Perceptions of Restrictiveness in Forensic Mental Health: do demographic, clinical and legal characteristics matter?

Dr. Jack Tomlin[1], Prof. Peter Bartlett[2], Prof. Birgit Völlm[1], Dr. Vivek Furtado[3] & Dr. Vincent Egan[4]

[1] Department of Forensic Psychiatry, University of Rostock, Rostock, Germany

[2] School of Law and Institute of Mental Health, University of Nottingham, Nottingham, UK

[3] Mental Health and Wellbeing, Warwick Medical School, University of Warwick, Coventry, UK

[4] Centre for Family and Forensic Psychology, University of Nottingham, Nottingham, UK

* Correspondence:

Dr. Jack Tomlin

jack.tomlin@med.uni-rostock.de

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Abstract

Where safe, forensic mental health systems should provide care in the least restrictive environment possible. Doing so can maximize patient autonomy and empowerment whilst minimizing unnecessary social disconnection and stigmatization.

This study investigated whether patients' perceptions of restrictiveness were associated with demographic, clinical and legal characteristics. The Forensic Restrictiveness Questionnaire (FRQ) was used to measure perceptions of restrictiveness in 235 patients in low, medium and high secure settings in England.

The results showed that restrictiveness scores were significantly higher for patients that experienced an adverse event in the past week or were diagnosed with a personality disorder compared to those with a mental illness. A regression analysis suggested that only diagnosis was predictive of FRQ scores when controlling for perceptions of ward atmosphere and quality of life. Age, length of stay, ethnicity, level of security, legal section and offence type were not associated with FRQ scores.

Future research should investigate the roles that individual symptoms, insight into illness, mood, personality and expectations of care have in influencing perceptions of restrictiveness.

Introduction

In recent years, efforts have been made to provide forensic mental health care in the least restrictive manner or setting (JCPMH, 2013; Sustere & Tarpey, 2019; The Mental Health Taskforce, 2016). This sentiment reflects broader efforts in mental health care towards deinstitutionalization (Caldas-Almeida, Mateus, & Gina, 2016), reductions of the use of coercive measures (Ewington, 2016), and models of offender rehabilitation and recovery that focus on patient autonomy and empowerment (Pouncey & Lukens, 2013; Simpson & Penney, 2018; Ward & Brown, 2004).

The maxim of least restriction can refer to the setting in which care is provided, the manner in which medication is given, the legal section designating treatment or more generally as the extent to which patients self-determine their daily activities. These trends should be viewed mindful of the concurrent increase in the number of forensic beds internationally (Chow & Priebe, 2016; Jansman-Hart, Seto, Crocker, Nicholls, & Côté, 2011).

The Safewards model is helpful for understanding localized ward conditions antecedent to restrictive or containing measures (Bowers, 2014). This model proposes that containment methods (medication, seclusion, restraint, observation etc.) in psychiatric settings are implemented in response to conflict. Conflict including aggression, self-harm, suicide and so forth, is hypothesised to originate from six domains of care: the staff, the physical environment, the world outside the hospital, the patient community, patient characteristics, and the regulatory framework shaping care. Conflict is thought to result from flashpoints emerging from these six domains. Containment can also result in further containment; the relationship is bidirectional.

The literature recognizes the detrimental effects of restrictive measures such as restraint, seclusion and forced medication on individuals (Elcock & Lewis, 2016; Ewington, 2016; Ada Hui, Middleton, & Vollm, 2016). Patients experiencing these measures report feeling physically harmed, dehumanized and unheard and express adverse consequences on therapeutic relationship with staff (Soininen, Kontio, Joffe, & Putkonen, 2016; Tingleff, Hounsgaard, Bradley, & Gildberg, 2018). More restrictive settings have been associated with increased aggressive behaviour (Hill, Rogers, & Bickford, 1996; NICE, 2015) and lower perceptions of ward atmosphere (Long et al., 2011). Studies exploring predictors of quality of life in forensic settings have suggested that reduced opportunities to self-determine daily activities is an important contributing factor (Long, McLean, Boothby, & Hollin, 2008; O' Flynn, O' Regan, O' Reilly, & Kennedy, 2018).

Recent qualitative studies have explored patient experiences of restrictiveness. Sustere and Tarpey (2019) report that patients felt their understandings of restrictive measures differed to some degree from staff's but that efforts to use Least Restrictive Practices increased positive risk taking, a sense of responsibility and less judgement from staff. Hui (2017) investigated high secure patients' experiences of restrictions. Her participants expressed that unfair or confusing rules and regulations made them feel frustrated and the environment promoted dependence on others. Elsewhere we have suggested that experiences of restrictions are shaped by patients' expectations of secure care ([authors], 2019). These expectations are derived from patients' own and vicarious experiences of institutional life, their normative appraisals of care and whether the restrictions make sense to them.

Reporting on the validation of the FRQ conducted within this study but reported elsewhere, we found that perceptions of restrictiveness measured with the Forensic Restrictiveness Questionnaire (FRQ) were strongly negatively correlated with quality of life and ward atmosphere ([authors]. 2019, under review). Franke and colleagues (2019) also explored these experiences quantitatively. They found that perceptions of the concept of restraint as measured with the adapted-Measuring Quality of Prison Life questionnaire were associated with psychological distress, specifically hostility, depression, global psychological state and suicidal ideation.

Different Groups and Different Experiences of Care

Patient groups might experience restrictiveness in different ways. Black and Minority Ethnic (BME) patients in England and Wales are subject to higher rates of restraint and involuntary detention in mental health settings (Wessely, 2018) and spend twice as long in low secure settings than non-BME patients (The Mental Health Taskforce, 2016). BME individuals are overrepresented across the whole criminal justice system, are subject to differential treatment (Lammy, 2017) and consequently hold poorer relations with, trust in and perceptions of the CJS (Braithwaite, 1982).

Other groups have special concerns in secure care. Older patients (i.e., aged over 50) report feeling socially isolated and experience a lack of age-appropriate activities, so engendering pessimism for the future (Di Lorito, Dening, & Völlm, 2018). Long-stay patients may demonstrate characteristics of institutionalisation and internalise restrictive institutional norms (Goffman, 1961). Patients subject to special legal restrictions (such as a restriction

order in England and Wales) require special approvals from the Ministry of Justice to progress in their care.

Offenders that have committed sexual offences can be severely isolated and stigmatized (Simon, 1998); and participation in community or prison life can be more restricted than for individuals with other offences (Mbuba, 2012). Civilly detained patients in forensic settings (possible in England and Wales under the U.K. Mental Health Act, 1983) might feel subject to greater controls than if they were receiving treatment in general psychiatric settings.

The literature also suggests that patients in different diagnostic groups may experience care differently. Studies of quality of life (QoL) in forensic settings have found that individuals diagnosed with a personality disorder (PD) have scored lower than counterparts with a mental illness (MI) (Swinton, Oliver, & Carlisle, 1999). This was attributed to higher expectations held by patients diagnosed with PD. Others have found that an increased sense of grandiosity and not accepting responsibility for care is associated with an increased likelihood of complaints about care (Dolan & Millington, 2002). It is also possible that staff attitudes towards particular patient groups considered difficult, including individuals with a PD diagnosis, may explain variance in the way care is provided (Ruane & Hayter, 2008).

However, other studies have found no relationship between a diagnosis of MI and QoL (C. Long et al., 2008); and that other factors are more predictive of QoL scores, including level of security, meaningful activity and therapeutic alliance (O' Flynn et al., 2018).

Given the above literature, it is reasonable to hypothesize that patients belonging to different demographic, clinical and legal groups might experience the restrictiveness of secure care in different ways.

Aims and Rationale

The present study sought to investigate differences between groups by using a dedicated measure of restrictiveness in secure care. The present study is part of a larger project that developed such a measure: The Forensic Restrictiveness Questionnaire ([authors], 2019). The FRQ is a validated, 15-item measure of patients' subjective experiences of restrictiveness in secure care.

The aims were to explore to what extent FRQ scores differed across groups defined by clinical, legal and demographic characteristics, specifically: age, length of stay in current institution, the occurrence of a recent adverse event, level of security, ethnicity, diagnosis, index offence and legal section.

Hypotheses

For each characteristic, the following hypotheses were put forward.

1. There would be a negative correlation between length of stay and FRQ scores.
2. There would be a negative correlation between age and FRQ scores.
3. BME patients will report higher FRQ scores than non-BME patients.
4. Patients reporting a recent adverse event occurring in the last week will report higher FRQ scores than patients not reporting this.
5. Patients subject to civil detention (no index offence) will report higher FRQ scores than patients under forensic detention (convicted of an offence).
6. Patients with a sexual index offence will report higher FRQ scores than patients with non-sexual index offences.

7. Patients with a diagnosis of personality disorder report higher FRQ scores than patients with a diagnosis of mental illness. No hypothesis is proposed for patients with more than one diagnosis.
8. Patients in higher levels of security will report higher FRQ scores than patients in lower levels.
9. Patients with restriction orders will report higher FRQ scores than patients without restriction orders.

Methods

Design

This study was part of a larger project to conceptualize, develop and validate a questionnaire to measure forensic patients' experiences of restrictiveness in care. Findings from a literature review ([authors], 2018), qualitative interviews ([authors]., 2019) and psychometric testing of the FRQ ([authors]., 2019) are reported elsewhere.

The present study is observational and quantitative. Participants were asked to complete the pilot FRQ and measures of quality of life (QoL) and ward atmosphere. Data on clinical, legal and demographic data were collected from patient notes by members of the research team. Participants' scores on the 15-item FRQ are reported in this study.

Recruitment

The study sampling frame included the forensic in-patient population of England. Patients were eligible for participation in accordance with the inclusion and exclusion criteria in Table 1. At ward community meetings, the aims of the study were presented to patients and staff by a member of the research team or the National Institute of Health Research's Clinical Research Network (CRN). Patients expressed interest in participating to researchers or members of their care team who liaised with the researchers. Patients were given information

sheets and at least 24 hours to consider their participation. All participants gave informed, written consent and all data were anonymised by use of a study ID. Recruitment took place between May 2018 and April 2019 in 16 NHS trusts (bodies that commission healthcare for geographic regions or specialized services) in England.

Table 1 Study Inclusion and Exclusion Criteria

Materials

Participants were given three questionnaires to complete: the pilot FRQ, the EssenCES measure of ward climate (Schalast, Redies, Collins, Stacey, & Howells, 2008), and the Forensic Quality of Life Questionnaire-Short version (FQL-SV; Schel, Bouman, Vorstenbosch, & Bulten, 2017). Following the validation of the FRQ patients' scores on the final 15-item version were calculated for the present study.

The FRQ is a unidimensional, self-report questionnaire with 15 items measured on Likert scales ([authors], 2019). Items were derived from interviews with 18 patients in low, medium and high secure hospitals in England ([authors], et al., 2019). Questions ask how restricted patients feel in their care setting, for instance: 'I can choose what I want to do each day'; 'The restrictions on the ward make sense'; and 'I am given enough responsibility on the ward'.

The FRQ asked whether respondents have experienced something difficult/hard/hurtful over the preceding week. These were defined as 'adverse events' for this study. Participants' responded with yes/no and then described what this was. Patients gave the following examples: being denied a hospital transfer, being bullied by staff, being slapped on the bottom, the death of a mother, being denied medication, amongst others.

The FRQ demonstrated good psychometric properties in this study as reported elsewhere ([authors], 2019). Exploratory Factor Analysis indicated a unidimensional structure. Internal consistency was high: Cronbach's Alpha = 0.93. Convergent validity was good as the FRQ correlated significantly with measures of ward atmosphere (EssenCES; Spearman's ρ=-0.61, p<.001, n=229) and quality of life (FQL-SV; Spearman's ρ =-0.72, p<.001, n=229). A higher score indicates higher experienced restrictiveness.

Data Preparation

The analysis was conducted with SPSS v. 24. Data were missing for 1.0% of clinical, legal and demographic values. Individual cases were excluded from group analyses if the relevant clinical, legal or demographic datum was missing. Missing FRQ values (0.6%) were missing at random (Little's test of MCAR: $\chi^2(639)=530.9$, p=0.999). Values were imputed with the SPSS automatic multiple imputation function (Tabachnick & Fidell, 2013).

Analyses were only conducted where variables had a sufficient number of observations (n= >15). The groups included in the analysis of variance are depicted in Table 2. The variables 'age' and 'length of stay at current institution' were interval-level; 'legal section', 'recent adverse event', 'ethnicity', 'diagnosis' and 'index offence' were categorical; and 'security' was treated as categorical for the analysis of variance but as interval for the regression. Gender was not assessed as the number of women in the sample was too low (n=9).

Data Analysis

The analysis was carried out with IBM SPSS v. 24. Significance was set to p<.05 for all analyses unless specified. FRQ scores were non-normally distributed (Shapiro-Wilk=

p<.001). To investigate bivariate correlations Spearman's RHO was used. The Mann-Whitney *U*-test was used to analyse differences between two independent groups. The Kruskal-Wallis *H*-test was used to explore differences between three or more independent groups. Median scores are reported unless distributions were not similar between groups, in which case mean rank scores are reported (Field, 2009). Pairwise comparisons were explored with the Bonferroni correction.

A linear regression analysis was conducted to investigate to what extent participant characteristics explained variance in FRQ scores (Field, 2009). Variables were included in the regression if FRQ scores on these variables differed significantly between groups. Two regression models were computed: the first included predictor variables that were significantly associated with variation in FRQ scores between groups; the second model included participants' scores on quality of life and ward atmosphere as predictor variables as these have been found to correlate significantly with FRQ scores (ρ=-0.72 and ρ=-0.61 respectively) ([authors]., 2019). Two further linear regression models that investigated the relationship between significant predictors of FRQ scores identified in Model 1 on ward atmosphere and QoL were conducted.

SPSS's Bootstrapping function with 1000 samples was employed as data were non-parametric. A *post-hoc* power analysis using G*Power software v. 3.1 suggested our sample of 235, a probability level of .05, four predictor variables (the number of predictor variables included in the second regression model) and a desired effect size (f^2) of .10 would achieve a statistical power of 0.98.

Ethical Approval

This study was awarded ethical approval by the Leicestershire South Research Ethics Committee (REC:17/EM/0159) and the University of Nottingham; it was also granted approval by the National Health Service Health Research Authority.

Results

Respondents

In total, 241 patients gave consent to participate. Data were excluded for 6 participants that dropped out of the study following giving consent; 235 participants remained. Participants were mostly male (96%), white (70%) and had a diagnosis of a mental illness (60%). Black and Caribbean participants comprised 16% of the sample. Patients with a diagnosis of personality disorder comprised 16% of the sample. Participants with two or more diagnoses are described more in Table 2.

Most participants (43%) were on a hospital order with restrictions, 19% on a civil section, 16% were transferred from prison with a restriction order and 13% were given hospital orders without restrictions. The most common index offence was against the person (37%) followed by mixed offences of any type (15%), no offence (11%), sexual offences (10%) and against property (9%). Mean age was 39 years (S.D. 10.8); median length of stay in current institution in months was 19 (Q1, Q3: 9, 53). These values describe the largest groups and do not add to 100% for each category, full data are provided in Table 2.

Table 2 Participants' Demographic, Clinical and Legal Profiles

Differences between Groups

There was no significant relationship between age and FRQ scores (ρ = -.006, p=.928, N=230) or between length of stay at current institution and FRQ scores (ρ = -.032, p=.630, N=229). Hypotheses one and two were therefore not supported.

A Mann-Whitney *U*-test indicated that FRQ scores did not differ significantly between white (Mdn=31.5, n=170) and BME (Mdn=34, n=70) patients, *U*= 4965.0, *p*= .171, *r*= -0.09. Hypothesis three was therefore not supported.

There was a significant difference for FRQ scores between patients who reported having experienced an adverse event in the past week (Mean rank= 150.68, n=64) and those not reporting this (Mean rank= 105.54, n=172) as suggested by a Mann-Whitney *U*-test, *U*= 3275.0, *p*< .001, r= -.29. Hypothesis four was therefore upheld.

There were no significant differences on FRQ scores for patients with an index offence (civil detention) (Mdn=32, n=205) and those without an index offence (forensic detention) (Mdn=36, n=25), *U*= 2085.5, *p*= .129, r= -0.1. Further, a Kruskal-Wallis *H*-test indicated there were no significant differences between different types of index offence including those against the person, against property, sexual offences, mixed offences or no offence, *H*(4)= 3.477, *p*= .481. Hypotheses five and six were therefore rejected.

A Kruskal-Wallis *H*-test concluded that there was a significant difference in FRQ scores between mental health diagnoses, *H*(2)= 11.214, *p*=.004. Pairwise comparisons were

conducted using the Bonferroni correction requiring a critical value of 0.0167. These indicated that there were no significant differences between those with a diagnosis of mental Illness (Mdn=30.5, n=140) and a mixed/dual diagnosis (Mdn=34, n=20), *U*= -10.611, *p*= .436, *r*= -.06; or between those with a mixed/dual diagnosis and a diagnosis of personality disorder (Mdn=42, n=37), *U*= 24.575, *p*=.120, *r*= .21. However, persons with a diagnosis of mental illness scored significantly lower than those with a personality disorder, *U*= -35.186, *p*= .001, *r*= .25. Hypothesis seven was upheld.

A Kruskal-Wallis *H*-test indicated that there were no significant differences across patients' FRQ scores and levels of security, *H*(2)= 5.313, p= .070. However, there was a trend in the data as FRQ scores increased with levels of security: low (Mdn=32, n=97), medium (Mdn=33, n=89) and high (Mdn=40, 49). Hypothesis eight was rejected for non-significance.

Finally, a Kruskal-Wallis *H*-test suggested that there were no significant differences for FRQ scores between patients on different legal sections, *H*(3)= 2.180, *p*= .536. Hypothesis nine was therefore rejected.

Table 3 Correlations, Mann-Whitney U-tests and Kruskal-Wallis H-test describing the differences between FRQ scores across demographic, legal and clinical characteristics

Regression Analysis

Given only two individual characteristic variables were significantly associated with FRQ scores (a diagnosis of MI or PD and the recent occurrence of an adverse event) these were entered into the first linear regression model. This suggested that a diagnoses of MI or PD and experiences of recent adverse events accounted for 11% (*Adj.* R^2 = .11) of the variance in FRQ scores, R^2 = .12, *F*(2, 173) = 12.24, p <.001. The addition of the predictors quality of

life and ward atmosphere increased the amount of variance in FRQ score explained $R^2 = .57$, $F(4, 168) = 56.28$, $p < .001$. As shown in Table 4 these latter two variables contributed more to the model than the diagnosis or recent adverse event variables did, with QoL (FQL-SV) explaining almost double the variance than ward atmosphere (EssenCES). In fact, recent adverse event became non-significant.

Table 4 Linear Regression for Predictors of FRQ Scores

The fact that the recent adverse event variable lost significance when the regression model included ward atmosphere and QoL and that diagnosis did not, suggests that the predictive ability of the recent adverse event variable on FRQ scores pertained to aspects of restrictiveness that overlap conceptually and empirically with aspects of ward atmosphere and QoL. It also suggests that aspects of restrictiveness that are to some extent distinct from ward atmosphere and QoL were predicted by diagnosis independently, which decreased in strength but remained significant.

To further explore this, we ran two linear regression models investigating to what extent diagnosis and recent adverse event predicted QoL and ward atmosphere. We hypothesised that if a) recent adverse events were more likely to predict aspects of restrictiveness that overlap with QoL and ward atmosphere and if b) diagnosis was more likely to predicted aspects of restrictiveness that do not overlap with QoL and ward atmosphere to the same extent, then: the recent adverse event variable would explain more variance in the QoL and ward atmosphere variables than the diagnosis variable would.

Table 5 presents the results. This demonstrates that QoL was predicted by recent adverse event but not diagnosis (overall model: $R^2 = .05$, $F(2, 173) = 4.39$, $p < .014$) and that ward

atmosphere was predicted by diagnosis but not recent adverse event (overall model: $R^2 = .07$, $F(2, 170) = 6.14$, $p < .003$). Both models explained a very small amount of total variance in QoL and ward atmosphere.

Table 5 Linear Regression of Diagnosis, Recent Adverse Event on Ward Atmosphere and QoL

Discussion

This study explored to what extent patients' experiences of restrictiveness were associated with clinical, demographic and legal characteristics. The experiences of 235 patients in low, medium and high secure hospitals in England were measured with the FRQ between May 2018 and April 2019. The results indicate that restrictiveness scores are largely independent of these characteristics. No significant associations were found between FRQ scores and age, length of stay in current institution, ethnicity, type of index offence or legal section.

The broad lack of differences supports a study by Horvath and colleagues (2018) which found that perceptions of coercion in relation to anti-psychotic medication were not predicted by socio-demographic factors such as sex, marital status, social living conditions, education, criminal and psychiatric history. Relatedly, MacInnes, Beer, Keeble, Rees, & Reid (2010) found that satisfaction with forensic inpatient care did not differ between demographic groups.

In our study, there was a non-significant trend towards increases in FRQ scores in a Kruskal-Wallis *H*-test. This reflected increases in levels of security. This suggests that there may be a relationship between security level and restrictiveness but that this is likely small and better explained by other factors.

A regression indicated that patients' FRQ scores were not significantly predicted by experiencing events patients internalized as hard, difficult or hurtful over the preceding week when controlling for QoL and ward atmosphere. However, an analysis of variance found that those experiencing such an event scored significantly higher than those that did not. Regression Model 2 showed that the recent adverse event variable lost significance whilst diagnosis remained significant (although demonstrating a higher p-value) when controlling for QoL and ward atmosphere. Reading this result in light of findings that the FRQ overlaps empirically and conceptually with the FQL-SV and EssenCES ([authors]., 2019), this suggests that the significant predictive ability of a recent adverse event in Model 1 pertained in large part to aspects of restrictiveness that overlap with aspects of ward atmosphere and QoL, given that QoL and ward atmosphere were controlled for in Model 2.

It might be hypothesised that recent adverse events are associated with a change in patients' perceptions of QoL and it is the change in QoL that is associated with a change in FRQ score. It may be that not all adverse events change a patients' perception of QoL but where they do, this also changes perceptions of elements of restrictiveness that overlap with QoL. Helpful in understanding this is Bowers' (2014) notion of 'flashpoints' in the Safewards model.

Flashpoints are hypothesised to be antecedents to aggressive incidents that precede the use of containment measures by staff. Thus, recent adverse events described by patients might have been flashpoints precipitating conflict and consequent containment or restrictive measures. Given the finding of non-significance in Model 2 of the regression analysis, it might be plausible that the containment measures employed following flashpoints shaped an

individuals' perceptions of their QoL and this shift in perception following the containment measure might be more predictive of FRQ scores than the adverse event or flashpoint itself.

There was a significant difference between patients with a diagnosis of mental illness and personality disorder. This was reflected in the results of the regression. The latter group had significantly higher FRQ scores. A study reported similar differences on a measure of quality of life. The authors found that in an English high secure setting, patients with a personality disorder reported lower global QoL scores than residents with mental illness (Swinton et al., 1999). They suggest that this may be related to the degree of unmet expectations that personality disordered patients have of their care. This is supported by other research findings that forensic patients with more severe personality disorder qualities such as grandiosity and not accepting responsibility are more likely to complain about their care (Dolan & Millington, 2002).

However, the literature is not in agreement on this. Other studies have found a lack of significant association between diagnosis and perceptions of care. There was no relationship between mental illness and QoL scores in a study by Long et al. (2008) or in more recent QoL research that suggested level of security, meaningful activity and therapeutic alliance are more important variables for predicting QoL (O' Flynn et al., 2018).

That the variable diagnosis remained a significant predictor in our study suggests that it might have been predicting a more conceptually and empirically distinct aspect of restrictiveness that does not overlap substantially with QoL or ward atmosphere. This indicates that the more idiosyncratic aspects of restrictiveness were associated with individual psychopathology and that a recent adverse event, arguably a more objective or external

phenomenon, was less meaningful in predicting experiences of restrictiveness. This was supported to some degree by the finding that recent adverse event predicted QoL and diagnosis did not.

However, the study of perceived restraint by Franke et al. (2019) found no relationship with diagnosis. The authors hypothesized that the externally imposed constraints of secure care manifest in different negative adjustments made by patients. They proposed that personality traits or symptoms of mental disorder not captured in their study (or the present study) might offer a better explanation differences in perceptions of restraint than broader diagnostic categories. In fact, the authors found associations with personality traits, hostility, global psychological state, suicidal thoughts and depression. These findings are in line with Horvath et al.'s (2018) study of patients' with psychotic disorders experiences of coercion in relation to antipsychotic use. The authors found that higher perceived coercion was predicted by symptom severity, insight into illness and attitude to towards medication.

Bowers' discussion of 'patient characteristics' as a domain of the Safewards model helpfully identifies several individual characteristics as originating features of flashpoints (Bowers, 2014). Crucially, these are predominantly individual- and not group-level: symptomatology including paranoia, delusions, hallucinations; depression; substance use; specific personality traits related to anti-social or borderline personality disorders; and demographics including age and gender. Only age and diagnosis were captured in the present study; gender differences were not discernible given the sample size. Although we found no relationship between experiences of restrictiveness (similar to containments in Bowers' terminology) and age, there was support for an association with diagnoses. Future studies serious in discerning

differences across individuals' experiences of restrictiveness should measure the individual characteristics identified by Bowers (2014) and Franke et al. (2019).

Another possible explanation for the absence of differences across most groups is that patients' experiences of restrictiveness are shaped by the degree to which they internalize restrictive phenomena as severe and salient. In a qualitative study we have argued that patients might experience phenomena as more severely restrictive where they interpret these as negating their autonomy, sense of self or personhood ([authors], et al., 2019). The salience of a restriction might follow from a clash of expectation and reality; where the restriction exceeds the expectation then this might be more salient for the patient. If experiences of restrictiveness are subjective, shaped by expectations of the setting and the degree to which an element of care is internalized symbolically then variance in FRQ scores are not likely to emerge in a group-level analysis. Individual psychopathology is likely to play a role in these thought processes.

Limitations

Limitations to this study must be acknowledged. The number of female patients recruited in this study was too small to include them in the analysis. This study therefore overlooks an important yet under researched group. Patients with learning difficulties were excluded from this study. Future research on this topic needs to involve female patients and patients with learning difficulties. The sample was not randomly chosen; patients could not participate if they were being secluded or restrained, and only patients that expressed a desire to participate did so. This may have skewed the sample.

Clinical, demographic and legal data were collected by researchers from patient notes. These records are not always complete or up to date and it is possible that more recent data were available but not accessible to the researchers in this study. A range of variables relevant to restrictiveness were not collected in the present study that should feature in future projects. These would help interpretation of FRQ scores and offer a further method of assessing its validity. These might include incidents of restraint, seclusion, forced medication, absconding, verbal or physical aggression, and number of hours of meaningful activity undertaken. Finally, stepwise regression was carried out with non-parametric data, further projects could confirm/refute the present study results by using a regression model with bootstrapping.

Implications and Future Research

There are clinical implications for these findings. Given that patients experiencing an adverse event in the last week have significantly higher FRQ scores, care teams should inquire into and be sensitive to hearing about patient experiences of such adverse events. Regardless of the content of the adverse event, patients' experience and assessment of them are likely to have consequence on wider aspects of care that stretch beyond the circumstances of the immediate adverse event. Staff should be aware of patients' flashpoints and how these may escalate to aggression and containment measures. Implementing principles of the Safewards model would be helpful here.

Future research should seek to confirm or refute the findings of the present study. The emerging literature on this topic as described in the discussion suggests that individual psychopathological traits and symptoms might be helpful in explaining or predicating patient experiences of restrictiveness. Studies should therefore measure restrictiveness alongside for

instance mood, symptom severity, presence of positive and negative symptoms, personality traits and individual expectations of their care.

Future research could also explore the relationship between individual characteristics and FRQ scores in relation to ward atmosphere and QoL as mediators. This would involve conducting a mediation analysis wherein X = FRQ scores, Y = recent adverse event or diagnosis and M = QoL or ward atmosphere respectively. Such an investigation could investigate associations between QoL and ward atmosphere and individual items of the FRQ to better understand where exactly within the FRQ these concepts overlap.

Conclusion

Patients' experiences of restrictiveness in forensic mental health settings were measured with a new instrument, the FRQ. Analysis of variance suggested that restrictiveness scores were significantly higher for patients that experienced an adverse event in the past week or were diagnosed with a personality disorder compared to those with a mental illness. There were non-significant trends towards higher scores for patients in higher levels of security and BME patients. A regression analysis indicated that a recent adverse event and ethnicity significantly predicted FRQ scores but that only diagnosis was a significant predictor when controlling for quality of life and ward atmosphere. Patients' experiences of the restrictiveness of forensic care are more likely shaped by individual psychopathology or patients' expectations of their care but more research is needed.

References

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. https://doi.org/10.1111/jpm.12129

Braithwaite, J. (1982). *Paradoxes of class bias in criminal justice*. *Rethinking criminology*. Retrieved from http://johnbraithwaite.com/wp-content/uploads/2016/05/1982_Paradoxes-of-Class-Bias-in-Cri.pdf

Caldas-Almeida, J., Mateus, P., & Gina, T. (2016). *Towards community-based and socially inclusive mental health care. Joint Action on Mental Health and Well-being. Situation analysis and recommendations for action.* Retrieved from https://ec.europa.eu/health/sites/health/files/mental_health/docs/2017_towardsmhcare_en.pdf

Chow, W. S., & Priebe, S. (2016). How has the extent of institutional mental healthcare changed in Western Europe? Analysis of data since 1990. *BMJ Open*, *6*, 10188. https://doi.org/10.1136/bmjopen-2015

Di Lorito, C., Dening, T., & Völlm, B. (2018). Ageing in forensic psychiatric secure settings: the voice of older patients. *The Journal of Forensic Psychiatry & Psychology*, *29*(6), 934–960. https://doi.org/10.1080/14789949.2018.1513545

Dolan, M., & Millington, J. (2002). The influence of personality traits such as psychopathy on detained patients using the NHS complaints procedure in forensic settings. *Personality and Individual Differences*, *33*(6), 955–965. https://doi.org/10.1016/S0191-8869(01)00204-5

Elcock, S., & Lewis, J. (2016). Mechanical restraint: Legal, ethical and clinical issues. *The Use of Coercive Measures in Forensic Psychiatric Care: Legal, Ethical and Practical Challenges.*, 315–331. https://doi.org/http://dx.doi.org/10.1007/978-3-319-26748-7_17

Ewington, J. (2016). Best practices for reducing the use of coercive measures. *The Use of Coercive Measures in Forensic Psychiatric Care: Legal, Ethical and Practical Challenges.*, 285–314. https://doi.org/http://dx.doi.org/10.1007/978-3-319-26748-7_16

Field, A. (2009). Discovering Statistics Using SPSS. In *Discovering Statistics Using SPSS* (pp. 166–181). https://doi.org/10.1234/12345678

Franke, I., Büsselmann, M., Streb, J., & Dudeck, M. (2019). Perceived Institutional Restraint Is Associated With Psychological Distress in Forensic Psychiatric Inpatients. *Frontiers in Psychiatry*, *10*, 410. https://doi.org/10.3389/fpsyt.2019.00410

Goffman, E. (1961). Asylums : essays on the social situation of mental patients and other inmates, 386.

Hill, C. D., Rogers, R., & Bickford, M. E. (1996). *Maxi-mum Security Forensic Psychiatric Hospital*. *Journal of Forensic Sciences, JFSCA* (Vol. 41). Retrieved from https://compass.astm.org/download/JFS13897J.15341.pdf

Hui, A. (2017). *Least restrictive practices: an evaluation of patient experiences*. University of Nottingham. Retrieved from http://eprints.nottingham.ac.uk/48816/

Hui, Ada, Middleton, H., & Vollm, B. (2016). The uses of coercive measures in forensic psychiatry: A literature review. *The Use of Coercive Measures in Forensic Psychiatric Care: Legal, Ethical and Practical Challenges.*, 151–184. https://doi.org/http://dx.doi.org/10.1007/978-3-319-26748-7_9

Jansman-Hart, E. M., Seto, M. C., Crocker, A. G., Nicholls, T. L., & Côté, G. (2011). International Trends in Demand for Forensic Mental Health Services. *International Journal of Forensic Mental Health*, *10*(4), 326–336. https://doi.org/10.1080/14999013.2011.625591

JCPMH. (2013). *Guidance for commissioners of forensic mental health services: Joint Commissioning Panel on Mental Health*. Retrieved from www.jcpmh.info

Lammy, D. (2017). *The Lammy Review: An independent review into the treatment of, and outcomes for, Black, Asian and Minority Ethnic individuals in the Criminal Justice System*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/643001/lammy-review-final-report.pdf

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 and Mental Health*, *21*(3), 202–214. https://doi.org/10.1002/cbm.791

Long, C., McLean, A., Boothby, A., & Hollin, C. (2008). Factors associated with quality of life in a cohort of forensic psychiatric in-patients. *British Journal of Forensic Practice*, *10*(1), 4–11. https://doi.org/10.1108/14636646200800002

MacInnes, D., Beer, D., Keeble, P., Rees, D., & Reid, L. (2010). The development of a tool to measure service user satisfaction with in-patient forensic services: The Forensic Satisfaction Scale. *Journal of Mental Health (Abingdon, England)*, *19*(3), 272–281. https://doi.org/10.3109/09638231003728133

Mbuba, J. M. (2012). Lethal Rejection. *The Prison Journal*, *92*(2), 231–252. https://doi.org/10.1177/0032885512439009

NICE. (2015). Violence and aggression: short-term management in mental health, health and community settings | Guidance and guidelines | NICE. *NICE Guidedance*, *NG10*.

O' Flynn, P., O' Regan, R., O' Reilly, K., & Kennedy, H. (2018). Predictors of quality of life among inpatients in forensic mental health: Implications for occupational therapists. *BMC Psychiatry*, *18*(1), 16. https://doi.org/10.1186/s12888-018-1605-2

Pouncey, C. L., & Lukens, J. M. (2013). Madness versus badness: The ethical tension

between the recovery movement and forensic psychiatry. In *Applied ethics in mental health care: An interdisciplinary reader* (pp. 237–253). Cambridge, MA: MIT Press; US. https://doi.org/http://dx.doi.org/10.7551/mitpress/9780262019682.003.0017

Redelmeier, D. A., & Kahneman, D. (1996). Patients' memories of painful medical treatments: real-time and retrospective evaluations of two minimally invasive procedures. *Pain*, *66*(1), 3–8. https://doi.org/10.1016/0304-3959(96)02994-6

Ruane, J., & Hayter, M. (2008). Nurses' attitudes towards sexual relationships between patients in high security psychiatric hospitals in England: an exploratory qualitative study. *Int J Nurs Stud*, *45*(12), 1731–1741. https://doi.org/10.1016/j.ijnurstu.2008.06.003

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. https://doi.org/10.1002/cbm.677

Schel, S. H. H., Bouman, Y. H. A., Vorstenbosch, E. C. W., & Bulten, B. H. (2017). Development of the forensic inpatient quality of life questionnaire: short version (FQL-SV). *Quality of Life Research*, *26*(5), 1153–1161. https://doi.org/10.1007/s11136-016-1461-9

Simon, J. (1998). Managing the monstrous: Sex offenders and the new penology. *Psychology, Public Policy, and Law*, *4*(1–2), 452–467. https://doi.org/10.1037/1076-8971.4.1-2.452

Simpson, A. I. F., & Penney, S. R. (2018). Recovery and forensic care: Recent advances and future directions. *Criminal Behaviour and Mental Health*. https://doi.org/10.1002/cbm.2090

Soininen, P., Kontio, R., Joffe, G., & Putkonen, H. (2016). Patient experience of coercive measures. *The Use of Coercive Measures in Forensic Psychiatric Care: Legal, Ethical and Practical Challenges.*, 255–270. https://doi.org/http://dx.doi.org/10.1007/978-3-

319-26748-7_14

Sustere, E., & Tarpey, E. (2019, January 20). Least restrictive practice: its role in patient independence and recovery. *Journal of Forensic Psychiatry and Psychology*, pp. 1–16. https://doi.org/10.1080/14789949.2019.1566489

Swinton, M., Oliver, J., & Carlisle, J. (1999). Measuring Quality of Life in Secure Care: Comparison of Mentally Ill and Personality Disordered Patients. *International Journal of Social Psychiatry*, *45*(4), 284–291. https://doi.org/10.1177/002076409904500407

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics*. *Harper Collins* (6th ed.). New Jersey: Pearson. https://doi.org/10.1037/022267

The Mental Health Taskforce. (2016). *The Five Year Forward View for Mental Health*. Retrieved from https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf

Tingleff, E. B., Hounsgaard, L., Bradley, S. K., & Gildberg, F. A. (2018). Forensic psychiatric patients' perceptions of situations associated with mechanical restraint: A qualitative interview study. *International Journal of Mental Health Nursing*. https://doi.org/10.1111/inm.12549

Tomlin, J., Bartlett, P., & Völlm, B. (2018). Experiences of restrictiveness in forensic psychiatric care: Systematic review and concept analysis. *International Journal of Law and Psychiatry*, *57*, 31–41. https://doi.org/http://dx.doi.org/10.1016/j.ijlp.2017.12.006

Tomlin, J., Egan, V., Bartlett, P., & Völlm, B. (2019). What Do Patients Find Restrictive About Forensic Mental Health Services? A Qualitative Study. *International Journal of Forensic Mental Health*, 1–13. https://doi.org/10.1080/14999013.2019.1623955

Tomlin, J., Völlm, B., Furtado, V., Egan, V., & Bartlett, P. (2019). The Forensic Restrictiveness Questionnaire: Development, Validation and Revision. *Submitted for Publication*.

Ward, T., & Brown, M. (2004). The good lives model and conceptual issues in offender rehabilitation. *Psychology, Crime & Law*, *10*(3), 243–257. https://doi.org/10.1080/10683160410001662744

Wessely, S. (2018). *Modernising the Mental Health Act: Increasing choice, reducing compulsion. Final report of the Independent Review of the Mental Health Act 1983*. Retrieved from www.gov.uk/dhsc

Table 1 Study Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
1. Sufficient grasp of English language (with use of translator if requested) 2. Capacity to consent and participate 3. Primary diagnosis of Mental Illness, Personality Disorder or 'Other'	1. Too unwell to participate (asserted by individual or staff) 2. Primary diagnosis of a Learning Disability 3. Lacked Capacity to consent and participate

Table 2 Participants' Demographic, Clinical and Legal Profiles

Variable	**N=**	**%**
Security Level		
Low	*97*	*41*
Medium	*89*	*38*
High	*49*	*21*
Total	*235*	*100*
Sex		
Male	*225*	*96*
Female	*9*	*4*
Total	*218*	*100*
Ethnicity		
White	*160*	*70*
Black / Caribbean	*36*	*16*
Asian	*16*	*7*
Mixed	*13*	*6*
Other	*5*	*2*
Total	*230*	*100*
Diagnosis		
F.6 Personality disorder	*37*	*16*
F.2 Mental illness	*140*	*60*
Mixed F.6 + F.2	*20*	*9*
Mixed F.2 + Other[1]	*16*	*7*
Mixed F.6 + Other[1]	*5*	*2*
Mixed F.6 + F.2 + Other[1]	*2*	*1*
Other[1]	*11*	*5*
Undiagnosed	*1*	*1*
Total	*232*	*100*
MHA Section		
s. 3	*45*	*19*
s. 37	*30*	*13*
s. 37/41	*100*	*43*
s. 41(5)	*6*	*3*
s. 45(A)	*6*	*3*
s. 47/49	*38*	*16*
s. 36	*1*	*1*
s. 48/49	*5*	*2*
s. 38	*1*	*1*
Total	*232*	*100*
Index Offence		
Offences against the person	*87*	*37*
Offences against property	*18*	*8*
Sexual offences	*23*	*10*
Other[2]	*41*	*18*
Mixed	*36*	*15*
No offence	*25*	*11*
Asked not to check	*1*	*1*
Awaiting trial	*2*	*1*
Total	*233*	*100*

	N=	**Mean (S.D.)**	**Min, Max**
Age (years)	*235*	*39.3 (10.8)*	*19, 74*
	N=	**Median (Q1, Q3)**	**Min, Max**
LoS (months)	*231*	*19 (9, 53)*	*1, 171*

[1] *Includes: F.3 Mood disorders, F.84 Autistic Spectrum Disorders, F.0 Organic Brain Disorders.*
[2] *Includes: Fraud, Arson, Possession of bladed article/offensive weapon, Threats to send explosives, Affray, Making explosives.*

Table 3 Correlations, Mann-Whitney U-tests and Kruskal-Wallis H-test describing the differences between FRQ scores across demographic, legal and clinical characteristics

Spearman's RHO	**N=**		**RHO**	**Sig.**		
Age	*230*		*ρ = -.006*	*.928*		
Length of Stay	*229*		*ρ = -.032*	*.630*		
Mann-Whitney *U*-test	**N=**	**Mdn.**	**Test statistic**	**Sig.**	**Z-score**	**Effect size**
Ethnicity	*230*		*U= 4965.0*	*.171*	*-1.368*	*r= -0.09*
White	*160*	*31.5*				
BME	*70*	*34*				
Adverse Event	*234*		*U= 3275.0*	*<.001*	*-4.503*	*r= -.29*
No Event	*172*	*31*				
Event	*64*	*44.5*				
Index offence	*230*		*U= 2085.5*	*.129*	*-1.519*	*r= -0.1*
Index offence	*205*	*32*				
No index offence	*24*	*36*				
Kruskal-Wallis *H*-test	**N=**	**Mdn.**	**Test statistic**	**Sig.**	**df**	**Effect size**
Index Offence	*189*		*H= 3.477*	*.481*	*4*	*η^2= 0.003*
Against person	*87*	*31*				
Against property	*18*	*30.5*				
Sexual	*23*	*34*				
Mixed	*36*	*31.5*				
No index offence	*25*	*36*				
Diagnosis	*197*		*H= 11.214*	*.004*	*2*	*η^2= 0.047*
F.6 PD	*37*	*42.*				
F.2 MI	*140*	*30.5*				
Mixed/Dual	*20*	*34*				
Security	*235*					*η^2= 0.013*
Low	*97*	*32*	*H= 5.313*	*.070*	*2*	
Medium	*89*	*33*				
High	*49*	*40*				
Legal Section	*213*		*H= 2.180*	*.536*	*3*	*η^2= 0.004*
Civil	*45*	*34*				
Hospital Order	*30*	*32.5*				
Hospital Order w Restrictions	*100*	*32.5*				
Prison Transfer w Restrictions	*38*	*31*				

Table 4 Linear Regression for Predictors of FRQ Scores

	Unstandardized Coefficients		**Standardized Coefficients**	**t-score**	**Sig.**	**95% CI for B**	
	B	**Std. Error**	**Beta**				
Model 1							
Constant	46.88	4.73		9.915	.001	*37.28*	*57.21*
Recent Adverse Event	7.60	2.42	.227	3.150	.007	*2.28*	*13.13*
Diagnosis	-8.02	2.51	-.231	-3.200	.005	*-13.05*	*-2.77*
Model 2							
Constant	83.70	4.33		19.322	.001	*75.29*	*90.36*
Recent Adverse Event	3.24	1.74	.097	1.860	.078	*-.32*	*6.91*
Diagnosis	-3.87	1.80	-.112	-2.153	.037	*-7.28*	*-.25*
EssenCES	*-.41*	*.09*	*-.286*	*-4.840*	*.001*	*-.59*	*-.22*
FQL-SV	*-.22*	*.03*	*-.507*	*-8.498*	*.001*	*-.28*	*-.15*

Estimates based on 1000 Bootstrap samples.

Table 5 Linear Regression of Diagnosis and Recent Adverse Event on Ward Atmosphere and QoL

	Unstandardized Coefficients		**Standardized Coefficients**	**t-score**	**Sig.**	**95% CI for B**	
	B	**Std. Error**	**Beta**				
Model 3							
EssenCES							
Constant	29.129	2.846		8.552	.000	*23.143*	*34.738*
Recent Adverse Event	-2.310	1.812	-.100	-1.327	.207	*-5.993*	*1.083*
Diagnosis	4.286	1.611	.179	2.373	.008	*1.184*	*7.619*
Model 4							
QoL							
Constant	112.839	12.273		10.021	.001	*88.265*	*135.711*
Recent Adverse Event	-15.332	5.933	-.200	-2.659	.009	*-27.385*	*-3.239*
Diagnosis	10.665	6.527	.134	1.784	.098	*-2.267*	*23.918*

Estimates based on 1000 Bootstrap samples.