



Long-term Effect of Antipsychotics in First-episode Schizophrenia

John R. Bola, Ph.D.

School of Social Work
University of Southern California

Bola@usc.edu



Question:

Does antipsychotic
medication improve the
long-term course of early
episode acute psychosis?



Method:

- Meta-analysis
- Effect size (r)
 - > outcome / study
 - > outcome across studies
 - > study
 - > composite across studies
- Magnitude of " r "
 - > 0.10 small
 - > 0.30 medium
 - > 0.50 large



Study Selection Criteria:

1. Primarily first-episode subjects
2. Quasi-experimental or random
3. At least 1 non-medicated group
4. At least 1-year follow-up



Excluded Studies: (Wyatt, 1991)

1. Chronic sample (4 studies)
 2. Pre-experimental (12 Studies)
 3. Drug-withdrawal (3 studies)
- 16 of 22 studies excluded



Included Studies:

1. Wirt and Simon, 1959
2. NIMH-PSC (Schooler et al, 1967)
3. Camarillo State Hosp. (May)
4. NIH (Carpenter, 1977)
5. Agnews Hosp. (Rappaport, 1978)
6. Soteria (Mosher & Menn, 1978)
7. Soteria-Bern (Ciompi 1992,1993)
8. Finnish Needs-Adapted (Lehtinen, 2000)



1. Wirt & Simon, 1959

Random	Drug & Milieu	DSM - I
Males	1 year f/u 79/80	Social: $r = 0.18$ Work: $r = -0.03$



**2. NIMH - PSC
(Schooler et al, 1967)**

Random	Drug vs. Milieu	2 of 7 Sx's
1 st episode	1 year f/u 254/463	Rehosp. (neg.)



**3. Camarillo Hospital
(May et al 1976 a/b, 1981; Wyatt et al, 1997)**

Random	Drug & Milieu	DSM - I
Middle 1/3	225/228	Health: $r = 0.12$ Work: $r = 0.20$
Wyatt, 1997	96/228	1-year rehosp. $r = 0.09$ 2-year rehosp. $r = 0.15$
	22/228	6-7 yr GAF: $r = 0.47$



**4. National Institutes of Health
(Carpenter et al. 1977)**

Quasi	Drug & Special Milieu	DSM - II
Some not 1 st episode	122/122	1-year global $r = -0.21$



**5. Agnew's Hospital
(Rappaport et al. 1978)**

Random	Drug vs. Milieu	DSM - II
Single Males	80/127	3-year rehosp: $r = -0.32$ clinical improv: $r = -0.03$



**6. Soteria
(Mosher & Menn, 1978; Matthews et al, 1979)**

Quasi	Drug vs. Special Milieu	DSM - II 4 of 7 Sx's
Young, Single	63/79	Work: $r = -0.08$ Indep. Living: $r = -0.37$ 2-yr rehosp: $r = -0.14$
		1-yr rehosp: $r = -0.26$ 1 1/2 - yr rehosp: $r = -0.17$ 2- yr rehosp: $r = -0.17$
Matthews, 1979	68/79	



**7. Soteria - Bern
(Ciompi et al. 1992, 1993)**

Quasi	Drug vs. Special Milieu	DSM - III R
1 st episode	44/44	2-yr symptoms r = 0.00 Indep. Living: r = -0.23 work: r = 0.11 relapse: r = -0.06 rehosp. days: r = -0.23



**8. Finnish Needs-Adapted Study
(Lehtinen et al, 2000)**

Quasi	Drug & needs adapted vs. Needs adapted only	DSM - III R
1 st episode	106/165	2-yr Sx's: r = -0.17 work: r = -0.02 rehosp. days: r = -0.23 GAS: r = -0.24 GRIP: r = -0.09



Effect Size / Outcome:

Outcome	r	range
Rehosp/ Relapse (4)	-0.11	-0.25 to 0.12
Psychopathology (5)	-0.03	-0.21 to 0.12
Work (5)	0.06	-0.08 to 0.15
GAF (2)	-0.12	-0.24 to 0.47
Indep. Living (2)	-0.31	-0.37 to -0.23



Effect Size / Study:

Study	N	r
Wirt & Simon	39	-0.08
NIMH-PSC (Cole)	254	(neg.)
Camarillo Hosp. (May)	22-225	0.14
NIH (Carpenter)	122	-0.21
Agnews Hosp. (Rappaport)	80	-0.18
Soteria (Masher)	63-68	-0.20
Soteria-Bern (Ciompi)	44	-0.09
Finnish N-A (Lehtinen)	106	-0.16



Composite Effect Size:

7 Studies: N = 476-684

mean: r = -0.09

median: r = -0.16



Limitations:

- > Few good-quality studies
- > Diagnostic heterogeneity
- > Selection / attrition bias
- > Different treatment comparisons
- > Treatment crossover



Conclusion:

- Scientific evidence is inadequate to conclude that antipsychotic treatment in early episode psychosis improves the long-term course.
- Limited available evidence suggests that antipsychotic treatment in early episode psychosis results in a small negative long-term effect.
- Withholding or limiting anti-psychotic use in early episodes, while providing psychosocial treatment, does not appear harmful to clients.



Need for further research:

Well-designed, large sample, first-episode, randomized controlled trial comparing:

1. antipsychotic medication (conventional & atypical),
2. medication plus psychosocial treatment, and
3. psychosocial treatment only, on long-term outcomes.

