

APPENDIX

1. Supplemental information on study sample

Patients presenting at any of the 12 inpatient psychiatric facilities in Suffolk County were selected for inclusion if they were between 15 and 60 years old, residing in Suffolk County, and experiencing symptoms of psychosis.

Patients were excluded if their first psychiatric hospitalization was more than six months before the index admission, their psychosis had a medical cause other than substance abuse, or they were unable to provide informed consent.

Signed releases for hospital and clinic records were obtained at each interview. The baseline cohort included 628 patients. Of the 586 participants alive at the 10-year follow-up, 470 were successfully contacted. Information about the 10-year follow-up sample has been published previously (2).

2. Supplemental information on participant characteristics

Consensus diagnosis was based on the Structured Clinical Interview for DSM-III-R (SCID) (3), which was administered at each follow-up interview. Social class of origin was ranked according to the occupation of the head of household of origin and has been described elsewhere (5). Rehospitalizations and state hospital admission were determined on the basis of available information at each follow-up. To account for intervals during which hospitalization information

was missing, rehospitalization rate was calculated per 10 observed follow-up years. Illness course was derived from the WHO rating of illness course (6).

Sample characteristics are presented in Table A1. The median age at baseline was 27 years (IQR: 21-34). The majority of the sample was male (57%) and white (73%). At baseline, 50% of participants had been living independently and 36% were employed or in school full-time. The diagnostic distribution at the two year follow up was: schizophrenia spectrum disorder (39%), bipolar disorder with psychotic features (27%), and other psychotic disorders (35%). Participants' first admissions were in community hospitals (33%), a university hospital (32%), two state hospitals (31%), and an "other" category (children's hospital, Veterans Affairs hospital, etc., 4%). At the 10-year follow-up, 49% had a high school education or less, 44% had ever been married, and 37% had experienced full remission. Over follow-up, 33% of participants were never rehospitalized and 45% were hospitalized in a state facility at least once.

To examine possible effects of attrition, we compared the study sample to those who were alive at year 10 but did not participate in the trauma module. The two groups were similar on all characteristics in Table A1 except for 10-year BPRS score, with non-participants having a higher mean BPRS score (44 vs. 30, $t=5.677$, $df=356$, $p<.001$), indicating greater severity of symptoms.

Associations between participant characteristics and perceived trauma are presented in Table A2.

Table A1: Characteristics of 395 participants admitted for a first episode of psychosis and followed over 10 years

Baseline characteristics	n	%
Sex		
Male	226	57
Female	169	43
Race		
Non-Hispanic white	290	73
Non-Hispanic black	65	17
Hispanic, Asian, American Indian	40	10
Social Class of origin		
High	109	31
Medium	148	42
Low	93	27
Living independently at baseline		
Independent	196	50
Not independent	197	50
Baseline work/school status		
Full time	141	36
Part time	54	14
None	170	43
Homemaker	28	7
Diagnosis		
Schizophrenia spectrum disorder	150	39
Bipolar disorder	105	27
Other psychotic disorder	134	35
Baseline insurance status		
No insurance	178	45
Private insurance	150	38
Public insurance	67	17
1 st inpatient admission status		
Voluntary	148	42
Involuntary	206	58
1 st inpatient facility type		
Community	131	33
State	121	31

University	128	32
Other	15	4
Age at 1st admission (median, IQR)	27	21-34
10 year characteristics	n	%
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10-year remission status		
Full remission	144	37
Partial or No remission	248	63
State hospital admission over 10y		
Any state hospitalization	178	45
None or unknown	217	55
10-year marital status		
Never married	208	53
Ever married	187	47
10-year education level		
High school or less	193	49
More than high school	201	51
Rehospitalizations per 10y		
0	131	33
1-2	116	29
>2	148	38
10-year BPRS score (median, IQR)	28	22-36

Note: percents are calculated out of number with observed responses

Table A2: Adjusted associations between participant characteristics and perceptions of hospitalization-related trauma

Baseline characteristics	aOR	95% CI	p
Female (reference: male)	1.97	1.19-3.27	.009
Race (reference: non-Hispanic white)			
Non-Hispanic black	.54	0.28-1.02	.057
Hispanic, Asian, American Indian	1.19	.52-2.73	.680
Social class of origin (reference: medium)			
High	.91	.49-1.70	.774
Low	.77	.40-1.46	.419
Not independent at baseline (reference: independent)	.81	.50-1.32	.405
Baseline work/school status (reference: full time)			
Part time	1.37	.64-2.95	.423
None	1.38	.80-2.40	.247
Homemaker	6.05	1.33-27.43	.020
Diagnosis (reference: schizophrenia spectrum)			
Bipolar disorder	1.48	.76-2.88	.246
Other psychotic disorder	.88	.50-1.55	.656
Baseline insurance (reference: none)			
Private	1.01	.59-1.73	.965
Public	.84	.43-1.66	.622
Involuntary 1 st admission (reference: voluntary)	1.54	.91-2.60	.104
Age at first admission	1.00	.97-1.02	.908
10-year characteristics			
Partial or no remission (reference: full remission)	.69	.36-1.34	.276
Any state hospitalization over 10 years (reference: none or unknown)	1.22	.74-2.01	.434
More than high school education (reference: high school or less)	1.20	.73-1.95	.470
Ever married (reference: never married)	.95	.59-1.55	.841

Note: Models are adjusted for 10-year BPRS score and rate of rehospitalization during follow-up. The abbreviation aOR stands for adjusted odds ratio, CI for confidence interval.

3. Specific experiences, reaction to worst hospitalization, and perceived trauma

To assess the psychological impact of trauma experiences, participants were asked the following about their “worst” or most upsetting hospitalization: a) whether he/she *believed* that he/she or someone else could have been killed or seriously harmed; b) whether he/she or someone else *was* seriously harmed; c) whether he/she experienced feelings of intense helplessness, fear or horror; d) how much the experience upset him/her either at the time or later on (a lot vs. none or somewhat); and e) how much the experience interfered with his/her life or daily activities or caused problems with family or friends (a lot vs. none or somewhat). The number of different distressing experiences reported was measured as a count variable ranging from 0 to 8. For this variable, experiences with missing responses were classified as not present unless responses for all experiences were missing, in which case the count was set to missing.

Table A3 shows the distributions of specific experiences, number of experiences, and reactions to worst hospitalization, by perceived trauma. Participants who reported perceived trauma were more likely to report each of the specific experiences than those who did not. Participants who reported perceived trauma were less likely to report no specific experiences (13.9% vs. 52.2%) and more likely to report 1-2 or 3 or more specific experiences (42.5% vs. 35.9% and 43.6% vs. 12.0%, respectively) than those who did not report perceived trauma.

Participants who reported perceived trauma were also more likely to report each negative reaction and were especially more likely to report helplessness, fear or horror (73.3% vs. 19.8%) and being bothered or upset “a lot” by their experience (65.1% vs. 11.0%). All differences were statistically significant. Although DSM PTSD criteria were not assessed in this study, we operationalized Criterion A1 and A2 using questions a, b and c described above. Among those who reported that any of their admissions were traumatic, 39% also met A1 and A2 criteria (endorsing either item a or b above, plus item c).

Table A3: Distribution of specific experiences, number of experiences, and reaction to worst hospitalization by perceived trauma

	Overall		Trauma (n=268, 69%)		No trauma (n=121, 31%)	
	n	%	n	%	n	%
Experience						
Hospitalized against will	217	62	182	72	33	37
Put in restraints	142	40	123	48	19	21
Put in seclusion	74	21	62	24	12	13
Physical abuse by staff	22	6	21	8	1	1
Physical abuse by patients	30	9	27	11	3	3
Threatened or endangered	72	20	66	26	6	7
Forced medication	130	37	119	46	11	12
Overcrowding	64	18	60	24	4	4
Number of different experiences						
0	88	25	36	14	48	52
1-2	145	41	110	43	33	36
3+	124	35	113	44	11	12
Reaction to worst hospitalization						
Believe could be killed/harmed	121	35	106	42	15	16
Serious harm occurred	34	10	32	12	2	2
Helplessness, fear, horror	207	59	189	73	18	20
Bother/upset a lot	176	51	166	65	10	11
Interfere a lot	137	40	127	50	10	11

Note: percents calculated out of number with observed responses. “Trauma” refers to those who reported perceived trauma associated with any hospitalizations, while “No trauma” refers to those who did not report perceived trauma.

4. Sensitivity analysis

We included a sensitivity analysis to assess whether any detected associations may have been influenced by paranoid ideation. Logistic regression was used to evaluate whether the 10-year BPRS “suspiciousness” item was

associated with perceived trauma or with any specific experience. Based on these results, potential confounding of reported associations by paranoid ideation was assessed. This process was repeated using a summary variable representing paranoid ideation over the course of follow-up.

Results of the sensitivity analysis indicated that neither suspiciousness at the 10 year interview, nor participants' history of suspiciousness at any time over follow-up, was significantly associated with perceived trauma. Suspiciousness rating at 10 years was associated with reporting forced medication, but adjustment for suspiciousness did not yield estimates that were appreciably different from those reported in Table 1 (available by request).

5. References

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