Quality of Life and Functioning One Year After Experiencing Accumulated Coercive Events During Psychiatric Admission

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Objectives: The study aimed to determine the number of accumulated coercive events experienced by patients during inpatient admission, the patients' functioning and quality of life (QOL) one year after discharge, and associations between these variables and patient characteristics and between follow-up outcomes and number of accumulated coercive events.

Methods: A prospective cohort study was undertaken at three community services and an independent hospital in Ireland (N=162). Accumulated coercive events scores were based on patients' legal status, perceived coercion, and exposure to physical restraint, seclusion, or forced medication.

Results: Most (68%) experienced at least one coercive event. Lower functioning predicted more coercive events. At follow-up, the mean subjective QOL score was 63% of the highest possible score, objective QOL improved for 15% of participants, and functioning improved for 70%. Accumulated coercive events did not predict these outcomes.

Conclusions: Coercive events during psychiatric admission appeared unrelated to functioning and QOL at follow-up.

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The use of coercion in mental health settings is one of the most controversial practices in medicine (1). Proponents of the practice state that coercion is necessary, unfortunately, to prevent a deterioration of the mental state or ensure the safety of vulnerable people with serious mental disorders (2). Opponents of coercion describe it as an unjustified deprivation of human liberties, and some go as far as describing it as torture (3). Considering the seriousness and prevalence of the practice of coercion, the extent of the research to date on this topic is minimal (4). In part, this may be because ethical and practical reasons make conducting randomized controlled trials of coercion incredibly difficult or impossible (5). Even so, observational cohort studies have provided valuable knowledge about the effects of coercion by comparing outcomes after various coercive experiences.

Although research to date has reported no association between coercion and quality of life (QOL) or functioning during admission (6,7), other studies have found that use of coercion during admission can predict prognosis and QOL up to one year after discharge (8,9). However, most of these studies assessed only some types of coercion and did not take into account the total amount of coercion experienced by the service user. Therefore, focusing on the relationship between functional and QOL outcomes and accumulated coercive events experienced during admission one year earlier can yield valuable new knowledge.

To further investigate this topic, we aimed to determine the number of coercive events experienced by individuals during admission and the characteristics associated with use of coercion, subjective QOL one year after discharge and change in levels of objective QOL and global functioning between admission and one year after discharge and characteristics associated with these variables, and association between accumulated coercive events and subjective QOL one year after discharge and change in objective QOL and functioning between admission and one year after discharge.

METHODS

We used an observational, prospective cohort design to assess inpatients from three community mental health services and an independent psychiatric hospital that receives national referrals during admission from May 2010 to June 2011 and one year after discharge from May 2011 to August 2012.

In the Republic of Ireland, users of psychiatric services who fulfill specific criteria can be detained involuntarily in approved centers under Mental Health Act 2001. Voluntarily admitted service users who attempt to leave the hospital

despite strong concerns regarding either their mental state or safety can be detained in approved centers for up to 24 hours to allow for a mental health examination by two consultant psychiatrists. Although voluntarily admitted service users may experience physical coercion, their legal admission status is likely to be changed to involuntary.

We excluded service users who were less than 18 years of age or had a learning disability or dementia. Because the Mental Health Act prohibits the involuntary admission of individuals who have a sole diagnosis of a personality disorder or substance misuse, such individuals were excluded from our study. We excluded individuals with a first episode of psychosis because they were involved in a different study. We selected the next voluntary service user admitted immediately after each involuntary admission to ensure that the study sample contained comparable numbers of voluntarily and involuntarily admitted patients.

Each mental health service involved in the study granted ethical approval. We obtained the participants' written informed consent to participate in the interviews and permit access to their clinical files. We offered participants a retail voucher worth €20 for attending the follow-up interview. We did not offer financial compensation for baseline interviews.

At baseline only, we administered the MacArthur Perceived Coercion Scale (MPCS) to measure perceived coercion (10), the Structured Clinical Interview for DSM-IV axis I disorders, the Scale for the Assessment of Positive Symptoms, the Scale for the Assessment of Negative Symptoms, the Young Mania Rating Scale, the Birchwood Insight Scale, the Beck Depression Inventory, and the Beck Hopelessness Scale. At baseline and follow-up, we administered the Objective Social Outcomes Index (SIX) (11) to measure objective QOL and the Global Assessment of Functioning (GAF) (12). We administered the subjective QOL items from the Manchester Short Assessment of Quality of Life (MANSA) (13) at follow-up only. We collected information regarding admission legal status, admission history, experience of seclusion, forced medication, and physical restraint from clinical files.

If more than one variable was associated with an outcome on bivariate analysis, we performed multivariate analysis by using SPSS to determine a predictive model. We did not include positive or negative symptoms in the multivariate analysis because we assessed those symptoms only among individuals with psychotic disorders. Likewise, we assessed mania only among individuals with a diagnosis of schizoaffective or bipolar affective disorder. For the subjective QOL outcome, all scores were grouped as above or below the median to facilitate clinically meaningful results. We used a cutoff of ±10 on the GAF to detect clinically meaningful change, the same cutoff used in a previous study examining functioning and accumulated coercive events (7). We used the bootstrapping method with bias-corrected confidence estimates and 95% confidence intervals (CIs) with 5,000 samples to test the proposed mediation model.

The accumulated coercive events algorithm was originally used in a Norwegian psychiatric population to calculate all coercive events for each service user (14). The total score was obtained by adding separate units of coercive events that were categorized in terms of legal status, perceived coercion, and physical coercion. We modified the original algorithm for use within an Irish psychiatric population by scoring legal status as 0, for voluntary, or 1, for involuntary; perceived coercion as 0, for scores of 0–2, or 1, for scores of 3–5, on the MPCS; and physical coercion as 1 for each episode of physical restraint, forced medication, or seclusion. There was no upper limit for the total score.

RESULTS

Of 222 eligible participants, 31 (14%) declined consent during admission, six (3%) were transferred to another center, and 23 (10%) were discharged before contact. Of the 162 individuals who were interviewed during admission, 102 (63%) were interviewed one year after discharge. Table 1 describes participant characteristics.

The number of accumulated coercive events during admission ranged from 0 to 22 (mean±SD=2±3). A total of 52 participants scored 0, 41 scored 1, and 69 (43%) scored ≥2. During admission, the following factors were associated with a higher number of accumulated coercive events: psychotic disorder (U=2,398.5, p=.003), less insight (r_s=–.266, p=.001), fewer depressive symptoms (r_s=–.343, p<.001), less hopelessness (r_s=–.244, p=.006), and poorer global functioning (r_s=–.542, p<.001). Among individuals with a psychotic disorder, higher levels of positive symptoms during admission were associated with more coercive events (r_s=.547, p<001). Among individuals with bipolar affective or schizoaffective disorder, higher levels of mania during admission were associated with more coercive events (r_s=.523, p<.001). Multivariate analysis showed that the odds of more coercive events were 5% lower per unit increase in the level of functioning during admission (odds ratio=.95, CI=.90–.99).

The mean GAF score was 40±13 during admission and 62±19 one year after discharge. Among the 91 participants whose GAF scores were available both during admission and one year after discharge, scores declined among seven participants (8%), remained the same among 20 participants (22%), and improved among 64 participants (70%). Improved global functioning (an increase of ≥10 points on the scale between baseline and follow-up) was associated with the following factors during admission: employment (χ^2=6.4, df=2, p=.041), higher objective QOL (χ^2=17.14, df=8, p=.029), fewer depressive symptoms (χ^2=7.09, df=2, p=.029), more accumulated coercive events (χ^2=8.04, df=2, p=.018), and lower levels of functioning (χ^2=8.13, df=2, p=.017).

Higher levels of positive symptoms were associated with improved functioning among individuals with a psychotic disorder (χ^2=9.77, df=2, p=.008). Higher levels of mania were associated with improved functioning among individuals with bipolar affective or schizoaffective disorder (χ^2=7.19, df=2, p=.027). Multivariate analysis showed that higher objective QOL and lower global functioning during admission reliably

TABLE 1. Characteristics of patients during a psychiatric inpatient admission and one year after discharge (follow-up)

Characteristic	Admission (N=162) N	%	Follow-up (N=102) N	%
Gender				
Male	87	54		
Female	75	46		
Age (M±SD)				
Total	43±14			
Male	40±12			
Female	47±15			
Objective quality of life (QOL)[a]				
Employment status				
Unemployed (0)	102	63	68	68
Voluntary, protected, or sheltered work (1)	8	5	9	9
Competitive employment (2)	52	32	23	23
Accommodations				
Homeless, under 24-hour supervision, or permanently in hospital (0)	0	—	3	3
Sheltered or supported accommodations (1)	9	6	13	13
Independent accommodations (2)	137	93	84	84
Living arrangement				
Lives alone (0)	66	43	41	41
Lives with partner or family (1)	88	57	58	59
Friendship				
Met a friend within the past week (0)	26	17	28	29
Did not meet ≥1 friend in the past week (1)	126	83	69	71
Diagnosis				
Psychotic disorder	75	46		
Affective or anxiety disorder	87	54		
Coercive events				
Involuntary status	79	49		
Converted from voluntary to involuntary status	25	15		
Physical restraint	27	17		
Seclusion	22	14		
Forced medication	20	12		
Any physical coercion	34	21		
High perceived coercion[b]	96	59		
Accumulated score				
0	52	32		
1	41	25		
2	35	22		
3	12	7		
4	3	2		
≥5	19	12		
Clinical				
Perceived coercion (M±SD score)[b]	3±2			
Objective QOL (median score)[a]	4		3	
Global functioning (M±SD score)[c]	40±13		62±19	
Insight (M±SD score)[d]	9±3			
Positive symptoms (M±SD score)[e]	8±4			
Negative symptoms (M±SD score)[f]	5±5			
Mania (M±SD score)[g]	28±17			
Depressive symptoms (M±SD score)[h]	17±14			
Hopelessness (M±SD score)[i]	6±6			
Subjective QOL (M±SD score)[j]			57±10	

[a] Assessed with the Objective Social Outcomes Index (SIX). Point values for each item are shown in parentheses. Possible scores range from 0 to 6, with higher scores indicating better objective QOL. Data on median score were available for 137 (85%) participants at baseline and 96 (59%) at follow-up; 82 (51%) individuals completed the SIX during admission and follow-up, and there were no significant differences in characteristics during admission between those who completed the SIX at both time points and those who did not.

[b] Possible scores on the MacArthur Perceived Coercion Scale range from 0 to 5, with higher scores indicating greater perceived coercion and scores of 3–5 indicating high perceived coercion.

[c] Assessed with the Global Assessment of Functioning (GAF). Possible scores range from 0 to 100, with higher scores indicating better global functioning. Data on mean scores were available for 157 (97%) participants at baseline and 94 (58%) at follow-up; 91 (56%) individuals completed the GAF during admission and follow-up, and there were no significant differences in characteristics during admission between those who completed the GAF at both time points and those who did not.

[d] Possible scores range from 0 to 12, with higher scores indicating greater insight.

[e] Administered to 68 of 75 participants with a psychotic disorder only (91% response rate). Possible scores range from 0 to 20, with higher scores indicating more severe positive symptoms.

[f] Administered to 69 of 75 participants with a psychotic disorder only (92% response rate). Possible scores range from 0 to 20, with higher scores indicating more severe negative symptoms.

[g] Administered to 48 of 60 participants with bipolar affective or schizoaffective disorder only (80% response rate). Possible scores range from 0 to 60, with higher scores indicating higher levels of mania.

[h] Possible scores range from 0 to 63, with higher scores indicating more depressive symptoms.

[i] Possible scores range from 0 to 20, with higher scores indicating more hopelessness.

[j] Assessed with the Manchester Short Assessment of Quality of Life (MANSA). Possible scores range from 12 to 84, with higher scores indicating greater satisfaction with QOL; 94 (58%) individuals completed the MANSA at follow-up, and there were no significant differences in characteristics during admission between who did or did not complete the MANSA.

predicted improved global functioning one year after discharge. The odds of improved functioning one year after discharge were 90% higher per unit increase on the objective QOL scale during admission (OR=.9, CI=.8–.9) and 2.59 times higher per unit decrease on the GAF scale during admission (CI=1.2−5.6).

The median score on the SIX was 4 (interquartile range [IQR]=2) during admission and 3 (IQR=1) one year after discharge on an ordinal scale of 0–6, with higher scores indicating better objective QOL. Among the 82 participants whose SIX scores were available both during admission and one year after discharge, scores declined among 34 (41%) individuals, remained the same among 36 (44%) individuals,

and improved among 12 (15%) individuals. Improvement in objective QOL one year after discharge was associated with more depressive symptoms during admission (χ^2=7.29, df=2, p=.026).

The mean subjective QOL score (MANSA) was 57±10 (range of possible scores 12–84) one year after discharge. Higher levels of subjective QOL were associated with fewer depressive symptoms (U=−1.992, p=.046) and hopelessness (U=−2.594, p=.009) during admission.

Higher numbers of coercive events during admission were associated with improved functioning one year after discharge (χ^2=8.04, df=2, p=.018). However, this association lost significance in the multivariate analysis. Functioning during admission did not mediate the relationship between accumulated coercive events during admission and functioning one year after discharge (B=.021, CI=.00–.06, p=.053).

DISCUSSION

The main findings were that lower global functioning reliably predicted that participants would experience a greater number of coercive events. One year after discharge, the participants' mean subjective QOL score was 63% of the highest possible score, objective QOL had improved among 15% of participants, and global functioning had improved for 70% of individuals. Accumulated coercive events did not predict these outcomes; the association between a higher number of coercive events and improved functioning lost significance when other factors were taken into account.

A strength of this study was that we examined variables and outcomes that have not been included in previous studies that measured accumulated coercive events (7,14). A limitation of this study was that our sample may create a bias because we had a low completion rate for some measures and we could not include individuals with first-episode psychosis. Although QOL may have been influenced by other life events that occurred between baseline admission and follow-up assessment one year after discharge, this does not discount the potential predictive value of accumulated coercive events during the baseline admission. Our hypothesis that accumulated coercive events during admission could predict change in objective QOL between admission and one year after discharge was informed by previous research that found that higher levels of perceived coercion during involuntary admission predicted improved objective QOL (as measured by the SIX tool) one year after discharge (9).

Previous research also found a decline in objective QOL and improvement in functioning one year after discharge (9). We hypothesize that this paradoxical finding could be due to social exclusion. For example, service users may not gain employment despite their improved functioning one year after discharge because of disability-related employment history gaps.

The finding that accumulated coercive events did not predict functional improvement could be explained by an assumption that all service users received the appropriate treatment. In other words, coercion facilitated the treatment of individuals who refused treatment but who lacked the capacity to do so because of their mental disorder. If coercion were not used, outcomes for these individuals one year after discharge could have been worse. An alternative hypothesis is that functional improvement occurred independently of treatment because extreme scores tend toward the average after they are measured a second time (15).

CONCLUSIONS

Coercive events, unfortunately, are common during psychiatric admission and appear to be unrelated to functioning and QOL one year after discharge.

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