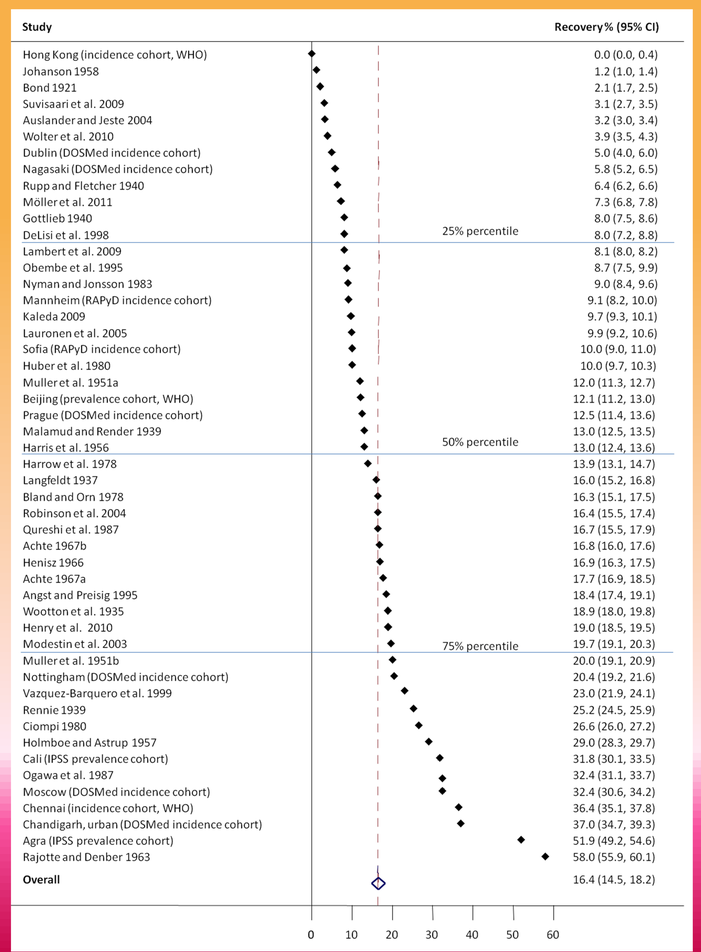
OUTCOMES AND THEIR PREDICTORS IN SCHIZOPHRENIA – SYSTEMATIC REVIEWS

Jouko Miettunen, Johanna Immonen, Matti Penttilä, Hanna Korpela, Juha Käkelä, Sanna Huhtaniska, Matti Isohanni, Noora Hirvonen, Erika Jääskeläinen

Center for Life Course Health Research and Information Studies, University of Oulu, Oulu, Finland; Medical Research Center Oulu, Oulu University Hospital and University of Oulu, Oulu, Finland

- **The aim is to present key results of recent systematic reviews and meta-analyses on outcomes of schizophrenia.**
- **The included reviews focus on proportion of recovery in schizophrenia and how other clinical and functional outcomes are predicted by family history of psychosis, onset age, and duration of untreated psychosis (DUP).**

Table 1



RECOVERY

Recovery was defined as improvements in both clinical and social domains with a two-year good outcome for at least one of the domains. In all studies, a follow-up of at least two years was required (Jääskeläinen et al. 2013).

We identified 50 studies with data suitable for inclusion. The median proportion (25%–75% quantiles) of patients who met our recovery criteria was 13.5% (8.1%–20.0%) (Table 1).

Recovery proportions did not differ by gender. Proportion of recovered cases had not increased in recent decades. Countries with poorer economic status had higher recovery proportions. See Table 2.

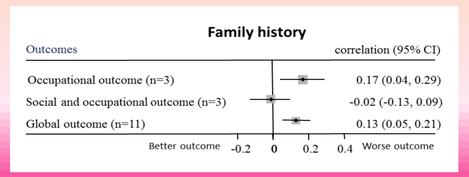
Table 2

	Number of Studies	Median%[a]	IQR[b]
Sex	24		
Males	12	12.9	10.0–19.4
Females	12	12.1	7.5–29.0
Midpoint of the collection of the sample[d]	48		
Before 1941	11	13.0	6.4–20.0
1941–1955	5	17.7	13.0–19.7
1956–1975	11	16.9	16.3–32.4
1976–1995	19	9.9	5.8–19.0
After 1996	2	6.0	3.9–8.1
Economic index of the site[e]	50		
Low or lower-middle	5	36.4	16.7–37.0
Upper-middle	5	12.1	10.0–31.8
High	40	13.0	7.7–19.0

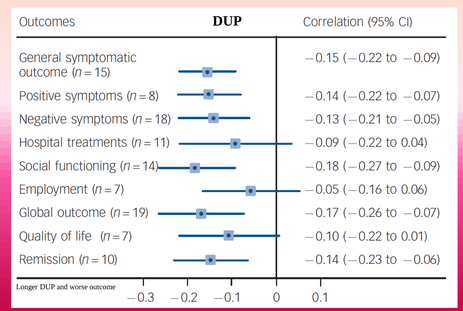
[a]Median weighted by sample size.
[b]IQR, inter quartile range.
[c]Metaregression, *t*-test.
[d]Classified as in Warner (2004).
[e]Income classes: low-income economies ($1005 or less) or lower middle-income economies ($1006–$3975) vs upper middle-income economies ($3976–$12,275) vs high-income economies ($12,276 or more) (data.worldbank.org).

PREDICTORS OF CLINICAL AND FUNCTIONAL OUTCOMES

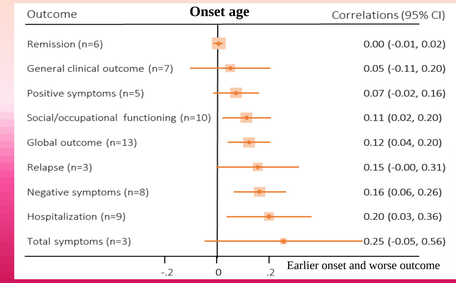
14 studies investigated associations between family history of psychosis and outcomes. Family history of psychosis was associated with poor occupational (r=0.17) and global (r=0.13) outcome (Käkelä et al. 2014).



33 studies investigated associations between DUP and outcomes. DUP associated with poor general symptomatic outcome, more severe positive and negative symptoms, lower likelihood of remission, poor social functioning, and poor global outcome (correlations 0.13–0.18) (Penttilä et al. 2014).



81 studies investigated associations between onset age and outcomes. Earlier onset age associated with more hospitalizations, negative symptoms, relapses, worse social/occupational functioning, and poorer global outcome (correlations 0.11–0.17) (Immonen et al. In press).



Correspondence:

Jouko Miettunen

P.O.Box. 5000, FIN-90014

University of Oulu, Finland

Email. jouko.miettunen@oulu.fi

Acknowledgements:

This work was supported by grant from the NARSAD: Brain and Behavior Research Fund) and the Academy of Finland.

UNIVERSITY OF OULU

References

Immonen J, Jääskeläinen E, Korpela H, Miettunen J. Age at onset and the outcomes of schizophrenia: systematic review and meta-analysis. Early Interv Psychiatry, in press.

Jääskeläinen E, Juola P, Hirvonen N, McGrath JJ, Saha S, Isohanni M, Veijola J, Miettunen J. A systematic review and meta-analysis of recovery in schizophrenia. Schizophr Bull 2013; 39:1296-1306.

Käkelä J, Panula J, Oinas E, Hirvonen N, Jääskeläinen E, Miettunen J. Family history of psychosis and social, occupational and global outcome in schizophrenia: a meta-analysis. Acta Psychiatr Scand 2014; 130:269-78.

Penttilä M, Jääskeläinen E, Hirvonen N, Isohanni M, Miettunen J. Duration of untreated psychosis as predictor of long-term outcome in schizophrenia. A systematic review and meta-analysis. Br J Psychiatry 2014; 205:88-94.

CONCLUSIONS

- Despite major changes in treatment options in recent decades, the proportion of recovered cases has not increased. Current outcomes are unsatisfactory and their exact mechanisms, trajectories, and predictors are partly unknown.
- Family history of psychosis has a relatively small but statistically significant negative effect on the occupational and global outcome.
- Longer duration of untreated psychosis was associated with poorer outcomes.
- Earlier age at onset has a small, but significant negative impact on some of the outcomes.
- Studied predictors, family history, onset age and duration of untreated psychosis, may correlate with each other and further studies are needed to study their interactions.