadership provided by the RMO fits with models of understanding of differences of functioning in psychiatric wards (Bowers et al., 2011). Bowers et al. (2011) suggest that leadership impacts on teamwork, which in turn impacts on the structure of the ward, burnout and attitudes to PD. The impact of both the teamwork changes influenced by the intervention and the leadership changes described may have combined to build the resilience of the staff team to burnout and hence maintain positive attitudes to PD throughout the study.

MBT CC sessions focus on the patients' experiences, and in promoting reflections on care. Skills in promoting mentalizing in patients provided ward based staff with means to supplement formal therapies in the 'everyday' interactions on the ward and in 1:1 discussions (Hörberg, 2015; McGauley et al., 2011). The provision of both training and case consultation and the proactive use of mentalizing skills by senior ward staff meets many of the suggestions for reducing conflict on psychiatric wards recommended in the Safewards model (Bowers, 2014). The increase in violence and aggression identified appears to relate directly to changes in the patient group towards forensic patients in

acute phases of mental illness, a group at high risk of aggression (Daffern, Ferguson, Ogloff, Thomson, & Howells, 2007).

4.4. Future directions

The study demonstrates the applicability of case study approaches to forensic mental health settings. It also provides some support for the usefulness of MBT training and case consultation as a model of care. The study identified no negative effects of the intervention, and was generally well received by staff. However, the strength of evidence that can be drawn from a single case study is limited. A repeated case study approach in a different forensic setting would allow for further conclusions to be drawn. A replication in a ward identified as having difficulties in team functioning or in high rates of staff-patient conflict may provide a further test of the applicability and ease of implementation of this approach. Future ward case studies may benefit from a longer time frame to allow for examination of changes due to the intervention separate from fluctuations related to new admissions to the ward. In considering data collection, obtaining access to records of changes in staff and patient composition would also aid in understanding outcomes and rival explanations.

The outcome of the study also has clinical implications. Staff valued a shared model of understanding, though also sought to have more expertise in the area. This complicated the role of CC sessions, as some staff sought more of a skills building focus, while others sought a reflective space. Further clinical implementation of similar models may benefit from having a separate skill development session or a ward based "champion" to aid in skill development, supported by an external facilitator for an explicitly reflective practice focused CC session.

5. References

Adshead, G., Moore, E., Humphrey, M., Wilson, C., & Tapp, J. (2013). The role of mentalising in the management of violence. *Advances in Psychiatric Treatment, 19*(1), 67-76. doi: 10.1192/apt.bp.110.008243

Alderman, N., & Groucott, L. (2012). Measurement of social climate within neurobehavioural rehabilitation services using the EssenCES. *Neuropsychological Rehabilitation, 22*(5), 768-793. doi: http://dx.doi.org/10.1080/09602011.2012.689683

Almutairi, A. F., Gardner, G. E., & McCarthy, A. (2014). Practical guidance for the use of a pattern-matching technique in case-study research: A case presentation. *Nursing & Health Sciences, 16*(2), 239-244.

Barnao, M., Ward, T., & Casey, S. (2015). Looking Beyond the Illness: Forensic Service Users' Perceptions of Rehabilitation. *Journal of Interpersonal Violence, 30*(6), 1025-1045. doi: 10.1177/0886260514539764

Bateman, A. & Treliving, L. (2013) *MBT Skills for Mental helath Professionals - a skills taining manual*. London: Anna Freud Centre.

Bateman, A., & Fonagy, P. (2009). Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *The American Journal of Psychiatry, 166*(12), 1355-1364.

Bateman, A., & Fonagy, P. (2013). Mentalization-Based Treatment. *Psychoanalytic Inquiry, 33*(6), 595-613. doi: 10.1080/07351690.2013.835170

Beazley, P., & Gudjonsson, G. (2011). Motivating inpatients to engage with treatment: The role of depression and ward atmosphere. *Nordic Journal of Psychiatry, 65*(2), 95-100. doi: doi:10.3109/08039488.2010.502244

Borckardt, J. J., Murphy, M. D., Nash, M. R., & Shaw, D. (2004). An empirical examination of visual analysis procedures for clinical practice evaluation. *Journal of Social Service Research, 30*(3), 55-73.

Bowers, L. (2014). Safewards: a new model of conflict and containment on psychiatric wards. *Journal of Psychiatric and Mental Health Nursing, 21*(6), 499-508.

Bowers, L., & Allan, T. (2006). The attitude to personality disorder questionnaire: psychometric properties and results. *Journal Of Personality Disorders, 20*(3), 281-293.

Bowers, L., Nijman, H., Simpson, A., & Jones, J. (2011). The relationship between leadership, teamworking, structure, burnout and attitude to patients on acute psychiatric wards (English). *Social psychiatry and psychiatric epidemiology (Print), 46*(2), 143-148.

Bressington, D., Stewart, B., Beer, D., & MacInnes, D. (2011). Levels of service user satisfaction in secure settings-A survey of the association between perceived social climate, perceived therapeutic relationship and satisfaction with forensic services. *International Journal of Nursing Studies, 48*(11), 1349-1356. doi: http://dx.doi.org/10.1016/j.ijnurstu.2011.05.011

Brunt, D., & Rask, M. (2007). Ward atmosphere—The Scarlet Pimpernel of psychiatric settings? *Issues in Mental Health Nursing, 28*(6), 639-655.

Carolan, C. M., Forbat, L., & Smith, A. (2015). Developing the DESCARTE Model: The Design of Case Study Research in Health Care. Qualitative Health Research, 26(5), 626-639. doi: 10.1177/1049732315602488

Carr-Walker, P., Bowers, L., Callaghan, P., Nijman, H., & Paton, J. (2004). Attitudes towards personality disorders: comparison between prison officers and psychiatric nurses. *Legal and Criminological Psychology, 9*(2), 265-277.

Caruso, R., Biancosino, B., Borghi, C., Marmai, L., Kerr, I., & Grassi, L. (2013). Working With the 'Difficult' Patient: The Use of a Contextual Cognitive-Analytic Therapy Based Training in Improving Team Function in a Routine Psychiatry Service Setting. *Community Mental Health Journal, 49*(6), 722-727. doi: 10.1007/s10597-012-9579-x

Chaudoir, S. R., Dugan, A. G., & Barr, C. (2013). Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci, 8*(1), 22.

Daffern, M., Ferguson, M., Ogloff, J., Thomson, L., & Howells, K. (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*(5), 431-441. doi: http://dx.doi.org/10.1080/10683160601060861

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science, 4*(1), 1-15. doi: 10.1186/1748-5908-4-50

Davies, J., Howells, K., & Jones, L. (2007). Evaluating innovative treatments in forensic mental health: A role for single case methodology? *Journal of Forensic Psychiatry & Psychology, 18*(3), 353-367. doi: 10.1080/14789940701443173

Dawber, C. (2013a). Reflective practice groups for nurses: A consultation liaison psychiatry nursing initiative: Part 1 – the model. *International Journal of Mental Health Nursing, 22*(2), 135-144. doi: 10.1111/j.1447-0349.2012.00839.x

Dawber, C. (2013b). Reflective practice groups for nurses: A consultation liaison psychiatry nursing initiative: Part 2 – the evaluation. *International Journal of Mental Health Nursing, 22*(3), 241-248. doi: 10.1111/j.1447-0349.2012.00841.x

de Ruiter, C., & Greeven, P. G. (2000). Personality disorders in a Dutch forensic psychiatric sample: Convergence of interview and self-report measures. *Journal Of Personality Disorders, 14*(2), 162.

Ewers, P., Bradshaw, T., McGovern, J., & Ewers, B. (2002). Does training in psychosocial interventions reduce burnout rates in forensic nurses? *Journal of Advanced Nursing, 37*(5), 470-476. doi: 10.1046/j.1365-2648.2002.02115.x

Farrington, D. P., & Jolliffe, D. (2002). A feasibility study into using a randomised controlled trial to evaluate treatment pilots at HMP Whitemoor. London: Home Office.

Fonagy, P., Bateman, A., & Bateman, A. (2011). The widening scope of mentalizing: A discussion. *Psychology and Psychotherapy: Theory, Research and Practice, 84*(1), 98-110.

Forensic Network (2011). *"The forensic mental health matrix" – A guide to delivering evidence based psychological therapies in forensic mental health services in Scotland*. NHS Education for Scotland: Scottish Government

Freestone, M. C., Wilson, K., Jones, R., Mikton, C., Milsom, S., Sonigra, K., . . . Campbell, C. (2015). The Impact on Staff of Working with Personality Disordered Offenders: A Systematic Review. *PLoS ONE, 10*(8), e0136378. doi: 10.1371/journal.pone.0136378

Gale, N., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology, 13*(1), 117.

Gudde, C. B., Olsø, T. M., Whittington, R., & Vatne, S. (2015). Service users' experiences and views of aggressive situations in mental health care: a systematic review and thematic synthesis of qualitative studies. Journal of multidisciplinary healthcare, 8, 449-462. http://dx.doi.org/10.2147/JMDH.S89486

Gudjonsson, G. H., Young, S., & Yates, M. (2007). Motivating mentally disordered offenders to change: Instruments for measuring patients' perception and motivation. *The Journal of Forensic Psychiatry & Psychology, 18*(1), 74-89. doi: 10.1080/14789940601063261

Heneghan, C., Wright, J., & Watson, G. (2013). Clinical Psychologists' Experiences of Reflective Staff Groups in Inpatient Psychiatric Settings: A Mixed Methods Study. *Clinical Psychology & Psychotherapy*, n/a-n/a. doi: 10.1002/cpp.1834

Hörberg, U. (2015). Caring Science and the Development of Forensic Psychiatric Caring. *Perspectives in Psychiatric Care, 51*(4), 277-284. doi: 10.1111/ppc.12092

Hörberg, U., Sjögren, R., & Dahlberg, K. (2012). To be Strategically Struggling against Resignation: The Lived Experience of Being Cared for in Forensic Psychiatric Care. *Issues in Mental Health Nursing, 33*(11), 743-751. doi: 10.3109/01612840.2012.704623

Howells, K., Tonkin, M., Milburn, C., Lewis, J., Draycot, S., Cordwell, J., . . . Schalast, N. (2009). The EssenCES measure of social climate: A preliminary validation and normative data in UK high secure hospital settings. *Criminal Behaviour & Mental Health, 19*(5), 308-320.

James, I. A., Smith, P. S., & Milne, D. (1996). Teaching visual analysis of time series data. *Behavioural and Cognitive Psychotherapy, 24*(03), 247-261.

Johnson, H., Worthington, R., Gredecki, N., & Wilks-Riley, F. R. (2016a). The impact of forensic work on home life: the role of emotional labour, segmentation/integration and social support. *Journal of Forensic Practice, 18*(1), 52-63.

Johnson, H., Worthington, R., Gredecki, N., & Wilks-Riley, F. R. (2016b). The relationship between trust in work colleagues, impact of boundary violations and burnout among staff within a forensic psychiatric service. *Journal of Forensic Practice, 18*(1), 64-75.

Johnston, J., & Paley, G. (2013). Mirror mirror on the ward: who is the unfairest of them all? Reflections on reflective practice groups in acute psychiatric settings. *Psychoanalytic Psychotherapy, 27*(2), 170-186. doi: 10.1080/02668734.2013.772535

Khamisa, N., Peltzer, K., & Oldenburg, B. (2013). Burnout in Relation to Specific Contributing Factors and Health Outcomes among Nurses: A Systematic Review. *International Journal of Environmental Research and Public Health, 10*(6), 2214-2240.

Kurtz, A. (2005). The needs of staff who care for people with a diagnosis of personality disorder who are considered a risk to others. *Journal of Forensic Psychiatry & Psychology, 16*(2), 399-422.

Kurtz, A., & Jeffcote, N. (2011). 'Everything contradicts in your mind': A qualitative study of experiences of forensic mental health staff in two contrasting services. *Criminal Behaviour and Mental Health, 21*(4), 245-258. doi: http://dx.doi.org/10.1002/cbm.796

Livingston, J. D., Nijdam-Jones, A., Lapsley, S., Calderwood, C., & Brink, J. (2013). Supporting Recovery by Improving Patient Engagement in a Forensic Mental Health Hospital Results From a Demonstration Project. *Journal of the American Psychiatric Nurses Association*, 1078390313489730.

Long, C. G., Knight, C., Bradley, L., & Thomas, M. (2012). Effective therapeutic milieus in secure services for women: The service user perspective. *Journal of Mental Health, 21*(6), 567-578.

Madders, S. A. S., & George, C. A. (2014). “I couldn’t have done it on my own.” Perspectives of patients preparing for discharge from a UK high secure hospital. *Mental Health Review Journal, 19*(1), 27-36.

Mann, B., Matias, E., & Allen, J. (2014). Recovery in forensic services: facing the challenge. *Advances in Psychiatric Treatment, 20*(2), 125-131. doi: 10.1192/apt.bp.113.011403

Mason, K., & Adler, J. R. (2012). Group-work therapeutic engagement in a high secure hospital: Male service user perspectives. *The British Journal of Forensic Practice, 14*(2), 92-103. doi: http://dx.doi.org/10.1108/14636641211223657

McGauley, G., Yakeley, J., Williams, A., & Bateman, A. (2011). Attachment, mentalization and antisocial personality disorder: The possible contribution of mentalization-based treatment. *European Journal of Psychotherapy & Counselling, 13*(4), 371-393.

Meyer, C. B. (2001). A case in case study methodology. *Field methods, 13*(4), 329-352.

Millar, H. (2011). *Recovery approaches with women with a diagnosis of personality disorder in secure care.* (U575382 D.Clin.Psych.), Canterbury Christ Church University (United Kingdom), Ann Arbor. ProQuest Dissertations & Theses Global database.

Milsom, S. A., Freestone, M., Duller, R., Bouman, M., & Taylor, C. (2014). Factor structure of the Essen Climate Evaluation Schema measure of social climate in a UK medium-security setting. *Criminal Behaviour and Mental Health, 24*(2), 86-99.

Moore, E. (2012). Personality disorder: its impact on staff and the role of supervision. *Advances in Psychiatric Treatment, 18*(1), 44-55. doi: 10.1192/apt.bp.107.004754

Moos, R. H. (1989). *Ward Atmosphere Scale Manual*. Palo Alto, CA.: Consulting Psychologists Press.

National Institute for Health and Care Excellence (NICE) (2013). *Antisocial Personality Disorder: treatment, management and prevention. NICE Clinical Guidance 77*. Available online at guidance.nice.org.uk/cg77

Nesset, M. B., Rossberg, J. I., Almvik, R., & Friis, S. (2009). Can a focused staff training programme improve the ward atmosphere and patient satisfaction in a forensic psychiatric hospital? A pilot study. *Scandinavian Journal of Caring Sciences, 23*(1), 117-124. doi: http://dx.doi.org/10.1111/j.1471-6712.2008.00597.x

Nijdam-Jones, A., Livingston, J. D., Verdun-Jones, S., & Brink, J. (2015). Using social bonding theory to examine 'recovery' in a forensic mental health hospital: A qualitative study. *Criminal Behaviour and Mental Health, 25*(3), 157-168.

Olsson, H., Strand, S., Asplund, K., & Kristiansen, L. (2014). Turning towards recovery in forensic psychiatric inpatients - a study based on staff experience. *Nordic Nursing Research / Nordisk Sygeplejeforskning, 4*(3), 175-188 114p.

Ostrov, J. M., & Hart, E. J. (2014). Observational Methods. In T. Little, D. (Ed.), *The Oxford handbook of Quantitative Methods in Psychology* (Vol. 1, pp. 286-304). Oxford: 'Oxford University Press'.

Paget, T. (2001). Reflective practice and clinical outcomes: practitioners' views on how reflective practice has influenced their clinical practice. *Journal of Clinical Nursing, 10*(2), 204-214. doi: 10.1111/j.1365-2702.2001.00482.x

Papadopoulos, C., Ross, J., Stewart, D., Dack, C., James, K., & Bowers, L. (2012). The antecedents of violence and aggression within psychiatric in-patient settings (English). *Acta psychiatrica scandinavica, 125*(6), 425-439.

Rask, M., & Aberg, J. (2002). Swedish forensic nursing care: Nurses' professional contributions and educational needs. *Journal of Psychiatric and Mental Health Nursing, 9*(5), 531-539.

Richards, D., Bee, P., Barkham, M., Gilbody, S., Cahill, J., & Glanville, J. (2006). The prevalence of nursing staff stress on adult acute psychiatric in-patient wards. *Social Psychiatry & Psychiatric Epidemiology, 41*(1), 34-43. doi: 10.1007/s00127-005-0998-7

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. *The qualitative researcher's companion, 573*, 305-329.

Ross, T., Querengässer, J., Fontao, M. I., & Hoffmann, K. (2012). Predicting discharge in forensic psychiatry: The legal and psychosocial factors associated with long and short stays in forensic psychiatric hospitals. *International Journal of Law and Psychiatry, 35*(3), 213-221. doi: http://dx.doi.org/10.1016/j.ijlp.2012.02.011

Rossberg, J. I., & Friis, S. (2004). Patients' and Staff's Perceptions of the Psychiatric Ward Environment. *Psychiatric Services, 55*(7), 798-803.

Rossberg, J. I., Eiring, O., & Friis, S. (2004). Work environment and job satisfaction: A psychometric evaluation of the Working Environment Scale-10. Social Psychiatry & Psychiatric Epidemiology, 39(7), 576-580

Rossberg, J. I., Melle, I., Opjordsmoen, S., & Friis, S. (2008). The Relationship Between Staff Members' Working Conditions and Patients' Perceptions of the Treatment Environment. *International Journal of Social Psychiatry, 54*(5), 437-446. doi: 10.1177/0020764008090689

Royal College of Psychiatrists (2012). *Standards for Psychotherapy in medium Secure units. CCQI132*. London: Royal College of Psychiatrists: Accessed online on 12/07/14 at: http://www.rcpsych.ac.uk/pdf/Standards_for_Psychotherapy_in_MSUs_June2012.pdf

Russell, K. (2016). *Position Paper: Psychological Approaches to Personality Disorder in Forensic Mental Health Settings*. Carstairs: Forensic Mental Health Services Managed Care Network.

Saudargas, R. A., & Zanolli, K. (1990). Momentary time sampling as an estimate of percentage time: A field validation. *Journal of Applied Behavior Analysis, 23*(4), 533-537. doi: 10.1901/jaba.1990.23-533

Schalast, N., Redies, M., Collins, M., Stacey, J., & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. *Criminal Behaviour and Mental Health, 18*(1), 49-58. doi: http://dx.doi.org/10.1002/cbm.677

Sharp, C., Williams, L. L., Ha, C., Baumgardner, J., Michonski, J., Seals, R., . . . Fonagy, P. (2009). The development of a mentalization-based outcomes and research protocol for an adolescent inpatient unit. *Bulletin of the Menninger Clinic, 73*(4), 311-338.

Smith, H., White, T., & MacCall, C. (2004). A comparison of special hospital patients and other admissions to a regional low security unit. *The Journal of Forensic Psychiatry & Psychology, 15*(4), 660-668. doi: 10.1080/14789940412331270717

Sociocultural Research Consultants (2015). *Dedoose Version 6.1.18, web application for managing, analyzing, and presenting qualitative and mixed method research data* (2015). Los Angeles, CA: SocioCultural Research Consultants, LLC www.dedoose.com

Tema, T. R., Poggenpoel, M., & Myburgh, C. P. H. (2011). Experiences of psychiatric nurses exposed to hostility from patients in a forensic ward. *Journal of nursing management, 19*(7), 915-924.

Thomson, L., Duncan, E., Biggam, F., Chiswick, D., Darjee, R., Davidon, K., . . . Sturrock, M. (2005). Report of the Working Group on Services for People with Personality Disorder: Forensic Mental Health services Managed Care Network.

Thorndycraft, B., & McCabe, J. (2008). The challenge of working with staff groups in the caring professions: the importance of the 'team development and reflective practice group'. *British Journal of Psychotherapy, 24*(2), 167-183. doi: 10.1111/j.1752-0118.2008.00075.x

Tonkin, M. (2015). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International Journal of Offender Therapy and Comparative Criminology*, 0306624X15578834.

Tonkin, M., Howells, K., Ferguson, E., Clark, A., Newberry, M., & Schalast, N. (2012). Lost in translation? Psychometric properties and construct validity of the English Essen Climate Evaluation Schema (EssenCES) social climate questionnaire. *Psychological Assessment, 24*(3), 573-580. doi:10.1037/a0026267

Trochim, W. M. (1989). Outcome pattern matching and program theory. *Evaluation and Program Planning, 12*(4), 355-366.

Urheim, R., Rypdal, K., Palmstierna, T., & Mykletun, A. (2011). Patient autonomy versus risk management: a case study of change in a high security forensic psychiatric ward. *International Journal of Forensic Mental Health, 10*(1), 41-51.

Walker, H., Langton, D., & Thomson, L. (2011). 'New to Forensic'; implementing a problem-based introductory educational programme for forensic practitioners in Scotland. *Journal of Psychiatric & Mental Health Nursing, 18*(10), 934-942. doi: 10.1111/j.1365-2850.2011.01778.x

Ward, D. J., Furber, C., Tierney, S., & Swallow, V. (2013). Using Framework Analysis in nursing research: a worked example. *Journal of Advanced Nursing, 69*(11), 2423-2431. doi: 10.1111/jan.12127

Yakeley, J., & Adshead, G. (2013). Locks, keys, and security of mind: psychodynamic approaches to forensic psychiatry. *J Am Acad Psychiatry Law, 41*(1), 38-45.

Yin, R. K. (2013). *Case study research: Design and methods* (5th ed.). London: Sage publications.

Complete Reference List

Abel, S. E. (2012). *A qualitative investigation of the experiences of nursing staff working in a secure personality disorder unit.* (U613497 D.Clin.Psych.), University of Hull (United Kingdom), Ann Arbor. Retrieved from http://search.proquest.com/docview/1557568919?accountid=10673 ProQuest Dissertations & Theses Global database.

Adshead, G. (2002). Three degrees of security: Attachment and forensic institutions. *Criminal Behaviour and Mental Health, 12*(S2), S31-S45.

Adshead, G., Moore, E., Humphrey, M., Wilson, C., & Tapp, J. (2013). The role of mentalising in the management of violence. *Advances in Psychiatric Treatment, 19*(1), 67-76. doi: 10.1192/apt.bp.110.008243

Alderman, N., & Groucott, L. (2012). Measurement of social climate within neurobehavioural rehabilitation services using the EssenCES. *Neuropsychological Rehabilitation, 22*(5), 768-793. doi: http://dx.doi.org/10.1080/09602011.2012.689683

Almutairi, A. F., Gardner, G. E., & McCarthy, A. (2014). Practical guidance for the use of a pattern-matching technique in case-study research: A case presentation. *Nursing & Health Sciences, 16*(2), 239-244.

Barnao, M., Ward, T., & Casey, S. (2015a). Looking Beyond the Illness: Forensic Service Users' Perceptions of Rehabilitation. *Journal of Interpersonal Violence, 30*(6), 1025-1045. doi: 10.1177/0886260514539764

Barnao, M., Ward, T., & Casey, S. (2015b). Taking the Good Life to the Institution Forensic Service Users' Perceptions of the Good Lives Model. *International Journal of Offender Therapy and Comparative Criminology*, 60(7), 766-786.

Barnett-Page, E., & Thomas, J. (2009). Methods for the synthesis of qualitative research: a critical review. *BMC Medical Research Methodology, 9*(1), 1.

Barsky, J. S., & West, A. G. (2007). Secure settings and the scope for recovery: service users' perspectives on a new tier of care. *British Journal of Forensic Practice, 9*(4), 5-11 17p.

Bateman, A. & Treliving, L. (2013) *MBT Skills for Mental health Professionals - a skills taining manual.* London: Anna Freud Centre.

Bateman, A., & Fonagy, P. (2006). *Mentalization Based Treatment: A Practical Guide for borderline personality disorder: A practical guide*. Oxford: Oxford University Press.

Bateman, A., & Fonagy, P. (2009). Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *The American Journal of Psychiatry, 166*(12), 1355-1364.

Bateman, A., & Fonagy, P. (2013). Mentalization-Based Treatment. *Psychoanalytic Inquiry, 33*(6), 595-613. doi: 10.1080/07351690.2013.835170

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544-559.

Beazley, P., & Gudjonsson, G. (2011). Motivating inpatients to engage with treatment: The role of depression and ward atmosphere. *Nordic Journal of Psychiatry, 65*(2), 95-100. doi: doi:10.3109/08039488.2010.502244

Bergen, A., & While, A. (2000). A case for case studies: exploring the use of case study design in community nursing research. *Journal of Advanced Nursing, 31*(4), 926-934.

Booth, A., & Carroll, C. (2015). Systematic searching for theory to inform systematic reviews: is it feasible? Is it desirable? *Health Information & Libraries Journal, 32*(3), 220-235.

Borckardt, J. J., Murphy, M. D., Nash, M. R., & Shaw, D. (2004). An empirical examination of visual analysis procedures for clinical practice evaluation. *Journal of Social Service Research, 30*(3), 55-73.

Borckardt, J. J., Nash, M. R., Murphy, M. D., Moore, M., Shaw, D., & O'Neil, P. (2008). Clinical practice as natural laboratory for psychotherapy research: a guide to case-based time-series analysis. *American psychologist, 63*(2), 77.

Bowers, L. (2014). Safewards: a new model of conflict and containment on psychiatric wards. *Journal of Psychiatric and Mental Health Nursing, 21*(6), 499-508.

Bowers, L., & Allan, T. (2006). The attitude to personality disorder questionnaire: psychometric properties and results. *Journal Of Personality Disorders, 20*(3), 281-293.

Bowers, L., Nijman, H., Simpson, A., & Jones, J. (2011). The relationship between leadership, teamworking, structure, burnout and attitude to patients on acute psychiatric wards (English). *Social psychiatry and psychiatric epidemiology (Print), 46*(2), 143-148.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi: 10.1191/1478088706qp063oa

Bressington, D., Stewart, B., Beer, D., & MacInnes, D. (2011). Levels of service user satisfaction in secure settings-A survey of the association between perceived social climate, perceived therapeutic relationship and satisfaction with forensic services. *International Journal of Nursing Studies, 48*(11), 1349-1356. doi: http://dx.doi.org/10.1016/j.ijnurstu.2011.05.011

Brunt, D. (2008). The Ward Atmosphere of Single-Sex Wards in a Maximum-Security Forensic Psychiatric Hospital in Sweden. *Issues in Mental Health Nursing, 29*(3), 221-241. doi: http://dx.doi.org/10.1080/01612840701869858

Brunt, D., & Rask, M. (2007). Ward atmosphere--the scarlet pimpernel of psychiatric settings? *Issues in Mental Health Nursing, 28*(6), 639-655. doi: http://dx.doi.org/10.1080/01612840701354513

Carolan, C. M., Forbat, L., & Smith, A. (2015). Developing the DESCARTE Model: The Design of Case Study Research in Health Care. *Qualitative Health Research*, *26(5),* 626-639. *doi*: 10.1177/1049732315602488

Carroll, C., Booth, A., & Cooper, K. (2011). A worked example of" best fit" framework synthesis: A systematic review of views concerning the taking of some potential chemopreventive agents. *BMC Medical Research Methodology, 11*(1), 1-9.

Carroll, C., Booth, A., & Lloyd-Jones, M. (2012). Should we exclude inadequately reported studies from qualitative systematic reviews? An evaluation of sensitivity analyses in two case study reviews. *Qualitative Health Research, 22*(10), 1425-1434.

Carroll, C., Booth, A., Leaviss, J., & Rick, J. (2013). "Best fit" framework synthesis: refining the method. *BMC Medical Research Methodology, 13*(1), 1.

Carr-Walker, P., Bowers, L., Callaghan, P., Nijman, H., & Paton, J. (2004). Attitudes towards personality disorders: comparison between prison officers and psychiatric nurses. *Legal and Criminological Psychology, 9*(2), 265-277.

Caruso, R., Biancosino, B., Borghi, C., Marmai, L., Kerr, I., & Grassi, L. (2013). Working With the 'Difficult' Patient: The Use of a Contextual Cognitive-Analytic Therapy

Based Training in Improving Team Function in a Routine Psychiatry Service Setting. *Community Mental Health Journal, 49*(6), 722-727. doi: 10.1007/s10597-012-9579-x

Charmaz, K., & Smith, J. (2003). Grounded theory. *Qualitative psychology: A practical guide to research methods*, 81-110.

Chaudoir, S. R., Dugan, A. G., & Barr, C. (2013). Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci, 8*(1), 22.

Clark, D. H. (1974). *Social Therapy in Psychiatry*. London: Penguin Books.

Clarke, C. L. & Reed, J (2013). Case study research. In K. Gerrish & Lacey, A. (Eds.) *The Research Process in Nursing,* 237-347. London: Wiley

Clarke, C., Lumbard, D., Sambrook, S., & Kerr, K. (2015). What does recovery mean to a forensic mental health patient? A systematic review and narrative synthesis of the qualitative literature. *The Journal of Forensic Psychiatry & Psychology*, 1-17.

Coffey, M. (2006). Researching service user views in forensic mental health: A literature review. *The Journal of Forensic Psychiatry & Psychology, 17*(1), 73-107. doi: 10.1080/14789940500431544

Cooke, A., Smith, D., & Booth, A. (2012). Beyond PICO: The SPIDER Tool for Qualitative Evidence Synthesis. *Qualitative Health Research, 22*(10), 1435-1443. doi: 10.1177/1049732312452938

Cooper, K., Squires, H., Carroll, C., Papaioannou, D., & Booth, A. (2010). Chemoprevention of colorectal cancer: systematic review and economic evaluation. *Health Technology Assessment, 14*(32), 205. doi: 10.3310/hta14320

Critical Approaisal Skilsl Programme (CASP) (2014). *CASP Checklists*. Oxford: CASP.

Cutcliffe, J. R., & Riahi, S. (2013). Systemic perspective of violence and aggression in mental health care: Towards a more comprehensive understanding and conceptualization: Part 1. *International Journal of Mental Health Nursing, 22*(6), 558-567.

Daffern, M., Ferguson, M., Ogloff, J., Thomson, L., & Howells, K. (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*(5), 431-441. doi: http://dx.doi.org/10.1080/10683160601060861

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science, 4*(1), 1-15. doi: 10.1186/1748-5908-4-50

Davies, J., Howells, K., & Jones, L. (2007). Evaluating innovative treatments in forensic mental health: A role for single case methodology? *Journal of Forensic Psychiatry & Psychology, 18*(3), 353-367. doi: 10.1080/14789940701443173

Davies, J., Sheldon, K., & Howells, K. (2011). Conducting research in forensic settings: Philosophical and Practical underpinnings. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals* (pp. 3-15). Oxon: Routledge.

Dawber, C. (2013a). Reflective practice groups for nurses: A consultation liaison psychiatry nursing initiative: Part 1 – the model. *International Journal of Mental Health Nursing, 22*(2), 135-144. doi: 10.1111/j.1447-0349.2012.00839.x

Dawber, C. (2013b). Reflective practice groups for nurses: A consultation liaison psychiatry nursing initiative: Part 2 – the evaluation. *International Journal of Mental Health Nursing, 22*(3), 241-248. doi: 10.1111/j.1447-0349.2012.00841.x

de Boer-van Schaik, J., & Derks, F. (2010). The Van der Hoeven Clinic: A flexible and innovative forensic psychiatric hospital based on therapeutic community principles *Shuker, Richard [Ed]; Sullivan, Elizabeth [Ed] (2010) Grendon and the emergence of forensic therapeutic communities: Developments in research and practice (pp 45-60) xxv, 333 pp Wiley-Blackwell*.

de Ruiter, C., & Greeven, P. G. (2000). Personality disorders in a Dutch forensic psychiatric sample: Convergence of interview and self-report measures. *Journal Of Personality Disorders, 14*(2), 162.

de Vries, M. G., Brazil, I. A., Tonkin, M., & Bulten, B. H. (2015). Ward Climate Within a High Secure Forensic Psychiatric Hospital: Perceptions of Patients and Nursing Staff and the Role of Patient Characteristics. *Archives of Psychiatric Nursing*. doi: http://dx.doi.org/10.1016/j.apnu.2015.12.007

Dean, K. (2013). A multi-centre RCT of a group psychological intervention to reduce antisocial behaviour in a medium secure setting. *Australian and New Zealand journal of psychiatry, 47*, 18-19. doi:10.1177/0004867412486854

Dickens, G. L., Suesse, M., Snyman, P., & Picchioni, M. (2014). Associations between ward climate and patient characteristics in a secure forensic mental health service. *The Journal of Forensic Psychiatry & Psychology, 25*(2), 195-211. doi: http://dx.doi.org/10.1080/14789949.2014.903505

Dixon-Woods, M. (2011). Using framework-based synthesis for conducting reviews of qualitative studies. *BMC medicine, 9*(1), 1.

Dixon-Woods, M., Booth, A., & Sutton, A. J. (2007). Synthesizing qualitative research: a review of published reports. *Qualitative Research, 7*(3), 375-422.

Duxbury, J. A., Bjorkdahl, A., & Johnson, S. (2006). Ward culture and atmosphere *Violence in mental health settings: Causes, consequences, management* (pp. 273-287). New York, NY: Springer Science + Business Media; US.

Eggert, J. E., Kelly, S. P., Margiotta, D. T., Hegvik, D. K., Vaher, K. A., & Kaya, R. T. (2014). Person–Environment Interaction in a New Secure Forensic State Psychiatric Hospital. *Behavioral Sciences & the Law, 32*(4), 527-538. doi: 10.1002/bsl.2127

Eklund, M., & Hansson, L. (2001). Perceptions of the real and the ideal ward atmosphere among trainees and staff before and after the introduction of a new work rehabilitation model. *European Psychiatry, 16*(5), 299-306. doi: http://dx.doi.org/10.1016/S0924-9338%2801%2900582-X

Ellard, D. R., Taylor, S. J., Parsons, S., & Thorogood, M. (2011). The OPERA trial: a protocol for the process evaluation of a randomised trial of an exercise intervention for older people in residential and nursing accommodation. *Trials, 12*(1), 28.

Ewers, P., Bradshaw, T., McGovern, J., & Ewers, B. (2002). Does training in psychosocial interventions reduce burnout rates in forensic nurses? *Journal of Advanced Nursing, 37*(5), 470-476. doi: 10.1046/j.1365-2648.2002.02115.x

Farrington, D. P., & Jolliffe, D. (2002). *A feasibility study into using a randomised controlled trial to evaluate treatment pilots at HMP Whitemoor*. London: Home Office.

Fonagy, P., Bateman, A., & Bateman, A. (2011). The widening scope of mentalizing: A discussion. *Psychology and Psychotherapy: Theory, Research and Practice, 84*(1), 98-110.

Forensic Network (2011). *The forensic mental health matrix – A guide to delivering evidence based psychological therapies in forensic mental health services in Scotland*. NHS Education for Scotland: Scottish Government

Freestone, M. C., Wilson, K., Jones, R., Mikton, C., Milsom, S., Sonigra, K., . . . Campbell, C. (2015). The Impact on Staff of Working with Personality Disordered Offenders: A Systematic Review. *PLoS ONE, 10*(8), e0136378. doi: 10.1371/journal.pone.0136378

Fuller, J. R. (1985). Treatment environments in secure psychiatric units: A case study. *International Journal of Offender Therapy and Comparative Criminology, 29*(1), 63-76.

Gale, N., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology, 13*(1), 117.

Gildberg, F. A., Bradley, S. K., Fristed, P., & Hounsgaard, L. (2012). Reconstructing normality: Characteristics of staff interactions with forensic mental health inpatients. *International Journal of Mental Health Nursing, 21*(2), 103-113.

Goodwin, I., Holmes, G., Cochrane, R., & Mason, O. (2003). The ability of adult mental health services to meet clients' attachment needs: The development and implementation of the Service Attachment Questionnaire. *Psychology and Psychotherapy: Theory, Research and Practice, 76*(2), 145-161. doi: 10.1348/147608303765951186

Gordon, N. (2011). Qualitative research with staff in forensic settings: A Grounded theory example. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals*, 111-131. London: Routledge.

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*(2), 105-112.

Gudde, C. B., Olsø, T. M., Whittington, R., & Vatne, S. (2015). Service users' experiences and views of aggressive situations in mental health care: a systematic review and thematic synthesis of qualitative studies. *Journal of multidisciplinary healthcare, 8*, 449-462. http://dx.doi.org/10.2147/JMDH.S89486

Gudjonsson, G. H., Young, S., & Yates, M. (2007). Motivating mentally disordered offenders to change: Instruments for measuring patients' perception and motivation. *The Journal of Forensic Psychiatry & Psychology, 18*(1), 74-89. doi: 10.1080/14789940601063261

Gudjonsson, G. H., Young, S., & Yates, M. (2007). Motivating mentally disordered offenders to change: Instruments for measuring patients' perception and motivation. *The Journal of Forensic Psychiatry & Psychology, 18*(1), 74-89. doi: 10.1080/14789940601063261

Gunderson, J. G. (1978). Defining the therapeutic processes in psychiatric milieus. *Psychiatry, 41*(4), 327-335.

Haigh, R. (2002). Acute wards: problems and solutions: Modern milieux: therapeutic community solutions to acute ward problems. *Psychiatric Bulletin, 26*(10), 380-382. doi: 10.1192/pb.26.10.380

Haigh, R. (2013). The quintessence of a therapeutic environment. *Therapeutic Communities: The International Journal of Therapeutic Communities, 34*(1), 6-15.

Hallett, N., Huber, J. W., & Dickens, G. L. (2014). Violence prevention in inpatient psychiatric settings: Systematic review of studies about the perceptions of care staff and patients. *Aggression and Violent Behavior, 19*(5), 502-514. doi: http://dx.doi.org/10.1016/j.avb.2014.07.009

Harris, F. C., & Lahey, B. B. (1982a). Recording system bias in direct observational methodology. *Clinical Psychology Review, 2*(4), 539-556. doi: http://dx.doi.org/10.1016/0272-7358(82)90029-0

Harris, F. C., & Lahey, B. B. (1982b). Subject reactivity in direct observational assessment: A review and critical analysis. *Clinical Psychology Review, 2*(4), 523-538. doi: http://dx.doi.org/10.1016/0272-7358(82)90028-9

Heneghan, C., Wright, J., & Watson, G. (2013). Clinical Psychologists' Experiences of Reflective Staff Groups in Inpatient Psychiatric Settings: A Mixed Methods Study. *Clinical Psychology & Psychotherapy*, n/a-n/a. doi: 10.1002/cpp.1834

Hirschi, T. (2002). *Causes of delinquency*. London: Transaction publishers.

Hollin, C. (2011). Strengths and weaknesses of randomised controlled trials. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals*, 235-249. London: Routledge.

Hörberg, U. (2015). Caring Science and the Development of Forensic Psychiatric Caring. *Perspectives in Psychiatric Care, 51*(4), 277-284. doi: 10.1111/ppc.12092

Hörberg, U., Sjögren, R., & Dahlberg, K. (2012). To be Strategically Struggling against Resignation: The Lived Experience of Being Cared for in Forensic Psychiatric Care. *Issues in Mental Health Nursing, 33*(11), 743-751. doi: 10.3109/01612840.2012.704623

Howard, R., Phipps, E., Clarbour, J., & Rayner, K. (2015). "I'd trust them if they understood learning disabilities" support needs of people with learning disabilities in the Criminal Justice System. *Journal of Intellectual Disabilities and Offending Behaviour, 6*(1), 4-14.

Howells, K., Tonkin, M., Milburn, C., Lewis, J., Draycot, S., Cordwell, J., . . . Schalast, N. (2009). The EssenCES measure of social climate: A preliminary validation and normative data in UK high secure hospital settings. *Criminal Behaviour & Mental Health, 19*(5), 308-320.

Howitt, D. (2011). Using qualitative methods to research offenders and patients. In K. Sheldon, J. Davies, & K. Howells (Eds.), *Research in Practice for Forensic Professionals*, 132-158. London: Routledge.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Hyett, N., Kenny, A., & Dickson-Swift, V. (2014). Methodology or method? A critical review of qualitative case study reports. *International journal of qualitative studies on health and well-being, 9,* 1-12.

Jacob, J. D. (2012). The rhetoric of therapy in forensic psychiatric nursing. *Journal of Forensic Nursing, 8*(4), 178-187. doi: http://dx.doi.org/10.1111/j.1939-3938.2012.01146.x

Jacob, J. D., & Holmes, D. (2011). Working under threat: Fear and nurse-patient interactions in a forensic psychiatric setting. *Journal of Forensic Nursing, 7*(2), 68-77.

James, I. A., Smith, P. S., & Milne, D. (1996). Teaching visual analysis of time series data. *Behavioural and Cognitive Psychotherapy, 24*(03), 247-261.

Johnson, H., Worthington, R., Gredecki, N., & Wilks-Riley, F. R. (2016a). The impact of forensic work on home life: the role of emotional labour, segmentation/integration and social support. *Journal of Forensic Practice, 18*(1), 52-63.

Johnson, H., Worthington, R., Gredecki, N., & Wilks-Riley, F. R. (2016b). The relationship between trust in work colleagues, impact of boundary violations and burnout among staff within a forensic psychiatric service. *Journal of Forensic Practice, 18*(1), 64-75.

Johnston, J., & Paley, G. (2013). Mirror mirror on the ward: who is the unfairest of them all? Reflections on reflective practice groups in acute psychiatric settings. *Psychoanalytic Psychotherapy, 27*(2), 170-186. doi: 10.1080/02668734.2013.772535

Karin, D., Nyström, M., & Dahlberg, H. (2007). *Reflective lifeworld research*: Studentlitteratur, Lund.

Khamisa, N., Peltzer, K., & Oldenburg, B. (2013). Burnout in Relation to Specific Contributing Factors and Health Outcomes among Nurses: A Systematic Review. *International Journal of Environmental Research and Public Health, 10*(6), 2214-2240.

Kielhofner, G. (2002). *A model of human occupation: Theory and application*: Lippincott Williams & Wilkins.

Kurtz, A. (2005). The needs of staff who care for people with a diagnosis of personality disorder who are considered a risk to others. *Journal of Forensic Psychiatry & Psychology, 16*(2), 399-422.

Kurtz, A., & Jeffcote, N. (2011). 'Everything contradicts in your mind': A qualitative study of experiences of forensic mental health staff in two contrasting services. *Criminal Behaviour and Mental Health, 21*(4), 245-258. doi: http://dx.doi.org/10.1002/cbm.796

Livesley, W. J. (2007). The relevance of an integrated approach to the treatment of personality disordered offenders. *Psychology, Crime and Law, 13*(1), 27-46.

Livingston, J. D., Nijdam-Jones, A., & Brink, J. (2012). A tale of two cultures: examining patient-centered care in a forensic mental health hospital. *The Journal of Forensic Psychiatry & Psychology, 23*(3), 345-360. doi: http://dx.doi.org/10.1080/14789949.2012.668214

Livingston, J. D., Nijdam-Jones, A., Lapsley, S., Calderwood, C., & Brink, J. (2013). Supporting Recovery by Improving Patient Engagement in a Forensic Mental Health Hospital Results From a Demonstration Project. *Journal of the American Psychiatric Nurses Association*, 1078390313489730.

Long, C. G., Anagnostakis, K., Fox, E., Silaule, P., Somers, J., West, R., & Webster, A. (2011). Social climate along the pathway of care in women's secure mental health service: Variation with level of security, patient motivation, therapeutic alliance and level of disturbance. *Criminal Behaviour & Mental Health, 21*(3), 202-214. doi: 10.1002/cbm.791

Long, C. G., Knight, C., Bradley, L., & Thomas, M. (2012). Effective therapeutic milieus in secure services for women: The service user perspective. *Journal of Mental Health, 21*(6), 567-578.

Madders, S. A. S., & George, C. A. (2014). “I couldn’t have done it on my own.” Perspectives of patients preparing for discharge from a UK high secure hospital. *Mental Health Review Journal, 19*(1), 27-36.

Mahoney, J. S., Palyo, N., Napier, G., & Giordano, J. (2009). The therapeutic milieu reconceptualized for the 21st century. *Archives of Psychiatric Nursing, 23*(6), 423-429.

Mann, B., Matias, E., & Allen, J. (2014). Recovery in forensic services: facing the challenge. *Advances in Psychiatric Treatment, 20*(2), 125-131. doi: 10.1192/apt.bp.113.011403

Mason, K., & Adler, J. R. (2012). Group-work therapeutic engagement in a high secure hospital: Male service user perspectives. *The British Journal of Forensic Practice, 14*(2), 92-103. doi: http://dx.doi.org/10.1108/14636641211223657

McAndrew, S., Chambers, M., Nolan, F., Thomas, B., & Watts, P. (2014). Measuring the evidence: Reviewing the literature of the measurement of therapeutic engagement in acute mental health inpatient wards. *International Journal of Mental Health Nursing, 23*(3), 212-220. doi: http://dx.doi.org/10.1111/inm.12044

McGauley, G., Yakeley, J., Williams, A., & Bateman, A. (2011). Attachment, mentalization and antisocial personality disorder: The possible contribution of mentalization-based treatment. *European Journal of Psychotherapy & Counselling, 13*(4), 371-393.

McKenna, B., Furness, T., Dhital, D., Park, M., & Connally, F. (2011). Recovery-Oriented Care in a Secure Mental Health Setting: 'Striving for a Good Life'. *Journal of Forensic Nursing, 10*(2), 63-69 67p. doi: 10.1097/JFN.0000000000000027

Meehan, T., McIntosh, W., & Bergen, H. (2006). Aggressive behaviour in the high-secure forensic setting: The perceptions of patients. *Journal of Psychiatric and Mental Health Nursing, 13*(1), 19-25.

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from*: ERIC.

Methley, A. M., Campbell, S., Chew-Graham, C., McNally, R., & Cheraghi-Sohi, S. (2014). PICO, PICOS and SPIDER: a comparison study of specificity and sensitivity in three search tools for qualitative systematic reviews. *BMC Health Services Research, 14*(1), 1.

Meyer, C. B. (2001). A case in case study methodology. *Field methods, 13*(4), 329-352.

Millar, H. (2011). *Recovery approaches with women with a diagnosis of personality disorder in secure care.* (U575382 D.Clin.Psych.), Canterbury Christ Church University (United Kingdom), Ann Arbor. Retrieved from http://create.canterbury.ac.uk/10263/

Miller, R. (2015). Changing organisational culture: another role for self-advocacy? *Tizard Learning Disability Review, 20*(2), 69-76.

Milsom, S. A., Freestone, M., Duller, R., Bouman, M., & Taylor, C. (2014). Factor structure of the Essen Climate Evaluation Schema measure of social climate in a UK medium-security setting. *Criminal Behaviour and Mental Health, 24*(2), 86-99.

Moore, E. (2012). Personality disorder: its impact on staff and the role of supervision. *Advances in Psychiatric Treatment, 18*(1), 44-55. doi: 10.1192/apt.bp.107.004754

Moos, R. H. (1989). *Ward Atmosphere Scale Manual*. Palo Alto, CA: Consulting Psychologists Press.

Moos, R. H., Shelton, R., & Petty, C. (1973). Perceived ward climate and treatment outcome. *Journal of Abnormal Psychology, 82*, 291-298.

National Collaborating Centre for Mental Health (UK). (2007). *Dementia: A NICE-SCIE Guideline on Supporting People With Dementia and Their Carers in Health and Social Care.* Leicester (UK): British Psychological Society Retrieved from: http://www.ncbi.nlm.nih.gov/books/NBK55467

National Institute for Health and Care Excellence (NICE) (2013). *Antisocial Personality Disorder: treatment, management and prevention. NICE Clinical Guidance 77*. Available online at guidance.nice.org.uk/cg77

Nesset, M. B., Rossberg, J. I., Almvik, R., & Friis, S. (2009). Can a focused staff training programme improve the ward atmosphere and patient satisfaction in a forensic

psychiatric hospital? A pilot study. *Scandinavian Journal of Caring Sciences, 23*(1), 117-124. doi: http://dx.doi.org/10.1111/j.1471-6712.2008.00597.x

Nijdam-Jones, A. (2012). *Patient Narratives: Understanding 'Recovery' and Social Bonding Theory in a Forensic Mental Health Hospital.* (MS22787 M.A.), Simon Fraser University (Canada), Ann Arbor. Retrieved from http://search.proquest.com/docview/1515751002?accountid=10673 ProQuest Dissertations & Theses Global database.

Nijdam-Jones, A., Livingston, J. D., Verdun-Jones, S., & Brink, J. (2015). Using social bonding theory to examine 'recovery' in a forensic mental health hospital: A qualitative study. *Criminal Behaviour and Mental Health, 25*(3), 157-168.

Nijman, H. L. (2002). A model of aggression in psychiatric hospitals. *Acta Psychiatrica Scandinavica, Supplementum*(412), 142-143.

Oeye, C., Bjelland, A. K., Skorpen, A., & Anderssen, N. (2009). Raising adults as children? A report on milieu therapy in a psychiatric ward in Norway. *Issues in Mental Health Nursing, 30*(3), 151-158. doi: http://dx.doi.org/10.1080/01612840802557246

Olsson, H., Audulv, A., Strand, S., & Kristiansen, L. (2015). Reducing or Increasing Violence in Forensic Care: A Qualitative Study of Inpatient Experiences. *Archives of Psychiatric Nursing, 29*(6), 393-400.

Olsson, H., Strand, S., Asplund, K., & Kristiansen, L. (2014). Turning towards recovery in forensic psychiatric inpatients - a study based on staff experience. *Nordic Nursing Research / Nordisk Sygeplejeforskning, 4*(3), 175-188.

Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology, 8*(5), 375-387.

Ostrov, J. M., & Hart, E. J. (2014). Observational Methods. In T. Little, D. (Ed.), *The Oxford handbook of Quantitative Methods in Psychology* (Vol. 1, pp. 286-304). Oxford: 'Oxford University Press'.

Paget, T. (2001). Reflective practice and clinical outcomes: practitioners' views on how reflective practice has influenced their clinical practice. *Journal of Clinical Nursing, 10*(2), 204-214. doi: 10.1111/j.1365-2702.2001.00482.x

Papadopoulos, C., Ross, J., Stewart, D., Dack, C., James, K., & Bowers, L. (2012). The antecedents of violence and aggression within psychiatric in-patient settings. *Acta psychiatrica scandinavica, 125*(6), 425-439. doi: 10.1111/j.1600-0447.2012.01827.x

Peplau, H. E. (1989). The history of milieu as a treatment modality. In. In A. O'Toole, S. R. Welt, & N. Y. S. Welt (Eds.) (Eds.), *Interpersonal theory in nursing practice: Selected works of Hildegard E. Peplau* (pp. 75-79). New York: Springer.

Prebble, K., Kidd, J., O'Brien, A., Carlyle, D., McKenna, B., Crowe, M., . . . Gooder, C. (2011). Implementing and maintaining nurse-led healthy living programs in forensic inpatient settings: An illustrative case study. *Journal of the American Psychiatric Nurses Association, 17*(2), 127-138.

Rask, M., & Aberg, J. (2002). Swedish forensic nursing care: Nurses' professional contributions and educational needs. *Journal of Psychiatric and Mental Health Nursing, 9*(5), 531-539.

Richards, D., Bee, P., Barkham, M., Gilbody, S., Cahill, J., & Glanville, J. (2006). The prevalence of nursing staff stress on adult acute psychiatric in-patient wards. *Social Psychiatry & Psychiatric Epidemiology, 41*(1), 34-43. doi: 10.1007/s00127-005-0998-7

Riordan, S., & Humphreys, M. (2007). Patient perceptions of medium secure care. *Medicine, Science and the Law, 47*(1), 20-26.

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. *The qualitative researcher's companion, 573*, 305-329.

Rodgers, M., Thomas, S., Harden, M., Parker, G., Street, A., & Eastwood, A. (2015). Developing a methodological framework for organisational case studies: a rapid review and consensus development process. *Health Services and Delivery Research*(In Press).

Ros, N., Van der Helm, P., Wissink, I., Stams, G.-J., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *The Journal of Forensic Psychiatry & Psychology, 24*(6), 713-727. doi: http://dx.doi.org/10.1080/14789949.2013.848460

Rose, D. N., Peter, E., Gallop, R., Angus, J. E., & Liaschenko, J. (2011). Respect in forensic psychiatric nurse-patient relationships: A practical compromise. *Journal of Forensic Nursing, 7*(1), 3-16. doi: http://dx.doi.org/10.1111/j.1939-3938.2010.01090.x

Ross, T., Querengässer, J., Fontao, M. I., & Hoffmann, K. (2012). Predicting discharge in forensic psychiatry: The legal and psychosocial factors associated with long and short stays in forensic psychiatric hospitals. *International Journal of Law and Psychiatry, 35*(3), 213-221. doi: http://dx.doi.org/10.1016/j.ijlp.2012.02.011

Rossberg, J. I., & Friis, S. (2003). A suggested revision of the Ward Atmosphere Scale. *Acta psychiatrica scandinavica, 108*(5), 374-380. doi: http://dx.doi.org/10.1034/j.1600-0447.2003.00191.x

Rossberg, J. I., & Friis, S. (2004). Patients' and Staff's Perceptions of the Psychiatric Ward Environment. *Psychiatric Services, 55*(7), 798-803.

Rossberg, J. I., Eiring, O., & Friis, S. (2004). Work environment and job satisfaction: A psychometric evaluation of the Working Environment Scale-10. *Social Psychiatry & Psychiatric Epidemiology, 39*(7), 576-580

Rossberg, J. I., Melle, I., Opjordsmoen, S., & Friis, S. (2008). The Relationship Between Staff Members' Working Conditions and Patients' Perceptions of the Treatment Environment. *International Journal of Social Psychiatry, 54*(5), 437-446. doi: 10.1177/0020764008090689

Rossiter, K. R. (2015). Victimization, trauma, and mental health: Women's recovery at the interface of the criminal justice and mental health systems. *Dissertation Abstracts International Section A: Humanities and Social Sciences, 75*(7-A(E)), No Pagination Specified.

Royal College of Psychiatrists (2012). *Standards for Psychotherapy in medium Secure units. CCQI132*. London: Royal College of Psychiatrists: Accessed online on 12/07/14 at: http://www.rcpsych.ac.uk/pdf/Standards_for_Psychotherapy_in_MSUs_June2012.pdf

Russell, K. (2016). *Position Paper: Psychological Approaches to Personality Disorder in Forensic Mental Health Settings*. Carstairs: Forensic Mental Health Services Managed Care Network.

Sainsbury, L., Krishnan, G., & Evans, C. (2004). Motivating factors for male forensic patients with personality disorder. *Criminal Behaviour and Mental Health, 14*(1), 29-38.

Saudargas, R. A., & Zanolli, K. (1990). Momentary time sampling as an estimate of percentage time: A field validation. *Journal of Applied Behavior Analysis, 23*(4), 533-537. doi: 10.1901/jaba.1990.23-533

Schalast, N., Redies, M., Collins, M., Stacey, J., & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. *Criminal Behaviour and Mental Health, 18*(1), 49-58. doi: http://dx.doi.org/10.1002/cbm.677

Sharp, C., Williams, L. L., Ha, C., Baumgardner, J., Michonski, J., Seals, R., . . . Fonagy, P. (2009). The development of a mentalization-based outcomes and research protocol for an adolescent inpatient unit. *Bulletin of the Menninger Clinic, 73*(4), 311-338.

Shepherd, A., Doyle, M., Sanders, C., & Shaw, J. (2015). Personal recovery within forensic settings – Systematic review and meta-synthesis of qualitative methods studies. *Criminal Behaviour and Mental Health*, n/a-n/a. doi: 10.1002/cbm.1966

Small, M. L. (2009). `How many cases do I need?': On science and the logic of case selection in field-based research. *Ethnography, 10*(1), 5-38. doi: 10.1177/1466138108099586

Smith, H., White, T., & MacCall, C. (2004). A comparison of special hospital patients and other admissions to a regional low security unit. *The Journal of Forensic Psychiatry & Psychology, 15*(4), 660-668. doi: 10.1080/14789940412331270717

Smith, J. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative research in psychology, 1*(1), 39-54.

Sociocultural Research Consultants (2015). *Dedoose Version 6.1.18, web application for managing, analyzing, and presenting qualitative and mixed method research data* (2015). Los Angeles, CA: SocioCultural Research Consultants, LLC www.dedoose.com

Spencer, L., Ritchie, J., Lewis, J., & Dillon, L. (2003). *Quality in qualitative evaluation: a framework for assessing research evidence*. London: Government Chief Social Researcher's Office.

Stake, R. E. (1995). *The art of case study research*. Thousand Oaks: Sage.

Tapp, J., Warren, F., Fife-Schaw, C., Perkins, D., & Moore, E. (2013). What do the experts by experience tell us about 'what works' in high secure forensic inpatient hospital services. *The Journal of Forensic Psychiatry & Psychology, 24*(2), 160-178. doi: http://dx.doi.org/10.1080/14789949.2012.760642

Taubner, S., Hörz, S., Fischer-Kern, M., Doering, S., Buchheim, A., & Zimmermann, J. (2013). Internal structure of the reflective functioning scale. *Psychological Assessment, 25*(1), 127.

Taylor, C. (2011). Nothing left to lose? Freedom and compulsion in the treatment of dangerous offenders. *Psychodynamic Practice: Individuals, Groups and Organisations, 17*(3), 291-306. doi: http://dx.doi.org/10.1080/14753634.2011.587638

Taylor, J., & Morrissey, C. (2012). Integrating treatment for offenders with an intellectual disability and personality disorder. *The British Journal of Forensic Practice, 14*(4), 302-315. doi: http://dx.doi.org/10.1108/14636641211283101

Tema, T. R., Poggenpoel, M., & Myburgh, C. P. H. (2011). Experiences of psychiatric nurses exposed to hostility from patients in a forensic ward. *Journal of nursing management, 19*(7), 915-924.

Thomson, L., Duncan, E., Biggam, F., Chiswick, D., Darjee, R., Davidon, K., . . . Sturrock, M. (2005). Report of the Working Group on Services for People with Personality Disorder: Forensic Mental Health services Managed Care Network.

Thorndycraft, B., & McCabe, J. (2008). The challenge of working with staff groups in the caring professions: the importance of the 'team development and reflective practice

group'. *British Journal of Psychotherapy, 24*(2), 167-183. doi: 10.1111/j.1752-0118.2008.00075.x

Thorne, S., Kirkham, S. R., & O'Flynn-Magee, K. (2004). The analytic challenge in interpretive description. *International journal of qualitative methods, 3*(1), 1-11.

Tight, M. (2010). The curious case of case study: a viewpoint. *International Journal of Social Research Methodology, 13*(4), 329-339.

To, W. T., Vanheule, S., De Smet, S., & Vandevelde, S. (2015). The Treatment Perspectives of Mentally Ill Offenders in Medium- and High-Secure Forensic Settings in Flanders. *International Journal of Offender Therapy and Comparative Criminology, 59*(14), 1605-1622. doi: 10.1177/0306624x14566355

Tonkin, M. (2015). A review of questionnaire measures for assessing the social climate in prisons and forensic psychiatric hospitals. *International Journal of Offender Therapy and Comparative Criminology*, 0306624X15578834. doi: 10.1177/0306624X15578834.

Tonkin, M., Howells, K., Ferguson, E., Clark, A., Newberry, M., & Schalast, N. (2012). Lost in translation? Psychometric properties and construct validity of the English Essen Climate Evaluation Schema (EssenCES) social climate questionnaire. *Psychological Assessment, 24*(3), 573-580. doi:10.1037/a0026267

Trochim, W. M. (1989). Outcome pattern matching and program theory. *Evaluation and Program Planning, 12*(4), 355-366.

Urheim, R., Rypdal, K., Palmstierna, T., & Mykletun, A. (2011). Patient autonomy versus risk management: a case study of change in a high security forensic psychiatric ward. *International Journal of Forensic Mental Health, 10*(1), 41-51.

van der Helm, P., Stams, G. J., & van der Laan, P. (2011). Measuring group climate in prison. *The Prison Journal, 91*(2), 158-176. doi: http://dx.doi.org/10.1177/0032885511403595

Verschuren, P. (2003). Case study as a research strategy: some ambiguities and opportunities. *International Journal of Social Research Methodology, 6*(2), 121-139.

Walker, H., Langton, D., & Thomson, L. (2011). 'New to Forensic'; implementing a problem-based introductory educational programme for forensic practitioners in Scotland. *Journal of Psychiatric & Mental Health Nursing, 18*(10), 934-942. doi: 10.1111/j.1365-2850.2011.01778.x

Ward, D. J., Furber, C., Tierney, S., & Swallow, V. (2013). Using Framework Analysis in nursing research: a worked example. *Journal of Advanced Nursing, 69*(11), 2423-2431. doi: 10.1111/jan.12127

Ward, T., & Brown, M. (2004). The good lives model and conceptual issues in offender rehabilitation. *Psychology, Crime & Law, 10*(3), 243-257.

Ward, T., & Willis, G. (2010). Ethical issues in forensic and correctional research. *Aggression and Violent Behavior, 15*(6), 399-409.

Wickström, G., & Bendix, T. (2000). The" Hawthorne effect"—what did the original Hawthorne studies actually show? *Scandinavian journal of work, environment & health*, 363-367.

Willmot, P., & McMurran, M. (2013). The views of male forensic inpatients on how treatment for personality disorder works. *Journal of Forensic Psychiatry & Psychology, 24*(5), 594-609.

World Health Organisation (1953). *Expert Committee on Mental Health: 3rd Report.* Geneva: WHO.

Wright, K., Duxbury, J., Baker, A., & Crumpton, A. (2014). A qualitative study into the attitudes of patients and staff towards violence and aggression in a high security hospital. *Journal of Psychiatric and Mental Health Nursing, 21*(2), 184-188.

Yakeley, J., & Adshead, G. (2013). Locks, keys, and security of mind: psychodynamic approaches to forensic psychiatry. *J Am Acad Psychiatry Law, 41*(1), 38-45.

Yazan, B. (2015). Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake. *The Qualitative Report, 20*(2), 134-152.

Yin, R. K. (2013). *Case study research: Design and methods* (5th ed.). London: Sage publications.

Appendix

A: Search strategies for systematic review

1. BeHEMoTH search terms (combined with AND operator)

Behaviour	Atmosphere, Climate, milieu, environment
Health Context	((Ward or Hospital* or Inpatient or institut*) adj3 (Locked or Secure or Forensic)) or (Low secur* or Medium secur* or High secur* or Special hospital)
Exclusions	*None*
Models & Theories	model* or theor* or concept* or framework*

2. SPIDER search strategy, combined [S AND P of I] AND [D OR E OR R].

	Search String
Sample	(Patient* OR service use* OR resident OR forensic mental health) OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*) AND ((Ward OR Hospital* OR Inpatient OR Intensive psychiatric support unit OR PICU OR Facilit* OR Institution* OR Unit OR therapeutic community) NEAR/ADJ (Locked OR Secure OR Forensic)) OR Low secur* OR Medium secur* OR High secur* OR Special hospital
Phenomenon of Interest	Atmosphere OR Climate OR milieu OR psychosocial OR social OR environment OR atmosphere conducive to recovery OR therap* OR communit* OR socioenvironmen*
Design	qualitative interview OR focus groups OR content analysis OR constant comparative method OR thematic analysis OR grounded theory OR ethnographic research OR phenomenological OR semantic analysis OR interview*
Evaluation	perception* OR patient satisfaction OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie*
Research Type	qualitative OR qualitative studies

Behemoth search – Psychinfo & MEDLINE 150216 – search String

1	(Atmosphere or Climate* or milieu or environ*).ab.	935778
2	(((Ward or Hospital* or Inpatient or institut*) adj3 (Locked or Secure or Forensic)) or ("Low secur*" or "Medium secur*" or "High secur*" or "Special hospital")).af	15776
3	model* or theor* or concept*).mp. or framework*.ab. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm]	4650794
4	1 and 2 and 3	310
5	**remove duplicates from 4**	**283**

Searches for Main review

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, **PsycINFO** 1806 to December Week 1 2015, **Embase Classic+Embase** 1947 to 2015 Week 49		
1	(((forensic adj2 mental) or patient* or resident).af. or service.mp.) adj3 use*.af. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw]	2245991
2	(staff or nurs* or psychiatri* or psychologist* or therapis*).af.	3833234
3	((Ward or Hospital* or Inpatient or Intensive psychiatric support unit or PICU or Facilit* or Institution* or Unit or therapeutic community) adj5 (Locked or Secure or Forensic)).af	21088
4	(((Low or medium or high) adj1 secur*) or Special hospital).mp. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw]	4244
5	(qualitative interview or focus groups or content analysis or constant comparative method or thematic analysis or grounded theory or ethnograp* or phenomenological or semantic analysis or interview*).mp. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw]	1051273
6	(perception* or patient satisfaction or satisf* or perspective* or view* or experience or opinion* or satisfaction or belie* or Attitudes).mp. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw	5625389
7	(qualitative or qualitative studies).mp. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw]	470002
8	(Atmosphere or Climate or milieu or psychosocial or social or environment or treatment or (conducive adj3 recovery) or therap* or communit* or socioenvironmen*).mp. [mp=ti, ab, ot, nm, hw, kf, px, rx, ui, an, tc, id, tm, tn, dm, mf, dv, kw]	17351973
9	5 or 6 or 7	6472653
10	1 or 2	5593104
11	3 or 4	24007
12	10 and 11	11989
13	8 and 12	7413
14	**9 and 13**	**3018**
15	**Remove duplicates from 15**	**2322**

1	(((forensic adj2 mental) or patient* or resident).af. or service.mp.) adj3 use*.af. [mp=title, other title, abstract, heading words]	42917
2	(staff or nurs* or psychiatri* or psychologist* or therapis*).af.	93541
3	((Ward or Hospital* or Inpatient or Intensive psychiatric support unit or PICU or Facilit* or Institution* or Unit or therapeutic community) adj5 (Locked or Secure or Forensic)).af.	614
4	(((Low or medium or high) adj1 secur*) or Special hospital).mp. [mp=title, other title, abstract, heading words]	456
5	(qualitative interview or focus groups or content analysis or constant comparative method or thematic analysis or grounded theory or ethnograp* or phenomenological or semantic analysis or interview*).mp. [mp=title, other title, abstract, heading words]	20189
6	(perception* or patient satisfaction or satisf* or perspective* or view* or experience or opinion* or satisfaction or belie* or Attitudes).mp. [mp=title, other title, abstract, heading words]	68699
7	(qualitative or qualitative studies).mp. [mp=title, other title, abstract, heading words]	8220
8	(Atmosphere or Climate or milieu or psychosocial or social or environment or treatment or (conducive adj3 recovery) or therap* or communit* or socioenvironmen*).mp. [mp=title, other title, abstract, heading words]	126727
9	5 or 6 or 7	79607
10	1 or 2	120870
11	3 or 4	936
12	10 and 11	627
13	8 and 12	364
14	**9 and 13**	128

EBSCOhost search – 2182 results 06-12-2015

Psychology and Behavioral Sciences Collection (1,655)

CINAHL Plus (491)

ERIC (36)

S1	TX (qualitative interview OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview*)	561294
S2	TX perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie*	1286935
S3	TX (qualitative OR "qualitative studies") OR SU (qualitative OR "qualitative studies")	213040
S4	S1 OR S2 OR S3	1607127
S5	TX atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*	2574654
S6	Ward* OR Hospital* OR Inpatient* OR "Intensive psychiatric support unit" OR PICU OR Facilit* OR Institution* OR Unit OR "therapeutic community"	983300
S7	TX forensic OR locked OR secure	91833
S8	TX (Patient* OR "service use*" OR resident OR "mental health" OR "mental* ill*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*)	2920666
S9	(S6 AND S8) N5 S7	5513
S10	S5 AND S9	3144
S11	S4 AND S10	2182

Proquest Databases

PILOTS: Published International Literature On Traumatic Stress - 9

Applied Social Sciences Index and Abstracts (ASSIA)- 343

ProQuest Dissertations & Theses Global - 320

Social Services Abstracts - 61

Sociological Abstracts - 154

Set#	Searched for	Databases	Results
S3	((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies)) AND peer(yes)	Applied Social Sciences Index and Abstracts (ASSIA)	334°
S4	ALL((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies)) AND peer(yes)	PILOTS: Published International Literature On Traumatic Stress	9°

S5	ALL((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies)) AND peer(yes)	Applied Social Sciences Index and Abstracts (ASSIA)	343°
S6	ALL((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies))	ProQuest Dissertations & Theses Global	320°
S10	ALL((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies)) AND peer(yes)	Social Services Abstracts	61°
S12	ALL((((((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5	Sociological Abstracts	154°

	(forensic OR secure OR locked)) AND ((Patient* OR service use* OR resident OR "forensic mental health" OR "forensic psychiat*") OR (staff OR nurs* OR psychiatri* OR psychologist* OR therapis*))) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment*)) AND ("qualitative interview" OR "focus groups" OR "content analysis" OR "constant comparative method" OR "thematic analysis" OR "grounded theory" OR ethnograph* OR phenomenological OR "semantic analysis" OR interview* OR perception* OR "patient satisfaction" OR satisf* OR perspective* OR view* OR experien* OR opinion* OR belie* OR qualitative OR qualitative studies))		

Cochrane Database - 71 Results January 12 2016

'*((forensic OR secur* OR criminal OR "forensic psychiat*" OR prison* OR psychiat* OR nurs* OR psycholo* OR mental*) and ("low secur*" OR "medium secur*" OR "special hospital" OR "high secure")) OR ((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR (forensic OR secure OR locked)) and (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment* OR treatment) in Title, Abstract, Keywords*

Open Grey Literature January 12 2016

72 – 49 entered on database - 23 were Duplicates

(((ward OR hospital* OR inpatient OR "intensive psychiatric support unit" OR picu OR facility OR institution* OR unit) NEAR/5 (forensic OR secure OR locked)) OR ("low secur*" OR "medium secur*" OR "high secur*" OR "special hospital")) AND (forensic OR secur* OR criminal OR "forensic psychiat*" OR prison* OR psychiat* OR nurs* OR psycholo* OR mental*) AND (atmosphere OR climate OR "atmosphere conducive to recovery" OR milieu OR therap* OR psychosocial OR communit* OR social OR socioenvironment* OR environment* OR treatment) lang:"en"

B: Framework for BeHeMOTH Search

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
Involvement - How active and energetic patients are in the program		**Inclusion**: To help patient's understand their place among others	**Roles of Responsibility** – Foster a sense of belonging			**Democratisation** - community members should share equally in the decision-making practices	**Involvement** – the patient attends to and interacts with the social environment		**Involving**
Support - How much patients help and support each other and how supportive the staff are towards the patients				**Support –** If the "support" dimension is well taken care of, group workers are responsive to the needs of the inmates, and they invest in building positive relationships	**Patient Cohesion & Mutual Support** - whether mutual support characteristic of therapeutic communities is present	**Communalism** - community functioning is characterised by the sharing of amenities and open communication between members	**Support** – giving kindness as the basis for a structure that fostered predictability and control	**Healing relationships** – the enhancement of caring, compassion, communication, empathy and social support	**Supportive**
		Psychological Containment – Feeling safe for both staff and patients	**Containment** – Through clear rules and boundaries Provide a space to explore and understand encounters with others			**Containment** Interventions to contain emotional and behavioural instability	**Containment** – meeting basic needs and providing physical care and safety		**Containing**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
Spontaneity - How much the programme encourages open expression of feelings by patients and staff			**Openness** – Tolerance and honesty, regular community meetings			**Permissiveness** community members should demonstrate tolerance of a wide range of behaviours			**Tolerance of Expression**
Autonomy - How self-sufficient and independent patients are in decision making	**Assumption that the patients are trustworthy** **Patients should be assumed to retain the capacity for a considerable degree of responsibility and initiative**	**Agency –** Feel a sense of their own personal agency sand are thus responsible for their own feelings thoughts and behaviour	**Empowerment** – Empowering the community's members						**Empowerment**
Practical orientation - The extent to which patients learn practical skills and are prepared for release form the program								**Healthy lifestyles –** Enhancing health habits including diet exercise, relaxation and balance	**Focus on developing Lifeskills**
Personal problem Orientation - The extent to which patients seek to	**Preservation of the patient's individuality –** Encourage self-respect and a sense of identity		**Provision of therapies –** Including psychotropic medication and individual	**Growth –** pertains to facilitation of leaning and preparation for a meaningful life		**Integration and synthesis** Interventions designed to address core pathology and		**Personal Wholeness –** relates to the provision of holistic care for self and others, to enhance the	**Personal development opportunities**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
understand their feelings and personal problems			and group therapies	both within and outside prison.		promote integration of self **Exploration and change** Cognitive, interpersonal and psychodynamic interventions		integration of body mind spirit and energy	
Anger and Aggression - The extent to which patients argue with other patients and staff, become openly angry, display other aggressive behaviour					**Experienced Safety -** the level of perceived tension and threat of aggression or violence	**Safety** Interventions to promote safety of self and others			**Safety**
Order and Organization - How important order and organisation are in the program	**Interrelationships** between director, psychiatric staff, nursing staff and patients, including patient to patient relationships		**Staff support** - providing space for multidisciplinary staff support, education and supervision				**Structure** – a predictable organisation of roles and responsibilities	**Collaborative Medicine** – A platform for integration of conventional, complementary, traditional and alternative therapies. Strong collaborative interdisciplinary teams and patient centred care	**Organisational Structure**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
Program Clarity -- The extent to which patients know what to expect in their day-to-day routine and the explicitness of program rules and procedure	**Good behaviour must be encouraged**	**Communication -**	**Communication** – Fostering communication and a common understanding					**Healing Places** – Leadership, mission, culture, teamwork, technology, evaluation, and service that are in alignment with intentional healing.	**Clarity of ward ethos**
Staff Control – The extent to which staff use measures to keep patients under necessary controls.			**Tight security –** To ensure safety	**Repression –** Features of "repression" are harsh and unfair control, a weak organizational structure, no flexibility, incremental rules, little privacy, extreme boredom, and (frequent) humiliation of inmates.		**Control and regulation** Behavioural, cognitive and pharmacological interventions to enhance self-regulation			**Staff control**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
			Senior peers (patients) provide **feedback** to new members			**Reality confrontation – Patients should be confronted with interpretations of their behaviour based on the experience of their behaviour by other community members.**			**Challenging of Difficulties**
				Atmosphere – The "atmosphere" dimension concerns the degree to which the physical as well as the social environment foster feelings of safety and trust among inmates.				**Healing Spaces** – Nature, light, colour, air, fine arts, architecture, aroma, music, and design of the physical environment.	**Physical Environment**
	Encourage visits from family members								**Connectedness to Community**
							Validation – Affirming the patients individuality		**Validation**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	**WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)**	**Haigh (2002, 2013) – Therapeutic Community Model**	**Therapeutic Community based DSPD (C Taylor, 2011)**	**Prison Social Climate Instrument (Van der Helm et al., 2011)**	**EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)**	**TC and Social Milieu (J. Taylor & Morrissey, 2012)**	**Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)**	**Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)**	***Framework***
	Activity - the need for activity and a proper working day for all patients								**Occupation**
		Attachment – The experience which makes people feel they belong	**Promoting attachment** – Through provision of a secure base						**Service Attachment**
			Shared responsibilities for therapeutic work		**Therapeutic Hold** - the extent to which the climate is seen as supportive of patients' therapeutic needs			**Awareness and Intention –** conscious commitment of the clinician to be a healer and to know about the biological – psychological – social – spiritual factors related to the individual and belief in the individual patients capacity to heal	**Staff Therapeutic Orientation**
			Patient commitment – Commitment to process of ongoing assessment and treatment						**Patient Motivation**

WAS – Moos (Brunt, 2008; Eklund & Hanson, 2001)	WHO (1953) Recommendations for ward atmosphere (Haigh, 2002; Brunt, 2008)	Haigh (2002, 2013) – Therapeutic Community Model	Therapeutic Community based DSPD (C Taylor, 2011)	Prison Social Climate Instrument (Van der Helm et al., 2011)	EssenCES – (Tonkin et al, 2012; Aldermann & Groucott, 2012)	TC and Social Milieu (J. Taylor & Morrissey, 2012)	Gunderson (1978) - Milieu Therapy (Oeye et al, 2009)	Milieu Therapy Reconceptualization – Optimal Healing Environment (Mahoney et al., 2009)	*Framework*
								External environment – Focus on the system rather than focus on the ward level	**External environment Factors**

1. Definition of Concepts derived from initial Framework

Concepts	Definition
Involving (5)	Patients are involved in the running of the ward and feel part of the ward
Supportive (6)	The extent to which there are opportunities for mutual support The extent to which staff provide support for patients
Containing (4)	The nature of the ward as containing of difficult emotional experience and as a space where difficult experiences can be understood
Tolerance of Expression (3)	The ward facilitates personal expression and tolerates difference
Empowerment (4)	The extent to which patients are empowered and have a sense of personal agency
Focus on developing Life skills (2)	Availability of opportunities to develop skills for community living
Personal development opportunities (6)	Availability of Interventions to facilitate personal development
Safety (3)	The experience of personal safety on the ward
Organisational Structure (5)	The structure of the staff team and the available mechanisms for staff support The procedures and formal structures of how the ward runs
Clarity of ward ethos (5)	The shared understanding of how the ward approaches the task of care and treatment.
Staff control (4)	The means through which staff exercise control in the ward environment The extent of staff control behaviours.
Challenging of Difficulties (2)	Mechanisms through which patients receive feedback and are challenged on their behaviour
Physical Environment (2)	The nature of the ward physical environment and the extent to which it is experienced as therapeutic and comfortable
Connectedness to Community (1)	The means through which contact with the outside world (family, friends, community) is facilitated
Validation (1)	Actions that affirm the individuality of the patient and acknowledge their personal experiences.
Occupation (1)	The provision of meaningful and purposeful activity
Service Attachment (2)	The role of the ward as a secure base, a place where patients are accepted
Staff Therapeutic Orientation (3)	The level of focus of staff members on their caring role
Patient Motivation (1)	The internal motivation of the patient
External environment Factors (1)	The systemic factors that can impact on the functioning of the ward.

C: List of excluded studies with reasons

Study	Reason for exclusion
Adams (1998)	Not available (Thesis)
Addo (2006)	Thesis study that focuses on nurse's experiences of working with sexual offenders, work environment described as a theme, but no discussion of social climate
Astbury et al. (2011)	Excluded as it does not discuss social climate - focus is on process of implementing change.
Baby et al. (2014)	Article describes staff member's experiences of assault. Does not describe perspectives on social climate
Barsky & West (2012)	Excluded based on low quality
Bartlett (2003)	Not available
Bos et al (2012)	Study does not identify sample as forensic. Unit described is a secure unit for "difficult patients"
Byrt et al (2001)	Does not report on qualitative data, provides review of service developments in a secure service.
Caldwell et al (2005)	Not a forensic sample
Cashin et al (2010)	Not related to social climate, describes nursing role in prison hospital setting
Chandley et al (2014)	Action research study – Study describes ward through lens of recovery – not focused on social climate
Chanpakkee & Whyte (1996)	Article focuses on role of primary nurse. Does not focus on experiences of social climate and only mentions therapeutic environment in a tangential sense.
Chinn et al (2011)	Not a forensic sample
Clark (1991)	Not available
Clarkson et al (2009)	Study focuses solely on patient perceptions of staff attributes rather than wider concept of social climate
Cook et al. (2005)	Focused on staff and patient experiences of Tidal Model of nursing care rather than social climate
Coughlin (2003)	Article presents quantitative analysis

Study	Reason for exclusion
Cromar-Hayes et al (2015)	Article discuses recovery approach in forensic mental health settings. Does not discus social climate
Duxbury et al (2005)	Not a forensic sample
Fish & Lobley(2001)&	Sample is drawn form a non-hospital setting – community based apartments where service users receive 24hr care.
Ford et al (1999)	Reports outcome of patient satisfaction survey. Only tangentially addresses social and physical environment. Presents data in terms of quantitative frequencies with few illustrative quotations
Gildberg et al. (2012)	Study focuses solely on models of nursing care and nurse – patient interactions in a forensic setting. Does not discuss social climate
Heyman et al. (2004)	Case study focused at the organisational level and the operation of services rather than perceptions of social climate
Hinsby & Baker (2004)	Grounded theory study of staff and patient views of incidents of violence. Study does not look to examine perspectives of social climate or the environment
Jacob (2010)	Reports on same data as Jacob (2011)
Jacob (2012)	Study describes outcomes of a study examining the impact of being responsible for both care and custody. Does not reference social climate
Jeffcote (2005)	Data also reported in Kurtz & Jeffcote (2011)
Kurtz & Turner (2007)	Study appears to use part of the same dataset (PDU sample) form Kurtz & Jeffcote (2011). Excluded to avoid duplication of participants.
Livingston & Nijdam-Jones (2013)	Study focuses on treatment planning process rather than experience of social climate – themes identified are relevant to social climate model identified.
Livingston et al (2012)	Reports quantitative data only
Livingston et al. (2013)	Mixed methods study examining the impact of patient engagement measures. Qualitative analysis focuses on the impacts of the introduced programmes and does not address perspectives of social climate
Maguire et al. (2014)	Study of limit setting in a forensic psychiatric setting. Does not include a wider conceptualisation of social climate

Study	Reason for exclusion
Maltman et al (2008)	Article focuses on perspectives of admission and assessment and the personal meaning of admission rather than the influence of external factors.
Martin (2009)	Exclude – Focused on factors that impact on patient engagement.
Mattson & Binder (2012)	Study focusses on a non-forensic secure ward for individuals who self-injure
McKenna et al (2014)	Not a forensic sample – ward case study of "secure care" facility. Identified in article that not a forensic mental health setting.
McKeown et al (2014)	Article focuses on implementation of involvement activities. Does not discuss social climate
Mercer (2013)	Discourse analysis study examining talk about pornography in a secure forensic setting. Study does not assess staff or patient views of social climate
Mistral et al (2002)	Sample is not forensic
Moore & Freestone (2006)	Paper does not report on any data, it is an expert opinion paper based on experiences of ward meetings in DSPD unit
Nijdam-Jones (2012)	Thesis - Data reported in empirical paper (Livingston et al 2013)
Oeye et al (2009)	Not a forensic sample
Olsson et al. (2014b)	Discusses patients individual experiences of turning towards recovery – does not focus on social climate
Parkes et al (2015)	Paper describes the impact of transitions between services rather than social climate
Parrott (2010)	Article focuses on significance of material culture rather than social climate
Patel (2014)	Does not refer to social climate – looks at role of psychologist in an inpatient forensic setting
Riordan & Humphreys (2007)	Excluded based on reporting quality – staff satisfaction study in medium secure care

Study	Reason for exclusion
Robinson (1994)	Excluded based on review of published account (Robinson, 1995). Mixed method observational study focused on developing quality indicators for clinical care. Does not present perspectives on social climate.
Rose et al. (2011)	Study focuses on concept of respect – does not consider experiences of the ward as a whole
Rossiter (2015)	Exclude – Focuses on experiences of trauma in females involved in forensic services
Ryan et al (2002)	Content analysis study of perspectives of ideal treatment, does not describe lived experiences and themes not presented in a way that can be extracted to study.
Sasse & Gough (2005)	Paper discusses bullying, but does not address concept of social climate
Schafer & Peternelj-Taylor (2003)	Sample is prison based
Secker et al (2004)	Not a forensic sample
Somers & Bartlett (2014)	Does not discuss ward level factors, focused on pathway of care and organisational level issues
Spencer et al (2010)	Not a forensic sample or inpatient sample
Urheim et al. (2011)	Longitudinal case study of changes in patient autonomy in a forensic setting. Does not address social climate
Voogt et al (2015)	Not a forensic sample
Ward (2011)	Not a forensic sample

D: Data Extraction form and Quality Criteria

Data Extraction form					Quality Item	Quality Criteria Rating
Study Reference						
Study Type	Journal Article	Thesis	Book Chapter			
	Other					
Name of reviewer	Reviewer 1	Reviewer 2				
Eligible	Yes	No	Unclear			
Type of Study	Qualitative	Mixed Methods	Case Study			
	Other					
Participants	Staff	Patients	Both staff and patients			
	Other					
Setting	High Security	Medium Security	Low Security	DSPD unit		
	Other					
Country						
DESIGN						
Rationale for research						
Study Aims					1	-/+/++
Theoretical perspective					2	-/+/++
Ethical Concerns addressed	Ethics Approval	Informed Consent	Confidentiality		3	-/+/++
	Other					
Participants						
Participant Selection strategy					4	-/+/++
Participant Coverage	Response rate reported:					
Inclusion and exclusion criteria	Inclusion	Exclusion				
Sample Size						
Participant gender	Male	Female	Not recorded			
Data Collection						

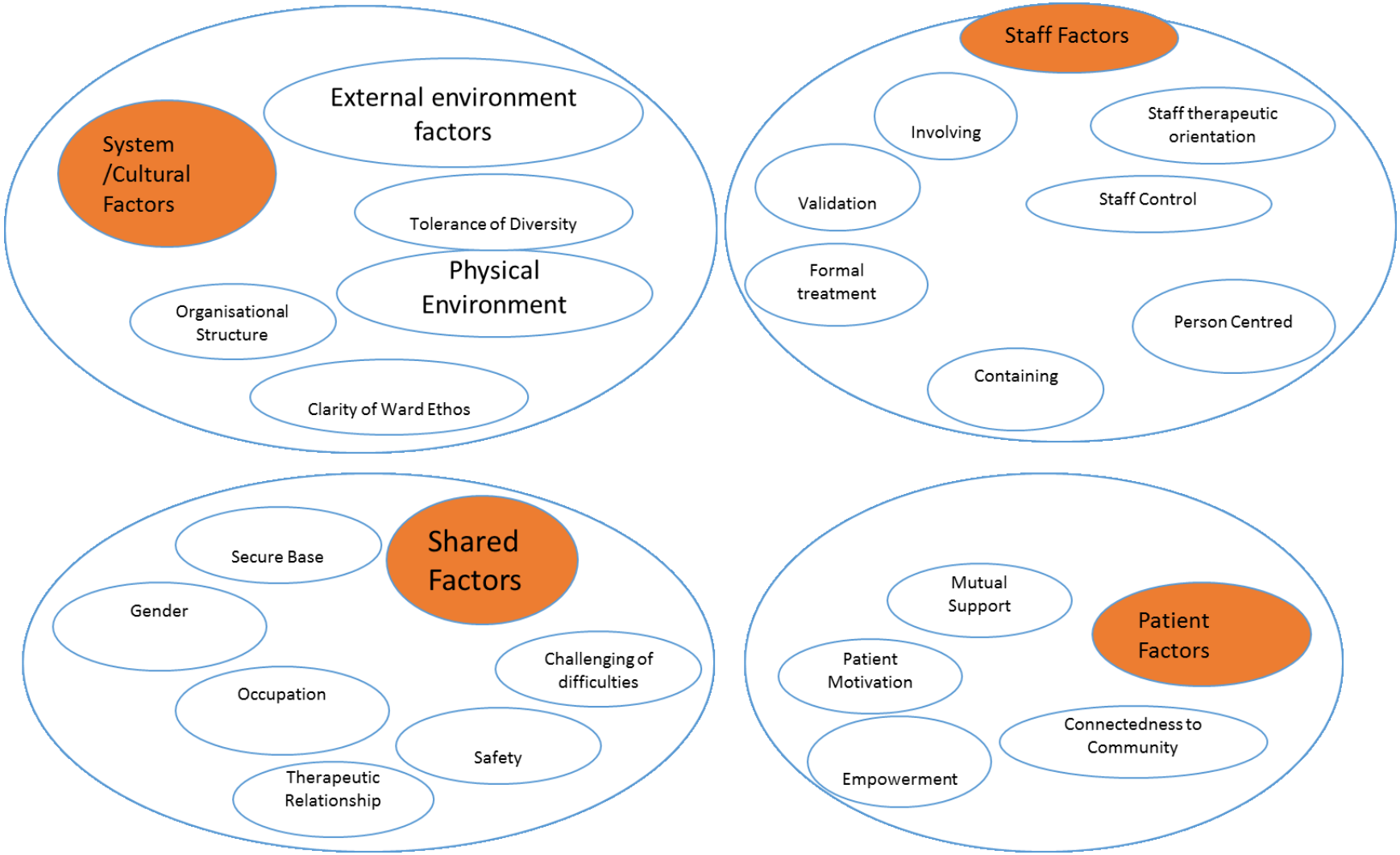
Method of Data collection	Interviews	Focus groups	Document Analysis	Surveys	Case Study	Ethnography	5	-/+/++
	Observation	Other						
Period of data collection								
Discussion of method selection								
Role of researcher Fieldwork / Field notes								
Analysis								
Data Analysis approach	Grounded Theory		Thematic Analysis		IPA		6	-/+/++
	Framework		Content Analysis		Other			
Description of analysis method								
Detail on context for individual and setting							7	-/+/++
Exploration of diversity in findings							8	-/+/++
Sources of Bias from researcher discussed								
FINDINGS								
Themes:								
Subthemes								
Credibility of findings							9	-/+/++
Conclusions								
Impact of findings							10	-/+/++
Clarity of Linkages							11	-/+/++
Clear Reporting							12	-/+/++
Outcome of Review								
Second reviewer	Not reviewed		In Agreement		Disagree			

Inclusion	Include	Exclude	Unclear		
Evaluative Summary				Final Rating	-/+/++

Quality Criteria Framework

Item		**Name**	Based on QC	Description	Rating
1	Design	**Study Design & Aims**	Cabinet Office 6, Carroll et al (1), CASP 1, 3	The study design is reported, is defensible, a rationale is provided and is appropriate to the question	-/+/++
2		**Explicit theoretical perspective**	Cabinet Office 16	Explicit coverage of the main hypotheses on which the evaluation was based. Discusses the ideological perspectives of the research team.	-/+/++
3		**Ethical Concerns**	Cabinet Office 17, CASP 7	Attention given to ethical concerns, including description of processes for gaining participant consent	-/+/++
4		**Participant Selection & Participant Coverage**	Cabinet Office 7, Cabinet Office 8, Carroll et al (2), CASP 4	The selection of participants is explicitly described How well is the eventual coverage of the final sample described	-/+/++
5		**Method of Data collection**	Cabinet Office 9 Carroll et al 3, CASP 5, 6	Details of data collection process are reported, including discussion of impact of method on data collected	-/+/++
6	Analysis	**Method of analysis**	Cabinet Office 10, Carroll et al 4, CASP 8	Description and rationale given for method of analysis. Description of how descriptive categories and constructed concepts were developed	-/+/++
7		**Contextual Information**	Cabinet Office 11	Description of both historical and social/organisational characteristics of study sites. Individual contributions are contextualised	-/+/++
8		**Exploration of diversity**	Cabinet Office 12	How well diversity of perspectives are explored. Attention shown to negative cases, outliers and exceptions	-/+/++
9	Findings	**Credibility of findings**	Cabinet Office 1, CASP 9	Findings make sense and have coherent logic and are supported by study evidence	-/+/++
10		**Impact of findings**	Cabinet Office 2	Discussion of how findings have contributed to knowledge and understanding	-/+/++
11	Reporting	**Clarity of Linkages**	Cabinet Office 14	Clear links between analytic commentary and presentation of original data	-/+/++
12		**Clear Reporting**		Reporting linked to study aim. Provides a clear narrative, and provides a structured commentary	-/+/++
Overall rating					-/+/++

E: Initial grouping of factors



F: Links between model of social climate and commonly used scales

Model of Social Climate Factors	WAS	EssenCES
Secure Base		
Therapeutic Relationship	Support	Therapeutic Hold
Mutual Support		Patient Cohesion and Mutual Support
Care and Treatment Orientation	Staff Control Spontaneity Autonomy Order and Organisation Program Clarity	
Therapies	Personal problem Orientation	
Meaningful Activity	Practical orientation	
Consistency		
Safety	Anger and Aggression	Experienced Safety
Involvement	Involvement	
Physical Environment		

G: Author Guidelines: Aggression and Violent Behavior

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All parts of the manuscript should be typewritten, double spaced, with margins of at least one inch on all sides. Number manuscript pages consecutively throughout the paper. Authors should also suppy a shortened version of the title suitable for the running head, not exceeding 50 character spaces. Each article should be summarized in an abstract of not more than 100 words. Avoid abbreviations, diagrams, and reference to the

text in the abstract. Each author should be listed with his or her primary departmental affiliation and institution name, and city/state/country (where applicable).

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Book: Millman, M. (1980). *Such a pretty face.* New York: W.W. Norton.
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J: Ethical Approval for Research study (IRAS)

Lothian NHS Board

South East Scotland Research Ethics Committee 02

Waverley Gate
2-4 Waterloo Place
Edinburgh
EH1 3EG
Telephone 0131 536 9000

www.nhslothian.scot.nhs.uk

NHS Lothian

Date 23 December 2014
Your Ref
Our Ref

Enquiries to: Joyce Clearie
Extension: 35674
Direct Line: 0131 465 5674
Email: Joyce.Clearie@nhslothian.scot.nhs.uk

23 December 2014

Mr Patrick Doyle
Forensic Community Mental Health Team
Lynebank Hospital
Dunfermline
KY11 4UW

Dear Mr Doyle

Study title:	**A case study of the implementation of an MBT staff reflective practice group in a low secure forensic mental health service.**
REC reference:	**14/SS/1105**
Protocol number:	**n/a**
IRAS project ID:	**162487**

Thank you for your letter of 23 December 2014 responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager, Ms Joyce Clearie, joyce.clearie@nhslothian.scot.nhs.uk. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

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The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.
There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from NRES. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

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Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Ward poster]	1.1	20 December 2014
Covering letter on headed paper [Response to REC]	1.0	23 December 2014
GP/consultant information sheets or letters [RMO information letter]	1.0	17 November 2014
GP/consultant information sheets or letters [GP information letter]	1.0	20 December 2014
Interview schedules or topic guides for participants [Patient Participant Interview Schedule]	1.0	30 October 2014
Interview schedules or topic guides for participants [Staff Participants Interview Schedule]	1.0	30 October 2014
Interview schedules or topic guides for participants [Managerial Participants Interview Schedule]	1.0	30 October 2014
IRAS Checklist XML [Checklist_25112014]		25 November 2014
Non-validated questionnaire [Staff Demographic Form]	1.0	17 October 2014
Other [CV_Ethel Quayle]	1.0	19 November 2014
Other [CV_Lynda Todd]	1.0	17 November 2014
Other [Anonymity sheet]	1.1	20 December 2014
Participant consent form [Consent form - Patient participants]	1.1	20 December 2014
Participant consent form [PCF staff]	1.1	20 December 2014
Participant information sheet (PIS) [PIS - Patient Participants]	1.1	20 December 2014
Participant information sheet (PIS) [PIS - Staff Participants]	1.1	20 December 2014
REC Application Form [REC_Form_25112014]		25 November 2014
Research protocol or project proposal [Protocol_1.0]	1.0	17 November 2014
Summary CV for Chief Investigator (CI) [CV_Patrick Doyle (CI)]	1.0	30 October 2014
Summary CV for supervisor (student research) [CV_Emily_Newman]	1.0	17 October 2014
Validated questionnaire [EssenCES]	1.0	17 October 2014
Validated questionnaire [WES-10]	1.0	17 October 2014
Validated questionnaire [PMI]	1.0	17 October 2014
Validated questionnaire [APDQ]	1.0	17 October 2014

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Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

14/SS/1105	Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

Lindsay Murray
Chair

NHS
Lothian

Email:joyce.clearie@nhslothian.scot.nhs.uk

Enclosures: "After ethical review – guidance for researchers" *[SL-AR2]*

Copy to: *Mrs Jo-Anne Robertson*
Mrs Aileen Yell, Research Governance Officer

K: Research and Development Approval for main study

Medical Director

Hayfield House
Hayfield Road
KIRKCALDY
KY2 5AH

NHS Fife

Mr Patrick Doyle
Forensic Community Mental Health Team
Lynebank Hospital
DUNFERMLINE

7 January 2015
Our Ref *14-091 14/SS/1105*

Enquiries to *Aileen Yell*
E-mail *aileenyell@nhs.net*
Telephone *01383 623623 Ext 20940*
Website *www.nhsfife.org*

Dear Mr Doyle

Project Title: A case study of the implementation of an MBT staff reflective practice group in a low secure forensic mental health service

Thank you for your application to carry out the above project. Your project documentation (detailed below) has been reviewed for resource and financial implications for NHS Fife and I am happy to inform you that NHS permission for the above research has been granted on the basis described in the application form, protocol and supporting documentation. The documents reviewed were:

Document	Version	Date
Protocol	1.0	17 November 2014
IRAS R&D Form	3.5	24 November 2014
IRAS SSI Form	3.5	24 November 2014
REC provisional favourable opinion letter		19 December 2014
REC final favourable opinion letter		23 December 2014
Documents referred to in REC letter dated 23.12.14		

The terms of the approval state that you are the Principal investigator authorised to undertake this study within NHS Fife, with assistance from Dr Lynda Todd.

I note that the favourable ethical opinion applies to all NHS sites taking part in the study therefore no separate Site Specific Review is required in this case.

The sponsors for this study are University of Edinburgh.

Details of our participation in studies will be included in annual returns we are expected to complete as part of our agreement with the Chief Scientist Office. Regular reports of the study require to be submitted. Your first report should be submitted to Dr A Wood, R&D Manager, R&D Department, Queen Margaret Hospital, Whitefield Rd, Dunfermline, KY12 OSU (Amanda.wood3@nhs.net) in 12 months time and subsequently at yearly intervals until the work is completed. A Lay Summary will also be required upon completion of the project.

In addition, approval is granted subject to the following conditions:-

All research activity must comply with the standards detailed in the Research Governance Framework for Health & Community Care

NHS
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(http://www.cso.scot.nhs.uk/publications/resgov/resgov.htm), health & safety regulations, data protection principles, other appropriate statutory legislation and in accordance with Good Clinical Practice (GCP).

Any amendments which may subsequently be made to the study should also be notified to Aileen Yell, Research Governance Officer (aileenyell@nhs.net) , as well as the appropriate regulatory authorities. Notification should also be given of any new research team members post approval and/or any changes to the status of the project.

This organisation is required to monitor research to ensure compliance with the Research Governance Framework and other legal and regulatory requirements. This is achieved by random audit of research. You will be required to assist with and provide information in regard to monitoring and study outcomes (including providing recruitment figures to the R&D office as and when required).

As custodian of the information collated during this research project you are responsible for ensuring the security of all personal information collected in line with NHS Scotland IT Security Policies, until the destruction of this data.

Permission is only granted for the activities for which a favourable opinion has been given by the REC (and which have been authorised by the MHRA where appropriate).

The research sponsor or the Chief Investigator or local Principal Investigator at a research site may take appropriate urgent safety measures in order to protect research participants against any immediate hazard to their health or safety. The R&D office (aileenyell@nhs.net) should be notified that such measures have been taken. The notification should also include the reasons why the measures were taken and the plan for further action. The R&D office should be notified within the same time frame of notifying the REC and any other regulatory bodies.

I would like to wish you every success with your study and look forward to receiving a summary of the findings for dissemination once the project is complete.

Yours sincerely

pp **DR BRIAN MONTGOMERY**
Medical Director
NHS Fife

Cc : Aileen Yell, Research Governance Officer, NIIS Fife, Queen Margaret Hospital, Dunfermline

L: Caldicott Approval for main research study

IG Ref No. 41949

NHS
Fife

Administration only: Appendix 6
Date application received DPCC / /
Expected Approval date / /

APPLICATION FOR CALDICOTT APPROVAL FOR USE OF PATIENT IDENTIFIABLE DATA

User Details

Name:	Patrick Doyle
Position:	Trainee Clinical Psychologist
Organisation:	NHS Fife (Fife forensic mental health service)
Address:	therapy Corridor
	Lynebank Hospital
	Halbeath Rd. DUNFERMLINE
Postcode:	KY11 4UW
Tel. No.:	01383 565 212 (ext 35212)
E-mail:	patrickdoyle1@nhs.net
Name(s) of any co-user(s):	Dr Lynda Todd

You must address the 6 Caldicott Principles when submitting this request for data

1. Project/Audit title

A case study of the implementation of an MBT staff reflective practice group in a low secure forensic mental health service.

2. Please provide additional background description of your project/audit to enable Caldicott Guardian to understand what outcome you trying to achieve.

The project is a case study approach to evaluate the potential benefit of adopting a Mentalization Based Treatment (MBT) model of training and reflective practice for staff members on a Low Secure forensic mental health ward. The sample will be drawn from the staff and patients on Radernie ward, Stratheden Hospital, NHS Fife. The training and reflective practice components will be available to all staff, regardless of their participation in the research.

The intervention will involve a one day MBT training, accredited by the Anna Freud Centre, for all staff on the Low secure ward. This will be followed by fortnightly reflective practice / case consultation sessions facilitated by an MBT Scotland accredited clinician.

The main research question is to examine the impact of MBT focussed staff reflective practice sessions. This leads to related secondary research questions to examine the impact of the intervention for both staff and patients.

Alongside this, the study will aim to examine the process of implementation of the intervention to examine the feasibility of this type of intervention in a naturalistic setting. This study of implementation factors will also allow us to gain a deeper understanding of any processes through which the intervention influences the therapeutic environment of the ward.

Data collection will focus on both staff and patients. Data will be collected through questionnaires, qualitative interviews, routinely collected information, and ward based observations. The study is proposed to have a 2-month baseline period, followed by nine months of intervention.

The study constitutes the research thesis contributing to the applicants Doctorate in Clinical Psychology.

The application for Caldicott approval relates to identifying participating patients' age at time of study and diagnosis from clinical file notes. This is to provide context and descriptive information on the patient group involved for dissemination of the research. Only summary information will be presented in the report.

3. Supporting information

Please list and attach any other supporting information, e.g. Project proposal, ethics approval, data protocol, safe haven arrangements, correspondence.

The study has received a favourable opinion from REC (attached)
The study has been approved by R & D in NHS Fife (attached)
The study protocol is attached.

4. Name of organisation receiving data (if not within NHS Fife)

Patrick Doyle (Trainee Clinical Psychologist), a member of staff in the Fife Forensic mental health Service will identify the relevant information (q5) in the patients Risk assessment document which are electronically available on a secure network drive. These documents contain items on mental illness and personality disorder, as well as the age of the participants. This will be the only file data accessed. Data will be summarised as it is collected so that only aggregate data is stored. There is a secure limited access folder on a secure network drive associated with the research which only Dr Lynda Todd (Consultant Clinical Psychologist) and Patrick Doyle (Trainee Clinical Psychologist) can access.

The University of Edinburgh is also involved in the research through research supervisors Dr Ethel Quayle and Dr Emily Newman. The aggregated non-identifiable information will be the only information shared with the university in the form of the final research report. The final study report is likely to be submitted for research publication. Only aggregated, non-identifiable data will be presented in any published reports.

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Fife

5. **What patient identifiable information are you looking to use? (please tick where relevant)**

CHI Number	
Forename	
Surname	
Initials	
Age	✓
Date of birth	
Gender	
Address	
Postcode	
Other, please specify.....	Psychiatric Diagnosis (from file information)

6. **Please explain how the proposal meets the following Six Caldicott Principles.** (The Caldicott Committee Report on the Review of Patient-Identifiable Information. Department of Health, December 1997)

Justify the purpose

Principle 1 Justify the purpose(s)	Every proposed use or transfer of patient-identifiable information within or from an organisation should be clearly defined and scrutinised, with continuing uses regularly reviewed, by an appropriate guardian.

The proposed use of patient data will provide valuable context to the intervention as a whole. This will provide context for the research in terms of the patient group being studied. Information from the patients risk assessment document will provide the most accurate diagnosis information and will be the only information reviewed.

Justify the requirement to use patient-identifiable data

Principle 2 Don't use patient-identifiable information unless it is absolutely necessary	Patient-identifiable information items should not be included unless it is essential for the specified purpose(s) of that flow. The need for patients to be identified should be considered at each stage of satisfying the purpose(s).

Diagnostic information is seen as key to describing the context of the intervention. Without a description of the psychiatric diagnoses of the patient group it would be difficult for others in similar settings to decide whether to implement a similar approach, should the research find a beneficial effect. This will limit the applicability of the research.

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Diagnostic data collected from patient files will be collected by Patrick Doyle (Trainee Clinical Psychologist), a member of staff in the Fife Forensic mental health Service will identify the relevant diagnostic information in the patients Risk assessment document which are electronically available on a secure network drive. These documents contain items on mental illness and personality disorder, as well as the age of the participants. The data will be collected and summarised in a word document, with only the summary information collected. For example as each patient's information is reviewed the age range and mean age of participants will be updated, along with the numbers of patients in each diagnostic category.

Summary information only will be used to develop the summary report. From this point data will be non-identifiable. The information will only be shared with Dr Lynda Todd and University of Edinburgh research collaborators Dr Ethel Quayle and Dr Emily Newman in non-identifiable, summary form

Information will only be collected in relation to the patients that have consented to take part in a research project that commenced on Radernie ward in January 2015. This research project was granted ethical approval by the South East Scotland REC in December 2014 (See Attached REC approval). Patients were provided with an information sheet about the study and proved written informed consent to take part in the research. Patients deemed to lack consent to participate by the treating clinical team were not approached to take part in the study.

Only diagnostic information related to age and psychiatric diagnosis will be accessed. Information on diagnosis will only be presented in the section of the research article describing the participants. As the sample is small (7 patients) any diagnoses that are only relevant to 2 or fewer persons will be presented as "Other Psychoses" or "other Personality Disorder" in the final study report to protect anonymity. Age breakdowns will not be linked to diagnoses.

Patient diagnosis will not be linked to patient data sets and will not be linked at any point in the study report (for example, individuals taking part in qualitative interviews will not be described as "P1, a patient diagnosed with Schizophrenia").

As an exemplar of what the final study report may look like:
7 patients took part in the research (Mean age 44.12; Range 26 - 51). All patients had a diagnosis of a psychotic disorder with 4 patients having a diagnosis of schizophrenia and 3 having Other Psychotic disorders. Five patients had a diagnosis of personality disorder, with 4 having a diagnosis of Antisocial Personality disorder.

Justify the inclusion of each data field required

Principle 3 Use the minimum necessary patient identifiable information	Where use of patient-identifiable information is considered to be essential, the inclusion of each individual item of information should be considered and justified so that the minimum amount of identifiable information is transferred or accessible as is necessary for a given function to be carried out.

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The data collected has been minimised to diagnosis and age to reduce the burden of potentially identifiable information. As data will be collected from only a small number of patients this was seen as the minimum that could be selected to describe the population. Without some description of the patient group it would be difficult for others in similar settings to decide whether to implement a similar approach, should the research find a beneficial effect. This will limit the applicability of the research.

Dr Lynda Todd will review the findings to ensure anonymity. As she has worked with the participants in a clinical role she will be ideally placed to confirm there is no risk of identifying individual patients.

The age information will only be presented in summary form, e.g. (Age range 24 – 56 (mean 32.3). All participants in the research study are adults.

Please outline arrangements for access to information

Principle 4 Access to patient-identifiable information should be on a strict need-to-know basis	Only those individuals who need access to patient-identifiable information should have access to it, and they should only have access to the information items that they need to see. This may mean introducing access controls or splitting information flows where one information flow is used for several purposes.

The proposal is for Dr Lynda Todd to collect and record the summary data. Any data stored securely will only include summary data (no. of patients, no. of diagnoses, age range and mean). Data will be maintained on a password -protected Word Document in a secure limited access folder on a NHS Fife network drive.

For all reports based on the research data, only the summary data for the participants as a whole will be presented.

Please outline action taken to ensure compliance with responsibilities and obligations to respect patient confidentiality

Principle 5 Everyone with access to patient-identifiable information should be aware of their responsibilities	Action should be taken to ensure that those handling patient-identifiable information - both clinical and non-clinical staff - are made fully aware of their responsibilities and obligations to respect patient confidentiality.

I, Patrick Doyle, am aware of the primacy of patient confidentiality and the need to justify use of any patient identifiable information. The research proposal as a whole has been reviewed and approved by REC and local R & D.

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NHS
Fife

I, Patrick Doyle, have completed the MRC Research Data and Confidentiality online module along with the Safe Information Handling (Foundation Level) Learnpro module.

Please outline organisational compliance with legal requirements

Principle 6 Understand and comply with the law	Every use of patient-identifiable information must be lawful. Someone in each organisation handling patient information should be responsible for ensuring that the organisation complies with legal requirements.

There will be no transfer of patient identifiable information to other organisations. The data will be collected and summarised in NHS Fife and only non-identifiable summary data will be shared though wider research reports.

7. **Has your application been to Research Ethics** **YES/NO**
If not, please explain why (i.e. not research)

The application has been granted a favourable opinion by the South East Scotland Research Ethics Committee (SESREC). Letter of favourable opinion is attached.

8. **Who is the data custodian for the NHS data?**

Name: Patrick Doyle

Job Title: Trainee Clinical Psychologist

Return Address: Fife forensic mental health service
Therapy Corridor
Lynebank Hospital
Halbeath Rd.
DUNFERMLINE,
KY11 4UW

Email Address: patrickdoyle1@nhs.net

Telephone Number: **01383 565 212 (ext 35212)**

Signature: ..... Date: 7/4/16

Review Date Dec 2016

V6-Dec2013

IG Ref No. 41949

NHS
Fife

Counter-signature by Line Manager

Name: Dr Lynda Todd

Job Title: Consultant Clinical Psychologist

Signature: ..... Date: 7/4/16

Please forward to:

Data Protection & Caldicott Coordinator (DPCC)
NHS Fife
Information Services Department
Lynebank Hospital
Dunfermline KY11 8JH

Counter-signature by Acute Services/Primary Care Caldicott Guardian

Name:

Job Title:

Signature: ..... Date: .....

I authorise access to the data as noted above:

Signature: ..... Date: 14.4.16

DR FRANCES ELLIOT
Caldicott Guardian for NHS Fife

Expiry date

Review Date Dec 2016

V6-Dec2013

IG Ref No. 41949

NHS
Fife

An expiry date of / / has been set for this application. If your audit, project or evaluation runs over that date, you must submit a Continuation request. See C9 Confidentiality Policy Appendix 9.

ADMIN USE ONLY

Applicant's Name & Project Title	
Date application received Data Protection Caldicott Coordinator (DPCC)	
Expected Approval Date (20 working days)	
Date sent for approval to CG Acute/PC	
Date sent to Board CG for formal approval	
Date received by DPCC	
Date applicant informed	
20 days timescale met?	Y N

M: Participant Information Sheets

THE UNIVERSITY of EDINBURGH

Section of Clinical and Health Psychology
School of Health in Social Science
The University of Edinburgh
Medical School
Teviot Place
Edinburgh
EH8 9AG

NHS Fife

Department of Psychology
Lynebank Hospital
Halbeath Rd.
Dunfermline
KY11 4UW

Tel: 01383 565 210

Participant Information Sheet - Staff

Study title: A ward case study of Mentalization Based Treatment (MBT).

We would like to invite you to take part in our research project. Before you decide we would like you to understand why this research is being carried out and what it would involve for you. This information sheet tells you the purpose of this study and what will happen to you if you take part.

Please ask if there is anything that is not clear, and you are welcome to talk to others about this research study.

What the study is looking at

As you may know, a program of staff training and a staff group based on a psychological approach called Mentalization Based Treatment (MBT) is about to commence on the ward.

This study is to see if this training and staff group approach will lead to any changes on the ward.

The study is looking at the impact of this training on how the ward environment is seen by both staff members and patients on the ward.

We are also looking at some other outcomes that other research tells us might be important, including staff levels of stress, patient motivation and staff attitudes towards personality disorders.

Why have I been invited?

As you are a staff member working on Radernie ward we are interested in your experience of the MBT training and staff group that is about to be introduced on the ward. We want to know both if the training and group lead to changes in your practice, and your thoughts on the group and training in general. All staff members and patients on the ward will be invited to take part.

If you agree to participate:

The study will run for a year. If you leave the ward staff team, you will no longer be able to take part in the study. We will use any data collected from you to that point as part of our results, unless you tell us not to.

1. Over the next 12 months you will be asked to complete:
   - a brief questionnaire every month, which asks you about your opinion of the ward environment.
   - a second questionnaire that looks at your experience of work related stress, on four occasions.
   - a third questionnaire, asking about attitudes towards personality disorders on five occasions

These questionnaires will take approximately 10 -15 minutes in total.

2. We will ask some staff members to take part in an interview with Patrick Doyle, Trainee Clinical Psychologist. This interview will ask in more depth about your opinions of the ward atmosphere, what it is like to work on the ward and your opinions of the training and reflective group. These interviews will happen on three different times throughout the year.
This will take approximately 40 minutes. The interviews will be recorded. These recordings will be transcribed and the recordings will be deleted.

3. Patrick Doyle, Trainee Clinical Psychologist, will complete some observations on the ward. Each of these observations will focus on staff – patient interactions and will measure any changes in how much time staff and patients spend talking to each other over the study period. These observations will happen four times over the year.

We do not expect to find inappropriate staff behaviours but if a deviation from normal professional practice is highlighted we will raise this with the Senior Charge Nurse.

Do I have to take part?

No, participation in this study is entirely voluntary. You can choose to say yes or no to taking part. You can choose to talk to someone who is not involved in the research about taking part. The details for this person are at the end of this leaflet.

If you choose not to take part you can still take part in the MBT training session and the Reflective Practice group on the ward. You can choose to take part only in only some parts of the study. This is outlined in the consent form.

If you decide to take part, you are free to withdraw from the study at any time and without giving a reason. The information you have provided while you were part of the study will be used in the study analysis. If you do not want this to happen, let us know and we will remove your information from the study.

Confidentiality & Anonymity

Any information we collect from you will be confidential. This means that any information you give will be treated with the strictest confidence and not shared with anyone outside of the research team. We will ensure that information you give us is kept safe. All study information will be kept in a password protected file on a password protected NHS computer. All hard copies of forms will be kept in a locked filing cabinet in the Psychology Department at Stratheden Hospital.

The information collected and used for the study will be anonymised, which means that your name and personal details will be removed. This means that no one will be able to identify the people who took part in the study.

The data collected will be stored securely.

What are the possible disadvantages and risks to taking part?

Taking part in research interviews can sometimes be distressing. We will be asking you about your experiences of working on Radernie ward and your relationships with the patients on the ward. Taking part in the MBT staff group sessions can also potentially be distressing of there is conflict with other members of the staff team. However, the facilitator will work to minimise any distress in these instances.

What are the possible benefits of taking part?

The research study will help us to understand whether MBT Skills training and staff MBT group sessions are helpful. If you choose to take part in the study you will be able to express your views on the positive and negative aspects of the MBT approach.

Ethical review

All research is submitted for an ethical review prior to approval. This study has been reviewed and given favourable opinion by a Research Ethics Committee. The University of Edinburgh is the sponsor for this research study.

Reporting of Results

The results of this research study will be submitted as part of a Doctorate in Clinical Psychology at the University of Edinburgh. We also hope to publish the outcomes in an academic journal. We will also write a report for the staff and patients on Radernie ward.

The report will not name any individuals. Some of the information presented will be for the group as a whole. Some quotes from interviews will be used to explain the findings. These quotes will not be identifiable.

Complaints and Concerns

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions.

You may also contact my clinical supervisor, Dr Lynda Todd (address below). Alternatively you can contact my academic supervisor, Dr Emily Newman (address below).

If you believe that you have been harmed in any way by taking part in this study you have the right to pursue a complaint and any resulting compensation through the University of Edinburgh who are acting as the research sponsor. Further details about this are available from the research team or by emailing complaints@ed.ac.uk

Contact Details:

Researcher:
Mr Patrick Doyle
Trainee Clinical Psychologist
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DUNFERMLINE
KY11 4UW 01383 565 212

Clinical Supervisor:
Dr Lynda Todd
Consultant Clinical Psychologist
Forensic Community Mental Health Team
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Academic Supervisors:
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Lecturer
School of Health in Social Science
The University of Edinburgh,
Medical School, Teviot Place, Edinburgh
EH8 9AG 0131 651 3945

Dr Ethel Quayle
Senior Lecturer
School of Health in Social Science
The University of Edinburgh,
Medical School, Teviot Place, Edinburgh
EH8 9AG 0131 650 4272

Below are contact details for an individual who is part of the University, but is not involved in the research. You may wish to contact Prof. Schwannauer for further advice about taking part in the study:

Prof. Matthias Schwannauer
Professor of Clinical Psychology
Head of Clinical and Health Psychology
School of Health in Social Science
The University of Edinburgh, Medical School
Teviot Place, Edinburgh,
EH8 9AG 0131 651 3954

If you wish to make a complaint about the study please contact NHS Fife:

Patient Relations Department
Fife NHS Board
Room 104
Hayfield House
Hayfield Road
Kirkcaldy
KY2 5AH

Tel: 01592 648153
Email: patientrelations.fife@nhs.net

THE UNIVERSITY of EDINBURGH

Section of Clinical and Health Psychology
School of Health in Social Science
The University of Edinburgh
Medical School
Teviot Place
Edinburgh
EH8 9AG

NHS Fife

Department of Psychology
Lynebank Hospital
Halbeath Rd.
Dunfermline
KY11 4UW

Tel: 01383 565 210

Participant Information Sheet – Patient Version

Study title: A ward case study of Mentalization Based Treatment (MBT).

We would like to invite you to take part in our research study. Before you decide we would like you to understand why this study is being carried out and what it would involve for you.

Please ask if there is anything that is not clear and you are welcome to talk to others about this research study.

What is the study?

We want to see if a certain type of staff training will lead to positive changes on the ward. This training is based on a psychological approach called "Mentalization based treatment"

We will check if this training is helpful by looking at how staff members and patients feel about the ward environment. We will also measure staff levels of stress, how motivated patients feel, and look at staff attitudes.

Why have I been invited?

All patients on Radernie ward are being invited to take part. We are interested to see if you, the patients on the ward, notice any changes when we are running the staff training.

If you agree to take part;

We will be running the study for one year, from January 2015 to December 2015. We know that people can be discharged from the ward during this time. This is okay. You can choose to take part or not take part in the study. There will be no difference to your clinical care or your discharge planning either way.

There are three different parts of the study:

1. Over the next 12 months;
   - You will be asked to fill in a short questionnaire every month about your opinion of the ward environment.
   - You will be asked to fill in another questionnaire at four different times that looks at how you feel about your treatment.

This will take around 5 - 10 minutes each time.

2. We will ask some patients to take part in an interview with Patrick Doyle, Trainee Clinical Psychologist. This interview will ask in more detail about your opinions of the ward, and about what it is like to be a patient on this ward. These interviews will happen at three different times throughout the year. This will take around 40 minutes each time. The interview will be recorded, then transcribed. The transcribed interviews will be made anonymous and the recording deleted.

3. We will also complete some observations on the ward. These observations look at how much time staff and patients spend talking to each other. We will only be looking at how much time is spent and we will not be listening to what staff and patients say to each other. These observations will happen four times over the year.

We do not expect to find inappropriate staff behaviours but if we see anything that is worrying we will raise this with the Senior Charge Nurse.

Do I have to take part?

No, taking part in the study is voluntary. You can choose to say yes or no to taking part. Taking part, or not taking part, will have no impact on your clinical care or discharge planning.

If you agree to take part you can change your mind at any stage and withdraw from the study without giving a reason. The information you have given while you were part of the study will still be used. If you do not want this to happen, let us know and we will remove your information from the study.

You can choose to take part only in only some parts of the study. This is outlined in the consent form. You can choose to talk to someone who is not involved in the research about taking part. The details for this person are at the end of this leaflet.

Confidentiality & Anonymity

Any information we collect from you will be confidential. This means that any information you give will be treated with the strictest confidence and not shared with anyone outside of the research team. We will ensure that information you give us is kept safe. All study information will be kept in a password protected file on a password protected NHS computer. All hard copies of forms will be kept in a locked filing cabinet in the Psychology Department at Stratheden Hospital.

The information collected and used for the study will be anonymised, which means that your name and personal details will be removed. This means that no one will be able to identify the people who took part in the study.

The data collected will be stored securely.

If you agree to take part, we will ask for your consent to inform your psychiatrist and your GP that you are taking part in the study.

What are the possible disadvantages and risks of taking part?

We will be asking you to complete questionnaires and research interviews. Sometimes research interviews can be stressful for people. The research interview will focus on your experiences on Radernie ward as well as your thoughts on other wards you may have been on in the past. This could be upsetting.

During the interview, we will not ask about any crimes you may have committed. If you tell us about any crimes you have committed, that your clinical team does not know about, then we may have to report this.

What are the possible benefits of taking part?

The study will help us to understand if the staff training has benefits for patients. Taking part gives you a chance to tell us if you notice any positive or negative changes while the study is running. The study gives you a chance to tell us your views about the ward.

Ethical review

All research is sent for an ethical review before being approved. The review checks if the study is worthwhile and checks to see if any part of the study might be harmful. This study has been reviewed and given favourable opinion by a Research Ethics Committee. The University of Edinburgh is the sponsor for this research study.

Reporting of Results

The results of this research study will be submitted as part of a Doctorate in Clinical Psychology at the University of Edinburgh. We also hope to publish the outcomes in an academic journal. We will also write a report for the staff and patients on Radernie ward.

The report will not name any individuals. Some of the information presented will be for the group as a whole. Some quotes from interviews will be used to explain the findings. These quotes will not be identifiable.

Complaints and Concerns

If you have a concern about this study, you can ask to speak to the researchers who will do their best to answer your questions.

You may also contact my clinical supervisor, Dr Lynda Todd (address below). Alternatively you can contact my academic supervisor, Dr Emily Newman (address below).

If you believe that you have been harmed in any way by taking part in this study you have the right to pursue a complaint and any resulting compensation through the University of Edinburgh who are acting as the research sponsor. Further details about this are available from the research team or by emailing complaints@ed.ac.uk

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Dr Emily Newman
Lecturer
School of Health in Social Science
The University of Edinburgh,
Medical School, Teviot Place, Edinburgh
EH8 9AG 0131 651 3945

Dr Ethel Quayle
Senior Lecturer
School of Health in Social Science
The University of Edinburgh,
Medical School, Teviot Place, Edinburgh
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Below are contact details for an individual who is part of the University, but is not involved in the research. You may wish to contact Prof. Schwannauer for further advice about taking part in the study:

Prof. Matthias Schwannauer
Professor of Clinical Psychology
Head of Clinical and Health Psychology
School of Health in Social Science
The University of Edinburgh, Medical School
Teviot Place, Edinburgh,
EH8 9AG 0131 651 3954

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Patient Relations Department
Fife NHS Board
Room 104
Hayfield House
Hayfield Road
Kirkcaldy
KY2 5AH

Tel: 01592 648153
Email: patientrelations.fife@nhs.net

N: Observation Schedule

Behaviour to be recorded: **Any staff and patient engaged in a conversation/verbal interaction.**

Interval of measurement: 00: 30s

Each sheet records 30 minutes – Record start time at top of each column

For 'Present' column Record: 0 = absent 1 = present

For '2 or more' column: 1 = present

Record behaviour if it is present **AT THE END** of the recording period

Interval	Start time	Present	2 or more	Notes: Number of staff and Patients Present
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
END OF 15 minutes. Break for 1 minute				

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Qualitative Interview Schedule – Patient Participant

Title of Project: **A case study of the impact of a Mentalization based treatment (MBT) staff intervention on a Low Secure Forensic Mental health ward**

Name of Researcher: **Patrick Doyle**

Start of study

1. Can you tell me about your experience of being a patient on this ward?
Prompts – likes, dislikes, positive and negative experiences.

2. Do you feel that you have a good relationship with staff?
Prompts – staff members you get on with, feel able to approach someone if there is a problem, availability of staff

3. How does this ward compare to other wards that you have been on in the past?
Prompt – differences, similarities, any changes over time.

4. Do you think the ward has a good atmosphere?
Prompt – feel safe, feel contained, feel supported?

5. Do you feel motivated to get involved in activities on the ward?
Prompt – List available activities, barriers, things that help

6. How could the ward be improved?

Midpoint and End point interviews Supplemental Questions

1. Has anything changed on the ward over the last year?

2. What things can you observe about the ward that has changed over the last year?

3. Has there been any changes in how motivated you have felt to get involved in activities and therapies on the ward?
Prompts – OT activities, therapy groups, other activities

3. What do you think has led to this change?

4. Has there been any changes in your interactions with staff?

Is there anything else you would like to add that hasn't been covered in the questions?

Schedule date: 17.10.14 Schedule version number: 1.0

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Qualitative Interview Schedule – Staff Participant

Title of Project: **A case study of the impact of a Mentalization based treatment (MBT) staff intervention on a Low Secure Forensic Mental health ward**

Name of Researcher: **Patrick Doyle**

Start of study

1. Can you tell me about your experience of working on this ward?
Prompts – likes, dislikes, positive and negative experiences.
2. Do you feel that you have a good relationship with patients on the ward?
Prompts – patients respond well to being approached, feel comfortable around patients?
3. What are some of the issues you find with working with the patient group in this ward?
Prompts: Forensic Issues,
3. How does this ward compare to other wards that you have worked on in the past?
Prompt – differences, similarities, any changes over time, *support structures*
4. What are your thoughts on the upcoming MBT training and staff group?
Prompt – worries, opportunities, what you might gain, current knowledge
5. Do you think the ward has a good atmosphere?
Prompt – feel safe, feel contained, feel supported, supportive for patients?
6. How could the ward be improved?

Midpoint and End point interviews Supplemental Questions

1. Has anything changed on the ward over the last year?
Prompts – ward atmosphere, staff-patient relationships, staff and patient motivation
2. Has there been any changes in how supported you have felt in your work?
3. Have you noticed any change across the staff team as a whole?
4. What things do you think has contribute to this change?
5. Has there been any changes in your interactions with patients, or your practice more generally?
5. Thinking specifically about the MBT training and reflective practice group, what are your thought about these?
Prompts – worthwhile, useful to practice, negatives of group
6. Were you able to attend the training and groups?
7. Did you notice any particular difficulties about how the groups were run?
Prompts – Accessibility, usefulness, supported by management, available to all staff, impact on time available to spend with patients
8. Have other things that have been happening on the ward influenced some of the changes you have described?
Prompts – Low Intensity groups, New to Forensic, New to Forensic: Essentials of Psychological Care, other staff training, changes in patient group, staffing changes
9. Has the MBT training and the staff group matched your expectations?
Prompts: Disappointments, Differences.
Is there anything else you would like to add that hasn't been covered in the questions?

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Qualitative Interview Schedule – Management team Participant

Title of Project: **A case study of the impact of a Mentalization based treatment (MBT) staff intervention on a Low Secure Forensic Mental health ward**

Name of Researcher: **Patrick Doyle**

Start of study

1. What is your opinion of the upcoming MBT training and reflective practice groups*?*
Prompts –concerns, opportunities
2. What are the main barriers to implementing the staff groups?
3. Do you feel that staff have a good relationship with patients on the ward?
Prompts – patients respond well to being approached, staff feel comfortable around patients?
4. Do you think the ward has a good atmosphere?
Prompt – feel safe, feel contained, feel supported, supportive for patients?
5. How has the atmosphere on the ward developed since the ward opened?
Prompt – differences, similarities, any changes over time.
6. How could the ward be improved?
7. What challenges does the ward face at the moment?
7. What changes do you hope to see as a result of this new service development?

Midpoint and End point interviews Supplemental Questions

1. What is your impression of how the MBT training and reflective practice sessions have run over the last year?
Prompts: usefulness, barriers to implementation
2. Has anything changed on the ward over the last year?
Prompts – ward atmosphere, staff-patient relationships, staff and patient motivation
3. Have you noticed any change across the staff team as a whole?
4. What things do you think has contribute to this change?
5. Thinking specifically about the MBT training and reflective practice group, what are your thought about these?
Prompts – worthwhile, useful to practice, negatives of group, benefits to ward
6. Were you able to attend the training and groups?
7. Did you notice any particular difficulties about how the groups were run?
Prompts – Accessibility, usefulness, supported by management, available to all staff, impact on time available to spend with patients
8. Have other things that have been happening on the ward influenced some of the changes you have described?
Prompts – Low Intensity groups, New to Forensic, New to Forensic: Essentials of Psychological Care, other staff training, changes in patient group, staffing changes
9. Did the MBT approach match your initial expectations?
10. What do you think about the research evaluation more generally?
11. Has the evaluation (questionnaires, interviews, observations and routine data) been acceptable to staff?
12. Has the study evaluation interfered with the routine running of the ward?
Prompts: - Burdens on patients, Burdens on staff, time taken, linking data collection to outcomes
13. What would you change about how the study was evaluated?
Is there anything else you would like to add that hasn't been covered in the questions?

P: Example of Development of themes to framework

Interviews were transcribed with a focus on accuracy of content, with only interruptions to the flow of speech, such as long pauses or laughter, recorded (Gale et al., 2013). Following transcription, the lead author familiarised himself with the data by reading through transcripts and re-listening to accounts with impressions and thoughts recorded in memos.

Baseline patient interviews (n=3) were then coded individually and sequentially resulting in 65 initial codes. The codes were then reviewed, to form an initial coding framework with 56 codes. Each code was given a brief definition. This coding framework was then applied to the remaining staff interviews from the baseline phase (n=4, 2 staff, 2 managerial), with extra care given to data that did not fit the framework. Following this the coding was again reviewed, with reference to memos made throughout the process with codes further defined and clarified (Gale et al., 2013).

At this point codes were grouped into categories, through looking at commonalities and differences across patients. There were 67 codes across 14 categories in the initial framework. The categories were examined for commonalities and through this process

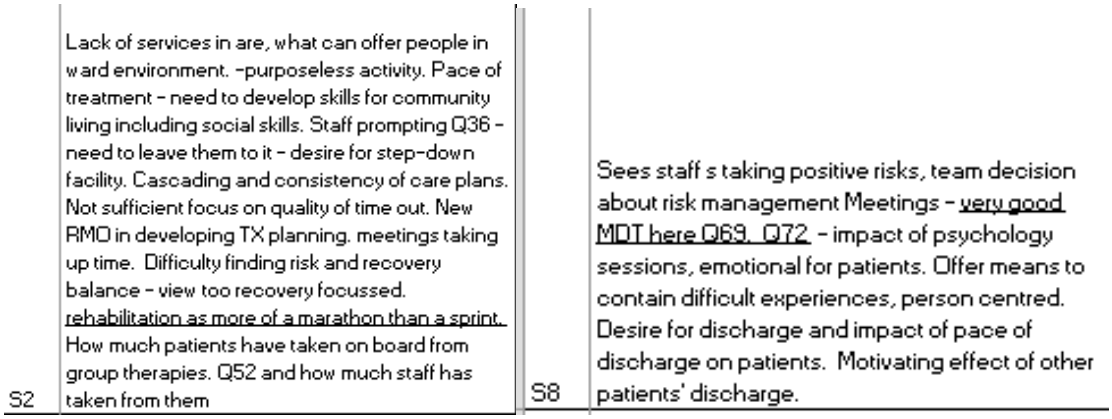
grouped into five categories: the therapeutic relationship, current treatment & future progress, structure rules & restrictions, the social climate, and staff skills and supports (Figure 2).

Figure 2: Categories, themes and coding applications

Media	Current treatment and future	Informal Structures and	Care and	Helping Actions	Pass/Time Out	Person Centred	Routine	Testing Out	The Outside world	Family	The Future	Unreality of	Therapeutic Input	Clinical Team	Medication	Psychological	Rehabilitation	Structured	Things to do	Staff Skills and Supports	Staff Qualities & Skills	Boundaries	Reflecting	Staff -	Staff - Motivation
1. P1_Baseline Interview	50	6		1	5				8		8		28		10	2	2	5	11	5	2				2
2. P2_baseline Interview.docx	40	13	3		3	2	4	3	16	6	10	1	4			2	1		2	2	1				1
3. P3_baseline Interview.docx	27	20	10	2	4	6			2		2		2					2		2	2				2
4. S1_Baseline Interview	7	1	1			1			1			1	1					1	1	20	6				6
5. S2_Interview_Baseline.docx	16	7	4	3		2			1		1		4			2	1	2		20	7	2	2	4	1
6. S3_M1_Baseline Interview.docx	18	8	5	1			2		3		1	2	4				2	2		27	12	1		6	7
7. S4_M2_Manager 2 baseline	15	9	2			1		6	2		2									36	19	2	7	11	2
A. P1_midpoint.docx	11	3			2	1			1	1			5		3			1	1	3	1		1		
B. P3_Interview_Midpoint.docx	12	6	2	1	3		1						6	2	1		1	2	1	4	2			1	1
C. P4_Midpoint.docx	15	9	4	2	4	2	2	1	4	3	2		3				1	2	2	1					
D. S2_Midpoint_staff.docx	22	12	6	4	3								16	1		3	10	4		25	9		6	7	
E. S6_Midpoint_interview	6	3	1	1	1															22	4		1	3	

This analytic framework was applied to the remaining interviews across subsequent stages. Following coding at each stage, data was summarised for each interview to an Excel database (Figure 3). At each stage, the framework was revisited to examine for the emergence of new codes and categories to ensure comprehensive coverage of the data (Gale et al., 2013). The final framework contained 69 codes which fit within the original five themes – See Table 3 (pg103). A second reviewer considered the framework for each stage of the study for consistency with the final study report to ensure accurate reporting of findings.

Figure 3: Example of coding framework



S2	Lack of services in are, what can offer people in ward environment. -purposeless activity. Pace of treatment - need to develop skills for community living including social skills. Staff prompting Q36 - need to leave them to it - desire for step-down facility. Cascading and consistency of care plans. Not sufficient focus on quality of time out. New RMO in developing TX planning. meetings taking up time. Difficulty finding risk and recovery balance - view too recovery focussed. rehabilitation as more of a marathon than a sprint. How much patients have taken on board from group therapies. Q52 and how much staff has taken from them	S8	Sees staff s taking positive risks, team decision about risk management Meetings - very good MDT here Q69, Q72 - impact of psychology sessions, emotional for patients. Offer means to contain difficult experiences, person centred. Desire for discharge and impact of pace of discharge on patients. Motivating effect of other patients' discharge.