

Inpatient mother-and-child postpartum psychiatric care: factors associated with improvement in maternal mental health.

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Table 1: Rate of marked improvement at discharge according to factors tested
(N=869; mean rate of marked improvement=69%)

	sample size N (%)	marked improvement N (%)	95% CI	p
Social and demographic characteristics				
Educational level				
- high school and over	305 (35.1)	247 (81.0)	[77;85]	p < 0.0001
- secondary	404 (46.5)	267 (66.1)	[61;71]	
- primary or less or unknown	155 (17.8)	82 (52.9)	[45;61]	
Occupational status				
- occupational activity or training	256 (29.5)	216 (84.4)	[80;89]	p < 0.0001
- receiving unemployment benefits	102 (11.7)	66 (64.7)	[55;74]	
- receiving disability payments	114 (13.1)	53 (46.5)	[37;56]	
- on sick leave from work	149 (17.2)	120 (80.5)	[74;87]	
- not in labor force	118 (13.6)	74 (62.7)	[54;71]	
- other (state allowance,...)	130 (15.0)	70 (53.9)	[45;62]	
Last employment category				
- professional	92 (10.6)	78 (84.8)	[77;92]	p < 0.0001
- intermediate	167 (19.2)	138 (82.6)	[77;88]	
- clerical or sales	282 (32.5)	211 (74.8)	[70;80]	
- workers, artisan or farmer	108 (12.4)	65 (60.2)	[51;69]	
- no known profession	220 (25.3)	107 (48.6)	[42;55]	
Country of birth				
- France	698 (83.6)	476 (68.2)	[65;72]	p = 0.92
- Other	137 (16.4)	94 (68.6)	[61;76]	
Maternal age at admission (years)				
- 25-35	105 (12.1)	60 (57.1)	[48;67]	p = 0.01
- < 25	541 (62.3)	390 (72.1)	[68;76]	
- > 35	223 (25.7)	149 (66.8)	[61;73]	
Living with a partner (married or cohabiting)				
- yes	569 (65.5)	436 (76.6)	[73;80]	p < 0.0001
- no	300 (34.5)	163 (54.3)	[49;60]	
Maternal mental illness				
Index diagnosis				
- depressive episode and recurrent depressive disorder	158 (18.1)	137 (86.7)	[81;92]	p < 0.0001
- psychotic affective disorders	207 (23.8)	171 (82.6)	[77;88]	
- schizophrenia and other non-affective psychotic disorders	116 (13.3)	54 (46.6)	[38;56]	
- acute and transient psychotic disorders	41 (4.7)	35 (85.4)	[75;96]	
- adult personality or behavior disorder	106 (12.)	42 (39.6)	[30;49]	
- neurotic and other mood disorders	146 (16.8)	121 (82.9)	[77;89]	
- other diseases and disorders	94 (10.8)	38 (40.4)	[30;50]	
Psychiatric history				
no known pathology	166 (19.1)	133 (80.1)	[74;86]	p < 0.0001
- psychotic disorders	194 (27.3)	118 (60.8)	[54;68]	
- mood disorders	289 (33.3)	235 (81.3)	[77;86]	
- behavioral disorders	95 (10.0)	38 (40.0)	[30;50]	
- other disorders or missing	125 (14.4)	75 (60.0)	[51;69]	

History of trauma in childhood

Foster care in childhood

- no	660 (76.0)	471 (71.4)	[68;75]	p = 0,006
- yes	209 (24.0)	128 (61.2)	[55;68]	

Abuse in childhood and adolescence

- no	608 (70.0)	442 (72.7)	[69;76]	p < 0.0001
- abuse other than sexual	141 (16.2)	71 (50.4)	[42;59]	
- sexual abuse	120 (13.8)	86 (71.7)	[64;80]	

Pregnancy and birth

Mean age of baby at admission (weeks)

869	9.1	[8.3;9.8]	p = 0.78
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Parity

-primiparous	540 (62.1)	372 (68.9)	[65;73]	p = 0.19
- secundiparous	190 (21.9)	140 (73.7)	[67;80]	
- over secundiparous	124 (14.3)	77 (62.1)	[54;71]	

Obstetric(pregnancy) complication

- no known complication	648 (74.6)	444 (68.5)	[65;72]	p = 0.65
- complications	221 (24.4)	155 (70.1)	[64;76]	

Child transferred to neonatal intensive care unit

- no	688 (79.2)	490 (71.2)	[68;75]	p = 0.004
- yes	181 (20.8)	109 (60.2)	[53;67]	

Characteristics at admission

Reason for index admission

- first acute episode	219 (25.4)	178 (81.3)	[76;86]	p < 0.0001
- evaluation of maternal competence	154 (17.7)	66 (42.9)	[35;51]	
- acute and transient psychotic disorders	287 (33.0)	183 (63.8)	[58;69]	
- relapse of an acute episode	188 (21.6)	158 (84.0)	[79;89]	
- other, unknown	21 (1.4)	14 (66.7)	[47;87]	

Legal status at admission

- informal	800 (92.0)	552 (69.0)	[66;72]	p = 0.95
-involuntary admission	67 (8.0)	46 (68.7)	[58;80]	

Partner characteristics*

Mental and behavioral disorders

- no psychiatric disorder	426 (49.0)	333 (78.2)	[74;82]	p < 0.0001
- bipolar or depressive disorders	38 (4.4)	23 (60.5)	[45;76]	
- schizophrenia or other psychotic disorders	28 (3.2)	12 (42.9)	[25;61]	
- behavioral disorders	54 (6.2)	34 (63.0)	[50;76]	
- other disorders	67 (7.7)	41 (61.2)	[50;73]	
- unknown	256 (29.5)	156 (60.9)	[55;67]	

Occupational status

- occupational activity or training	588 (67.7)	446 (75.9)	[72;79]	p < 0.0001
- receiving unemployment or disability benefits or paid sick leave from work	110 (12.7)	70 (63.6)	[55;73]	
- other (at home, state allowance...)	82 (9.4)	43 (52.4)	[42;63]	
- unknown	89 (10.2)	40 (44.9)	[35;55]	

Treatments for mental illness during pregnancy

Neuroleptics

- no	659 (75.8)	466 (70.7)	[67;74]	p = 0.04
- yes	210 (24.2)	133 (63.3)	[57;70]	

Anxiolytic/antidepressor/thymoregulator during pregnancy

- no	620 (71.3)	440 (71.0)	[67;75]	p = 0.04
- yes	249 (28.7)	159 (63.9)	[58;70]	

Drug taking behavior during pregnancy

Tobacco					
	- no	561 (64.6)	419 (74.7)	[71;78]	p < 0.0001
	- yes	308 (34.4)	180 (58.4)	[53;64]	
Alcohol					
	- no	811 (93.3)	567 (69.9)	[67;73]	p = 0.02
	- yes	58 (6.7)	32 (55.2)	[42;68]	
Drug use					
	- no	804 (92.5)	570 (70.9)	[68;74]	p < 0.0001
	- yes	65 (7.5)	29 (44.6)	[33;57]	
Unit characteristics					
Size of unit					
	- large unit	483 (55.6)	315 (65.2)	[61;69]	p = 0.004
	- medium unit	263 (30.3)	202 (76.8)	[72;82]	
	- small unit	123 (14.1)	82 (66.7)	[58;75]	
Unit director's professional domain					
	- child psychiatrist	424 (48.8)	275 (64.9)	[60;69]	p = 0.01
	- adult psychiatrist	445 (51.2)	324 (72.8)	[69;77]	

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 *partner and, if no partner, baby's father

Table 2: Model for maternal marked improvement at discharge
(N = 814; ORb logistic regression per variable*; ORa multivariable logistic regression *)

	ORb (CI)	p	ORa (CI)	p
Social and demographic characteristics				
Educational level				
- high school and over	1	p <0.0001*	1	p = 0,54
- secondary	0.46 [0.32;0.65]		0.88 [0.54;1.46]	
- primary or less or unknown	0.28 [0.18;0.43]		1.23 [0.64;2.48]	
Occupational status				
- occupational activity or training	1	p <0.0001*	1	p = 0.02*
- receiving unemployment benefits	0.34 [0.20;0.58]		0.50 [0.26;0.98]	
- receiving disability payments	0.16 [0.10;0.27]		0.37 [0.18;0.76]	
- on sick leave from work	0.77 [0.45;1.30]		0.83 [0.44;1.57]	
- not in labor force	0.31 [0.19;0.52]		0.36 [0.18;0.70]	
- other (state allowance,...)	0,23 [0.14;0.38]		0.46 [0.23;0.93]	
Last employment category				
- professional	1	p <0.0001*	1	p = 0.31
- intermediate	0.85 [0.43;1.71]		0.98 [0.44;2.22]	
- clerical or sales	0.53 [0.28;1.00]		0.93 [0.41;2.08]	
- workers, artisan or farmer	0.27 [0.14;0.54]		0.53 [0.21;1.33]	
- no known profession	0.17 [0.09;0.31]		0.60 [0.24;1.50]	
Country of birth				
- France	1	p = 0.13	1	p = 0.18
- Other	1.02 [0.69;1.51]		1.44 [0.85;2.42]	
Maternal age at admission (years)				
- 25-35	1	p = 0.01*	1	p = 0.20
- < 25	0.52 [0.34;0.79]		1.13 [0.63;2.04]	
- > 35	0.78 [0.56;1.09]		0.68 [0.44;1.06]	
Living with a partner (married or cohabiting)				
- yes	1	p <0.0001*	1	p = 0.98
- no	0.36 [0.27;0.49]		1.01 [0.63;1.60]	
Maternal mental illness				
Index diagnosis				
- depressive episode and recurrent depressive disorder	1	p <0.0001*	1	p <0.0001*
- psychotic affective disorders	0.68 [0.37;1.24]		1.07 [0.51;2.22]	
- schizophrenia and other non-affective psychotic disorders	0.13 [0.07;0.24]		0.27 [0.12;0.61]	
- acute and transient psychotic disorders	0.77 [0.29;2.10]		0.42 [0.14;1.28]	
- adult personality or behavior disorder	0.09 [0.05;0.18]		0.21 [0.10;0.44]	
- neurotic or other mood disorders	0.72 [0.37;1.40]		0.88 [0.43;1.81]	
- other diseases and disorders	0.10 [0.05;0.19]		0.22 [0.10;0.48]	
Psychiatric history				
- no known pathology	1	p <0.0001*	1	p = 0.47
- psychotic disorders	0.39 [0.24;0.62]		0.83 [0.38;1.79]	
- mood disorders	1.08 [0.67;1.75]		0.97 [0.50;1.87]	
- behavioral disorders	0.17 [0.09;0.29]		0.54 [0.25;1.14]	
- other disorders or missing	0.37 [0.22;0.63]		0.77 [0.36;1.62]	

History of trauma in childhood

Foster care in childhood

- no	1	p = 0.01*	1	p = 0.23
- yes	0.63 [0.46;0.88]		0.76 [0.48;1.20]	

Abuse in childhood and adolescence

- no	1	p <0.0001*	1	p = 0.10
- abuse other than sexual	0.38 [0.26;0.55]		0.79 [0.47;1.32]	
- sexual abuse	0.95 [0.62;1.47]		1.60 [0.89;2.87]	

Pregnancy and birth

Parity

-primiparous	1	p = 0.19	1	p = 0.29
- secundiparous	1.26 [0.87;1.83]		0.97 [0.60;1.57]	
- over secundiparous	0.74 [0.49;1.11]		0.65 [0.37;1.12]	

Obstetric (pregnancy) complication

- no known complication	1	p = 0.65	1	p = 0.84
- complications	1.08 [0.77;1.50]		0.96 [0.62;1.47]	

Child transferred to neonatal intensive care unit

- no	1	p = 0.005*	1	p = 0.28
- yes	0.61 [0.44;0.86]		0.78 [0.49;1.23]	

Characteristics at admission

Reason for index admission

- first acute episode	1	p <0.0001*	1	p = 0.01*
- evaluation of maternal competence	0.17 [0.11;0.28]		0.72 [0.38;1.38]	
- acute episode of a chronic disorders	0.41 [0.27;0.62]		0.97 [0.51;1.83]	
- relapse of an acute episode	1.21 [0.72;2.04]		2.24 [1.11;4.55]	
- other, unknown	0.46 [0.18;1.21]		1.84 [0.50;6.73]	

Legal status at admission

- informal	1	p = 0.85	1	p = 0.64
-involuntary admission	0.98 [0.58;1.69]		0.84 [0.41;1.72]	

Partner characteristics**

Mental and behavioral disorders

- no psychiatric disorder	1	p <0.0001*	1	p = 0.13
- bipolar or depressive disorders	0.21 [0.10;0.46]		0.33 [0.14;0.79]	
- schizophrenia or other psychotic disorder	0.43 [0.22;0.85]		0.70 [0.27;1.85]	
- behavioral disorders	0.48 [0.26;0.86]		1.26 [0.59;2.69]	
- other disorders	0.44 [0.26;0.76]		1.40 [0.66;2.98]	
- unknown	0.44 [0.31;0.61]		1.00 [0.59;1.71]	

Occupational status

- Occupational activity or training	1	p <0.0001*	1	p = 0.30
- receiving unemployment or disability benefits or paid sick leave from work	0.56 [0.36;0.86]		1.09 [0.61;1.96]	
- other (at home, state allowance...)	0.35 [0.22;0.56]		0.67 [0.36;1.26]	
- unknown	0.26 [0.16;0.41]		0.60 [0.30;1.18]	

Treatments for mental illness during pregnancy

Neuroleptics

- no	1	p = 0.04*	1	p = 0.71
- yes	0.72 [0.52;0.99]		0.91 [0.55;1.50]	

Anxiolytic, antidepressor or thymoregulator

- no	1	p = 0.04*	1	p = 0.98
- yes	0.72 [0.53;0.99]		0.99 [0.63;1.56]	

Drug taking behavior during pregnancy

Tobacco

- no	1	p <0.0001*	1	p = 0.68
- yes	0.48 [0.35;0.64]		0.91 [0.59;1.41]	

Alcohol

- no	1	p = 0.02*	1	p = 0.22
- yes	0.53 [0.31;0.91]		1.64 [0.74;3.63]	

Drug use

- no	1	p <0.0001*	1	p = 0.33
- yes	0.33 [0.20;0.55]		0.70 [0.34;1.44]	

Unit characteristics

Unit director's professional domain

- child psychiatrist	1	p = 0.01*	1	p = 0.59
- adult psychiatrist	1.45 [1.09;1.94]		1.12 [0.73;1.75]	

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*adjusted for age of baby and size of MBU

**partner and if no partner baby's father