Schizophrenia in Later Life

Carl I Cohen, MD

Distinguished Service Professor & Co-Director, Division of Geriatric Psychiatry & Center of Excellence for Alzheimer's Disease at SUNY Downstate Medical University

carl.cohen@downstate.edu

GREETINGS FROM NEW YORK CITY

No disclosures

Funding: The National Institutes of Health (NIGMS SO6GM54650 and SO6GM74923) supported this work.

Focus of Presentation: Will not be on all psychotic disorders

- Psychosis can be narrowly defined by the presence of hallucinations, delusions, or both. Impaired reality testing remains central to psychosis.
- About three-fifths of psychotic disorders in later life are secondary to conditions such as dementia, delirium, or medical causes. The most common primary cause of psychosis is depression. These conditions are covered elsewhere in this meeting.
- Today, I focus on the outcome of community–dwelling persons aged 55 and over with early–onset schizophrenia (i.e., who developed the condition prior to age 45) and the implications for care and policy.

Compelling Demographics

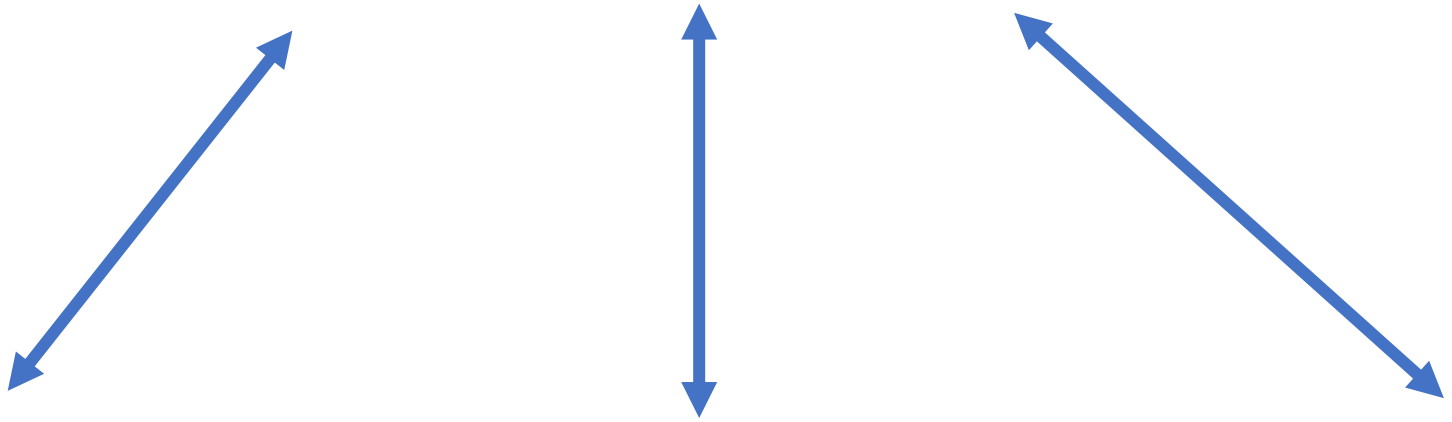
Schizophrenia typically develops in the 2nd or 3rd decades of life, but greater numbers of patients are surviving into old age.

1. **Prevalence estimates age 60+: .35% (EO), .14% (LO), .03% (VLOS) or total of 0.52% (Meesters, 2019).** **EO: LO/VLOS =2:1**
2. In the USA, there has been a **50% increase in the number of persons aged 55 and over with schizophrenia in the first quarter of the 21st century to about 750,000 (2025).** Hence, about **one-fourth** of persons are in this older age bracket. By 2060, **more than two-fifths** will be 55 and over (Cohen et al, 2020).
3. Globally, the **number of persons 60 and over will double between 2014 and 2050,** and will reach 10 million (Cohen et al, 2020).
4. Only **1%** of the schizophrenia literature is devoted to older adults.

Outcome (O) Formula

$$O=R+C+D+F+H+S$$

R=Remission
C=Cognition
D=Depression
F=Functioning
H=Health
S=SWB(QoL)

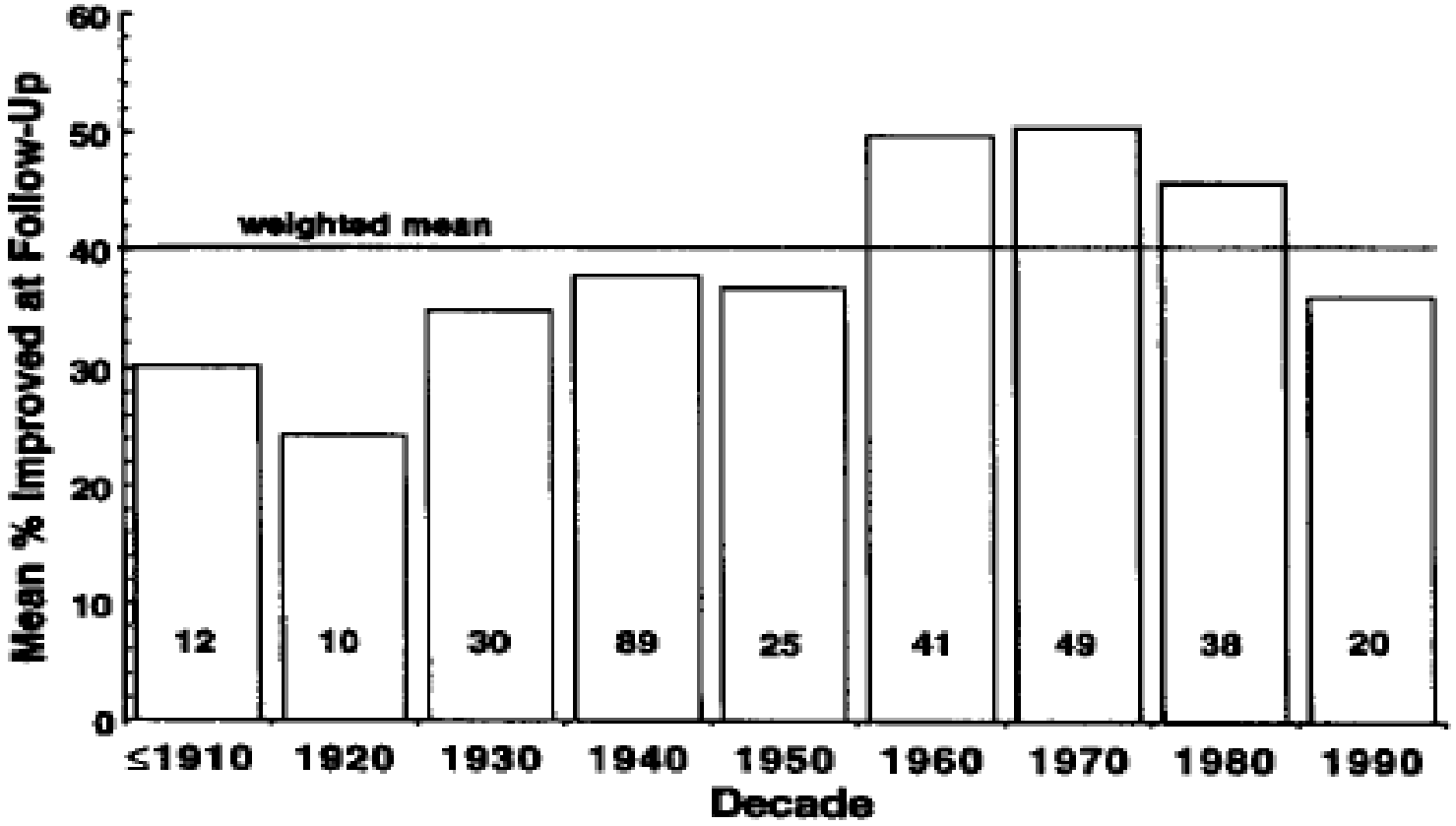


income, social stressors, trauma, race, gender, age, coping, residential status, community factors, public services and economic support, treatment

- **Point 1. Outcome changes historically because of evolving diagnostic criteria, criteria for outcomes, and social factors.**
- **It is important to reach a consensus on the "phenotype"(what is schizophrenia) and appropriate outcome measures**
- **Also need to reach consensus on age when doing research with OAS, e.g., 50, 55, 60, 65?**

Historical changes in persons attaining clinical remission, recovery, mild symptoms, and/or socially recovered (Hegerty et al , 1994)

FIGURE 1. Mean Percentages of Schizophrenic Patient Cohorts Considered Improved in Follow-Ups of ≤10 Years, by Decades of Studies Reviewed[a]



View on Clinical Outcome: 1900-1986

Kraepelin: 2.6% to 4.1% recovery/ 17% improvement

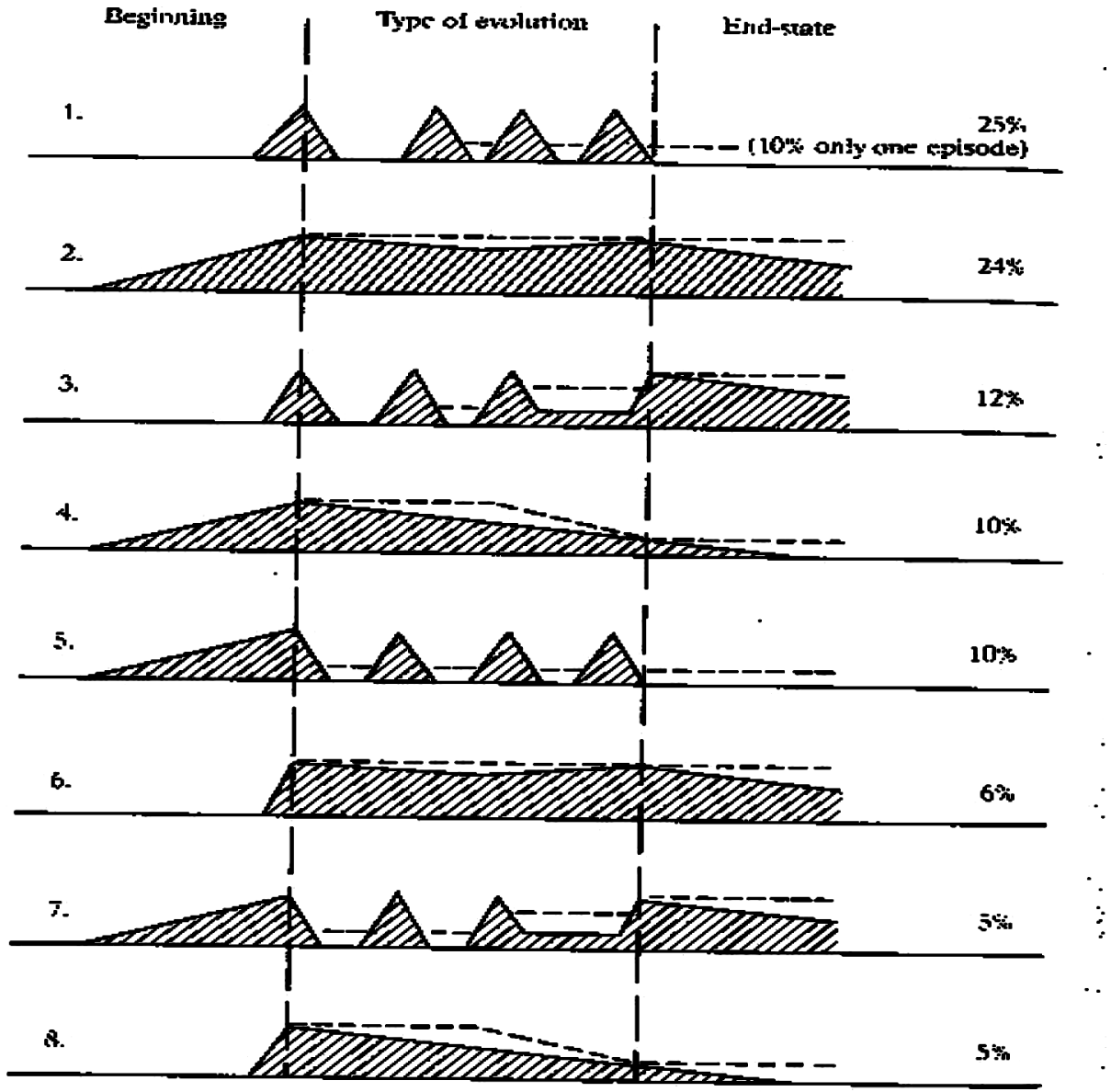
Bleuler : "...ultimate direction is toward loss of function"

DSM III (1980) "The most common course is one of acute exacerbations with increasing impairment between episodes"

Clinician's Illusion?

TABLE 2–1. Long-term studies of schizophrenia

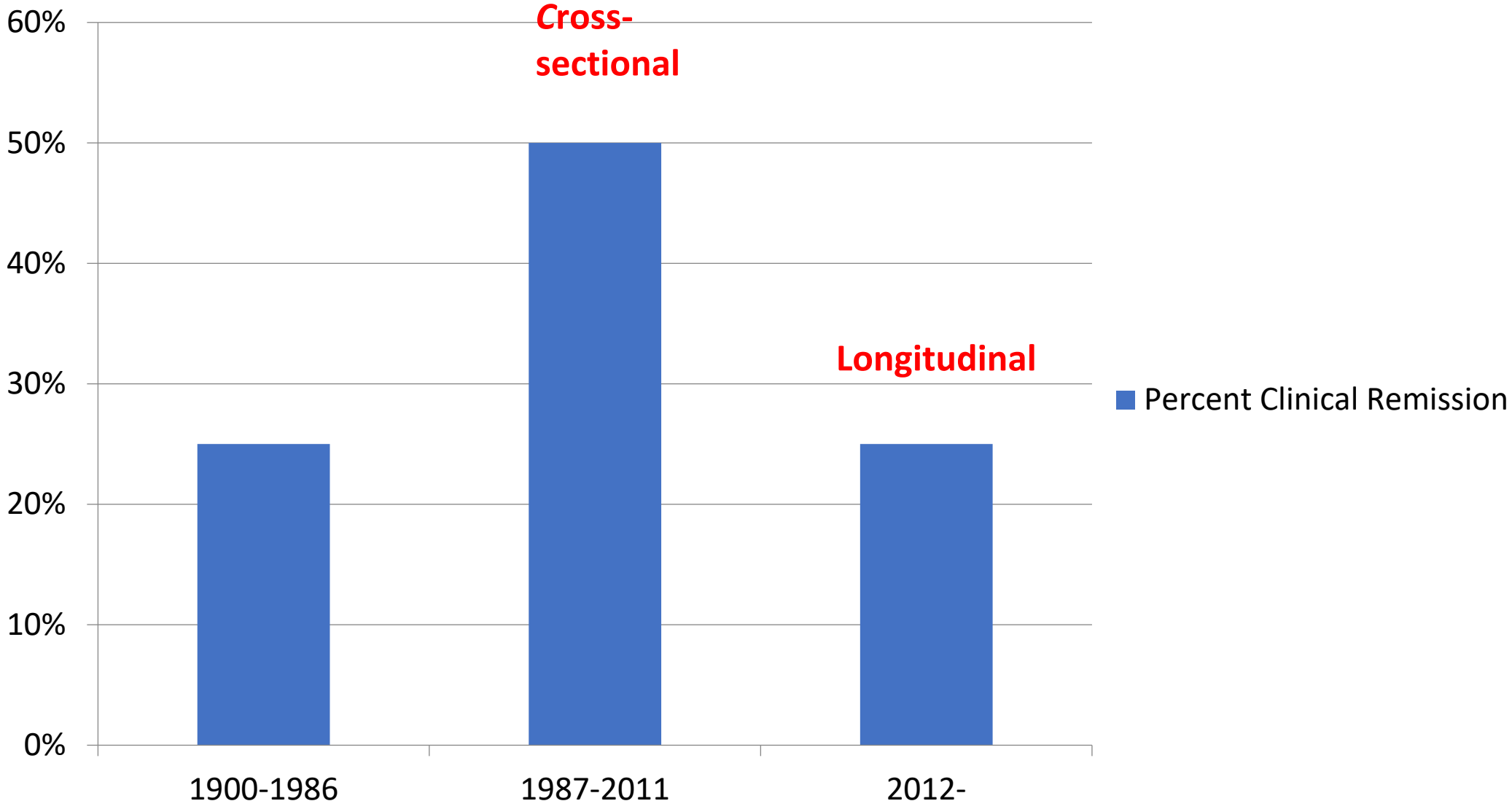
Study	Sample size, n	Average length in years	Percentage of subjects recovered and/or significantly improved[a]	Percentage of subjects socially recovered
M. Bleuler 1972a, 1972b, Switzerland	208	23	53–68	46–59[a]
Hinterhuber 1973, Austria	157	30 (approx.)	50	77
Huber et al. 1975, Germany	502	22	57	56
Ciompi and Müller 1976, Switzerland	289	37	53	57
Kreditor 1977, Lithuania	115	20+	84	NI
Tsuang et al. 1979, United States	200	35	46	21[b]
Marinow 1986, Bulgaria	280	20	50	NI
Harding et al. 1987a, 1987b, United States	269	32	62–68	68[c]
Ogawa et al. 1987, Japan	140	22.5	56[d]	47
DeSisto et al. 1995a, 1995b, United States	269	35	49	49[e]



50% favorable outcome

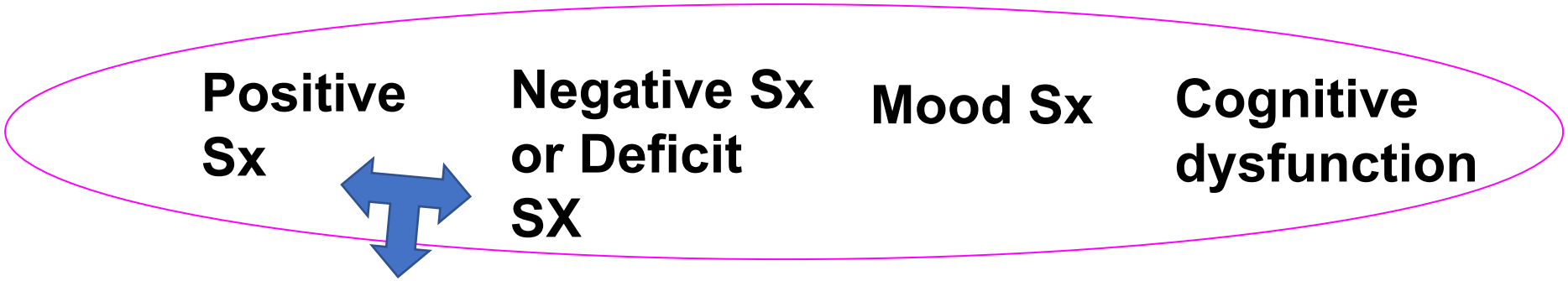
Ciompi, 1980

Historical Trends in Clinical Remission in Older Adults with Schizophrenia



Point 2. A comprehensive view of outcome should include symptoms, functionality, a combination of symptoms/functionality (recovery), and positive mental health (successful aging)

Outcome Dimensions



Quality of Life or subjective Well-Being

Social Adaptive functioning (community integration)

Clinical Recovery: Combination of remission and social functioning

Point 3. Outcome criteria are largely independent of each other

Correlations among the four outcome indicators at baseline (n=249)

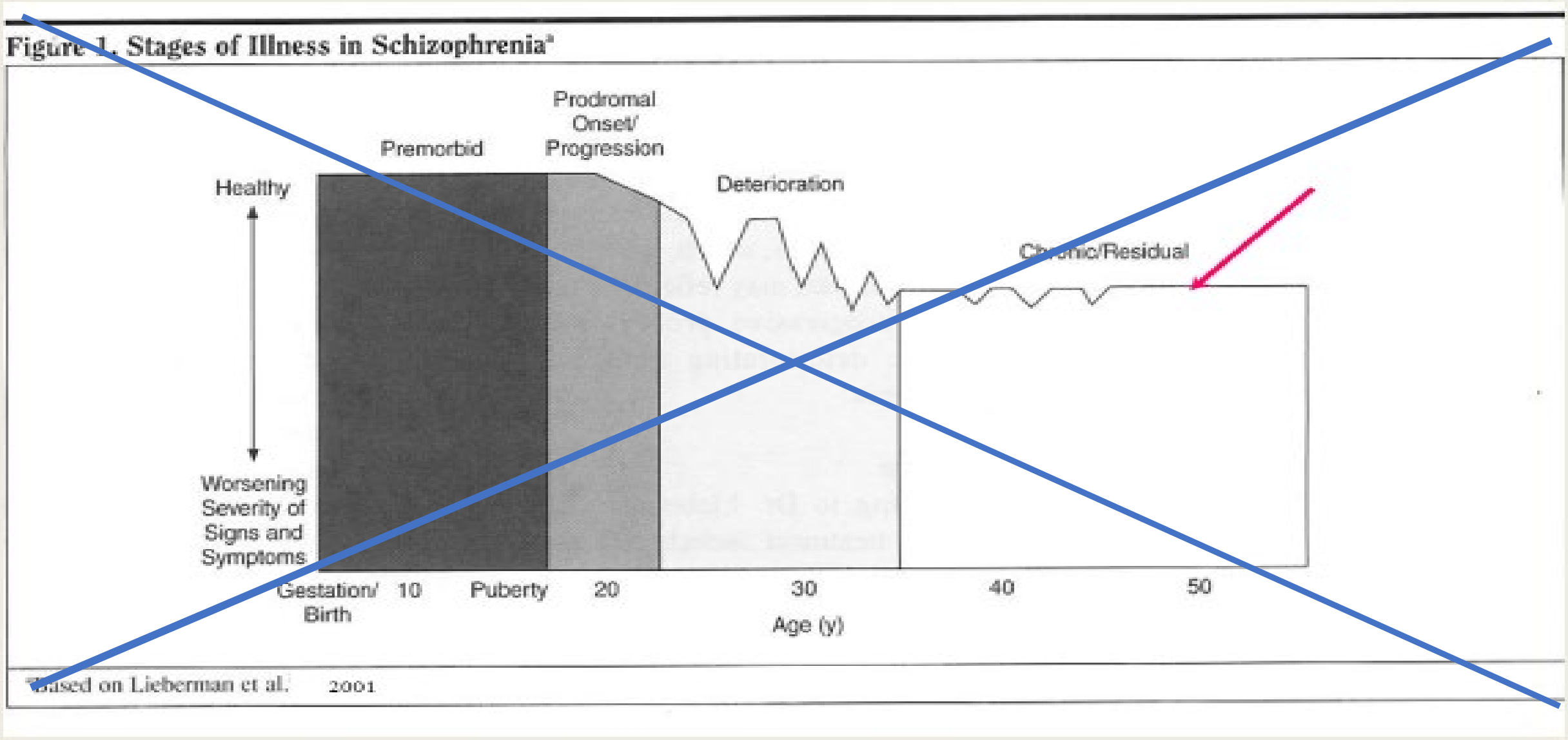
	Remission	DRS	CESD
Community Integration	.24*	.12	-.44**
CESD (depression)	-.16	.05	
DRS (cognition)	.40**		

DRS=Dementia Rating Scale;
CESD=Center for Epidemiology Scale–Depression

Range of shared variance (overlap) among variables: 0 to 19%

Point 4. Outcome is not quiescent or stable in later life but continues to evolve

Traditional view of schizophrenia with stable phase in later life



Reprinted J. Clin Psychiatry, June 2006

Longitudinal Assessments for Various Outcome Domains (Mean: 52 Months) :

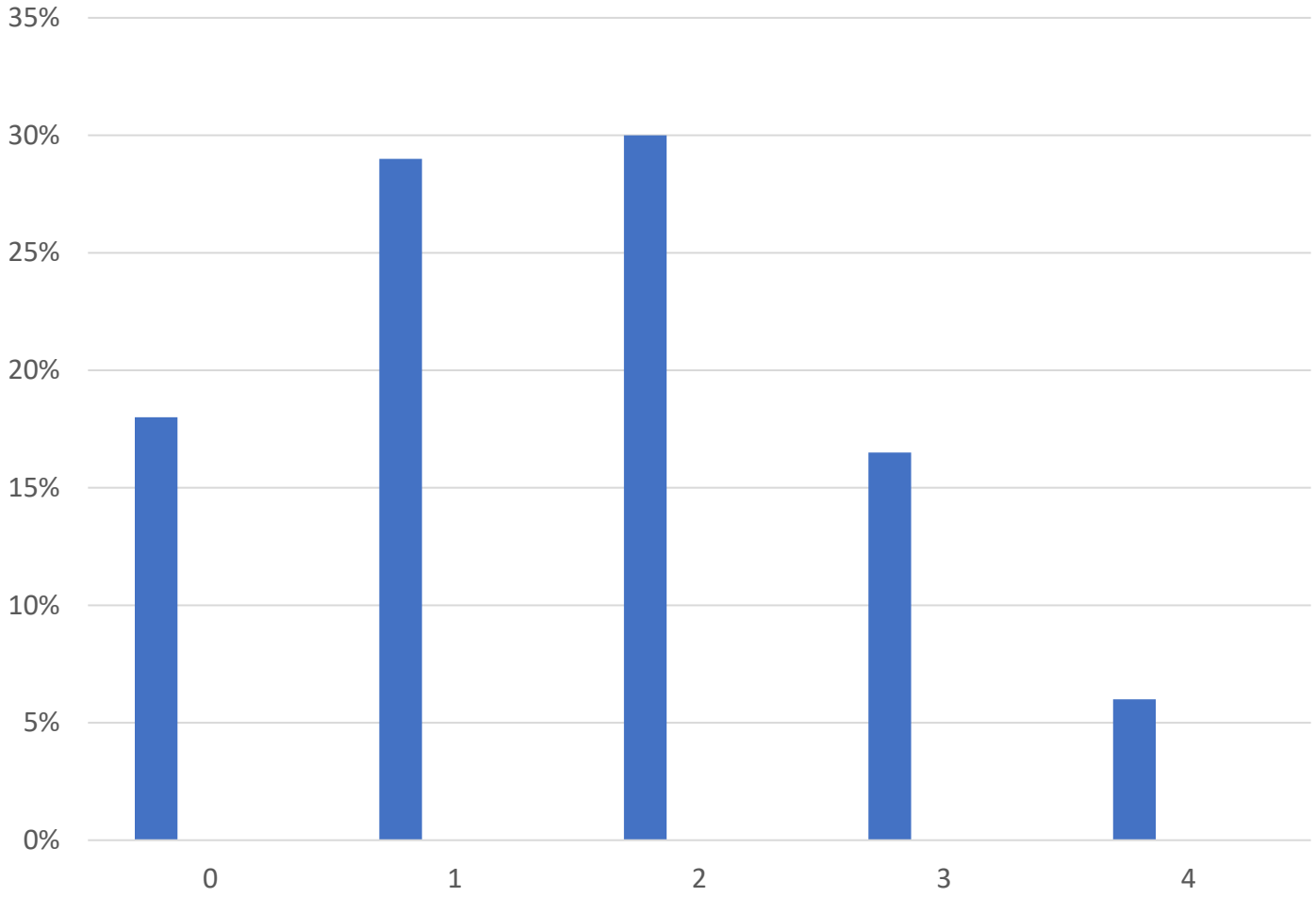
Middle two columns show movement between different outcome statuses

Outcome Domains	Never	Time 1(yes); Time 2(no)	Time 1(no); Time 2(yes)	Always
Remission(%)	35	25	16	25
High Community Integration(%)	39	16	19	26
Recovery: Remission & High Community Integration(%)*	65	14	9	12
Normal Cognition: DRS ≥ 130(%)	25	18	14	43
Not Depressed: CESD <8 (%)	44	10	16	30

*Remaining 47% were various combinations of remission and high community integration

Note: N=103; DRS=Dementia Rating Scale; CESD=Center for Epidemiology Scale–Depression

Percentage of Persons Experiencing Changes in Outcome Measures from T1 to T2

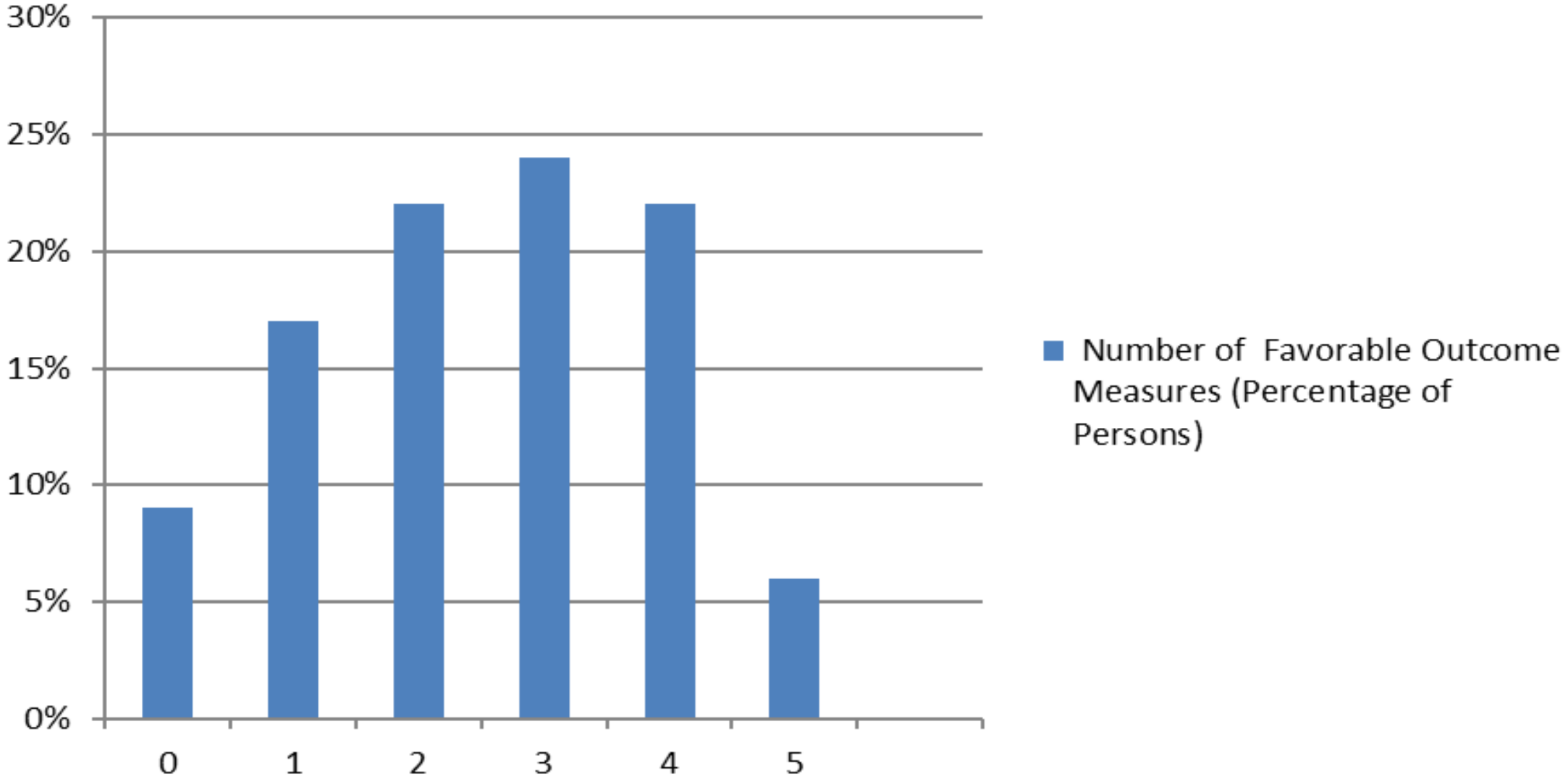


Number of Categories (remission, depression, cognition, community integration, self-health)
(Possible range: 0-5)

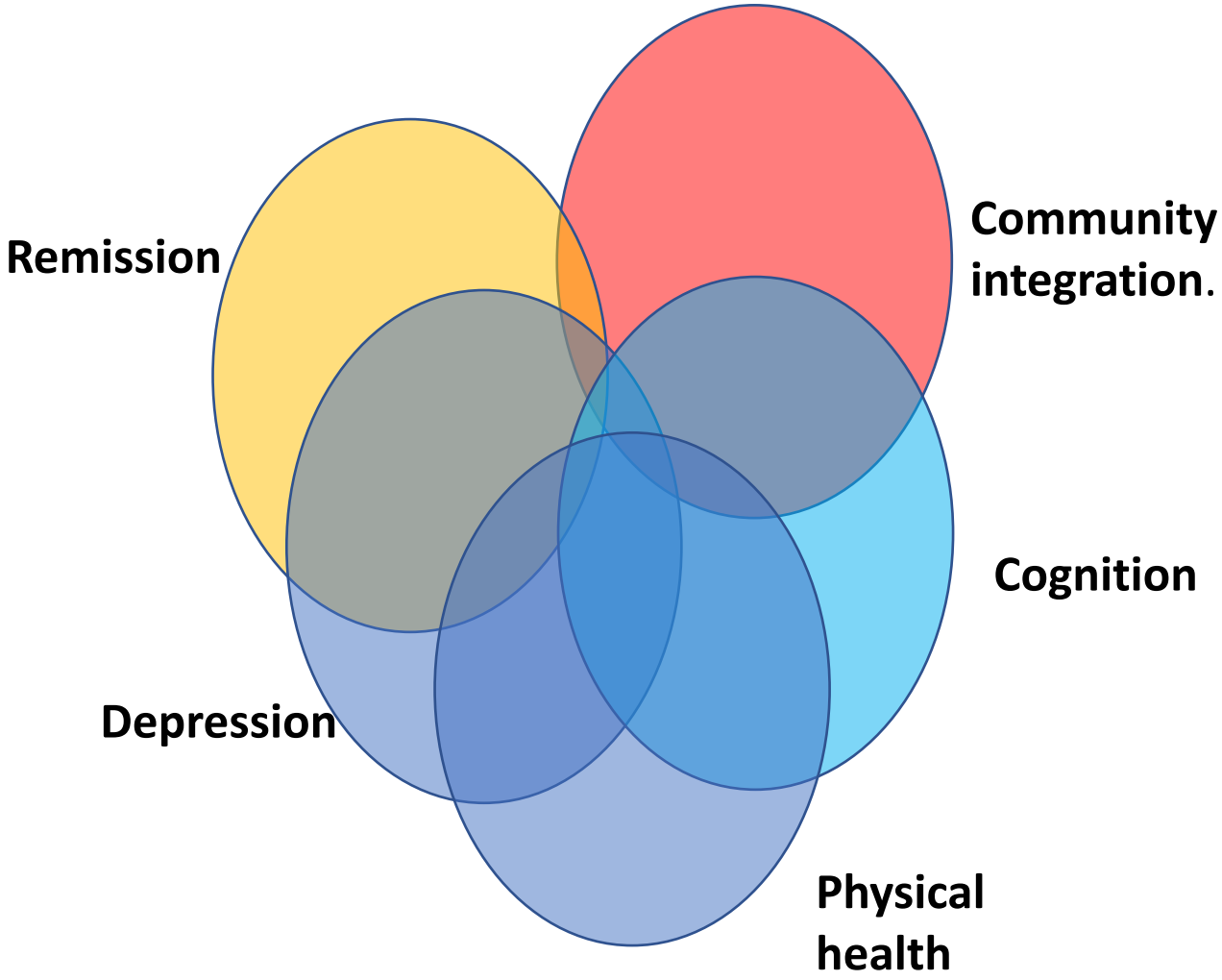
Point 5. Outcome is heterogeneous with a variety of combinations that necessitate a personalized approach to care and a more nuanced approach to research

Outcome Components: 52-month Follow-up Status (n=103)		
	Persistently unfavorable or worse over time(%)	Persistently favorable or better over time(%)
Remission	59	41
Community integration	55	45
Depression	54	46
Cognitive functioning	43	57
Self-health(excellent/good)	36	64

Figure 3. Number of Favorable Outcome Measures (Maximum=5)

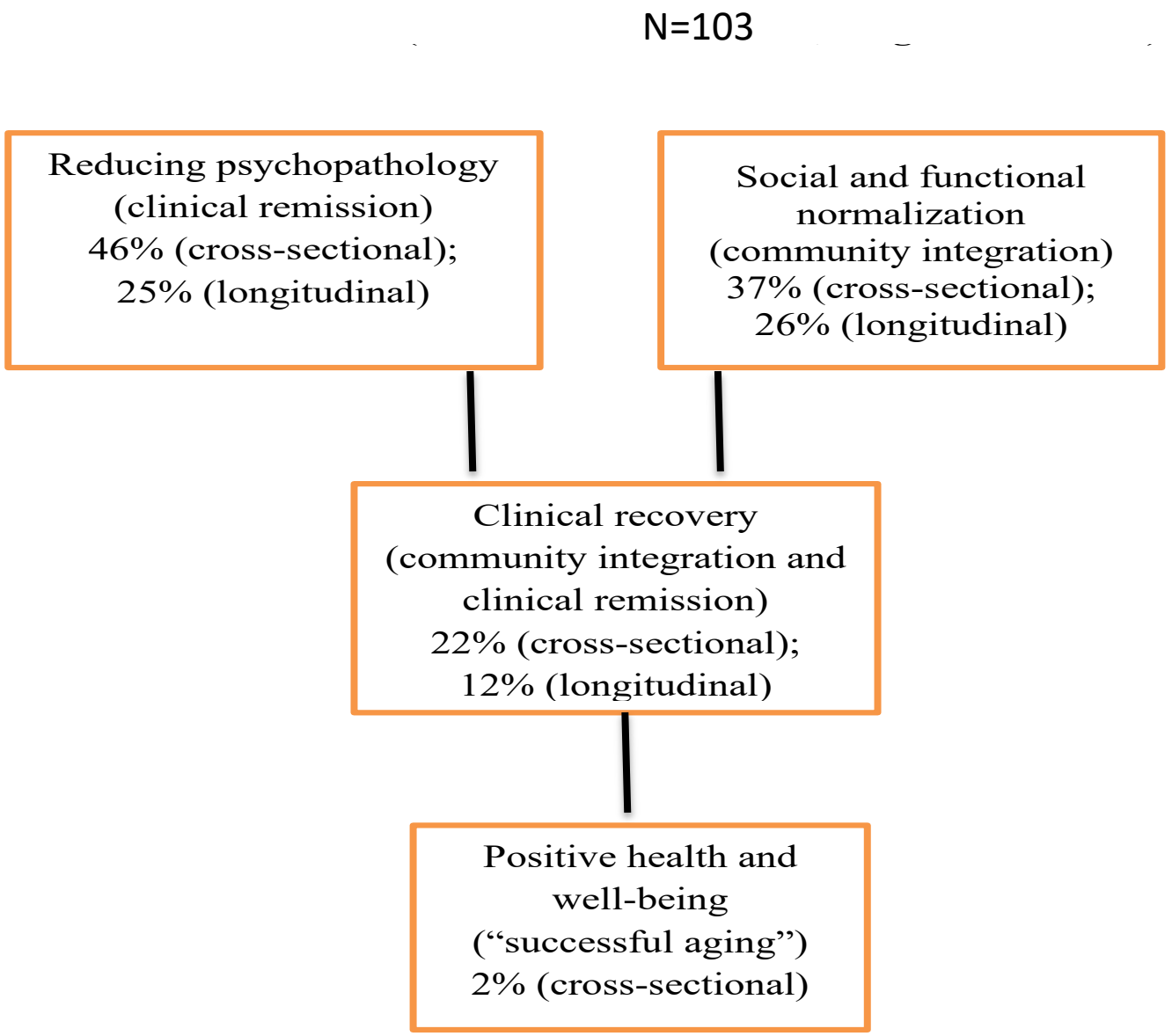


Even in later life, for each person outcome is a dynamic multidimensional process.



Point 6. “Recovering” (aka “clinical recovery”) can be assessed empirically and yields a 5-tier taxonomy that provides guidance for treatment and research

Figure 1 Cross-Sectional and Longitudinal Outcome of Recovery Process



What is the Status of Clinical Recovery Over Time? What are the implications for care?

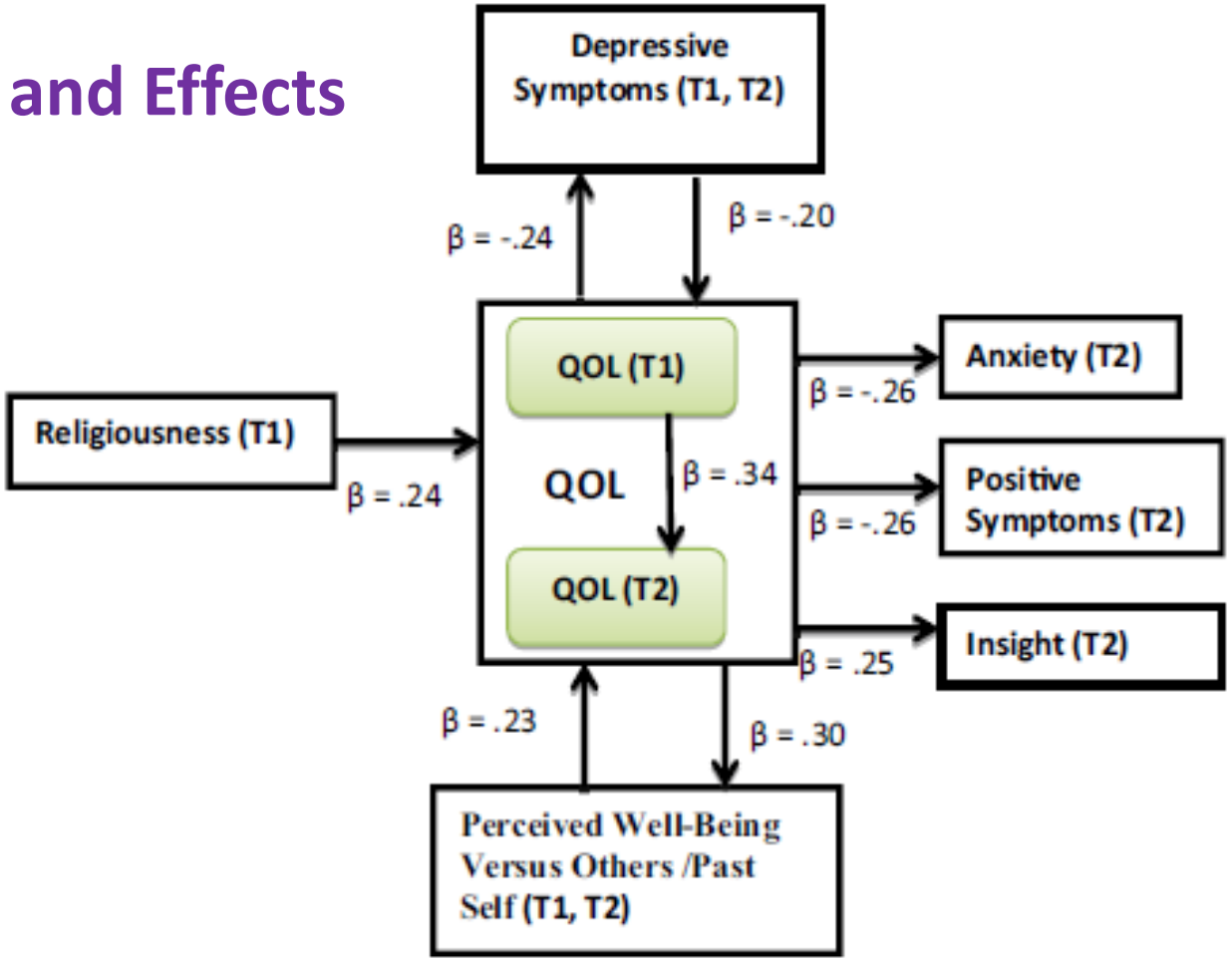
Five-Tier Taxonomy of Clinical Recovery in Older Adults with Schizophrenia

Tier1 (12%)	Stable state	**Experienced persistent clinical recovery (i.e., "recovered"). Maintain current treatment or consider reducing medications.**
Tier 2 (23%)	Fluctuating state	**Fluctuated between clinical recovery and non-recovery. With appropriate interventions, these persons might be able to attain persistent clinical recovery.**
Tier 3 (11%)	Stable state	**Persistent clinical remission but never attained community integration (6%) or persistent community integration but did not attain clinical remission (5%). These persons might benefit from more targeted approaches to their clinical or social deficits.**
Tier 4 (38%)	Fluctuating state	**Able to attain clinical remission or community integration at only one point in time. These persons might require more intensive work at the clinical and social levels.**
Tier 5 (18%)	Stable state	**Might not be considered "recovering" since they never attained either clinical remission or community integration at any point in time. These persons require the most intensive interventions.**

Cohen & Reinhardt, 2020

Point 7. Quality of Life (Self-Perceived Well-Being) is a Pivotal Variable and an Important Point for Intervention

Causes and Effects



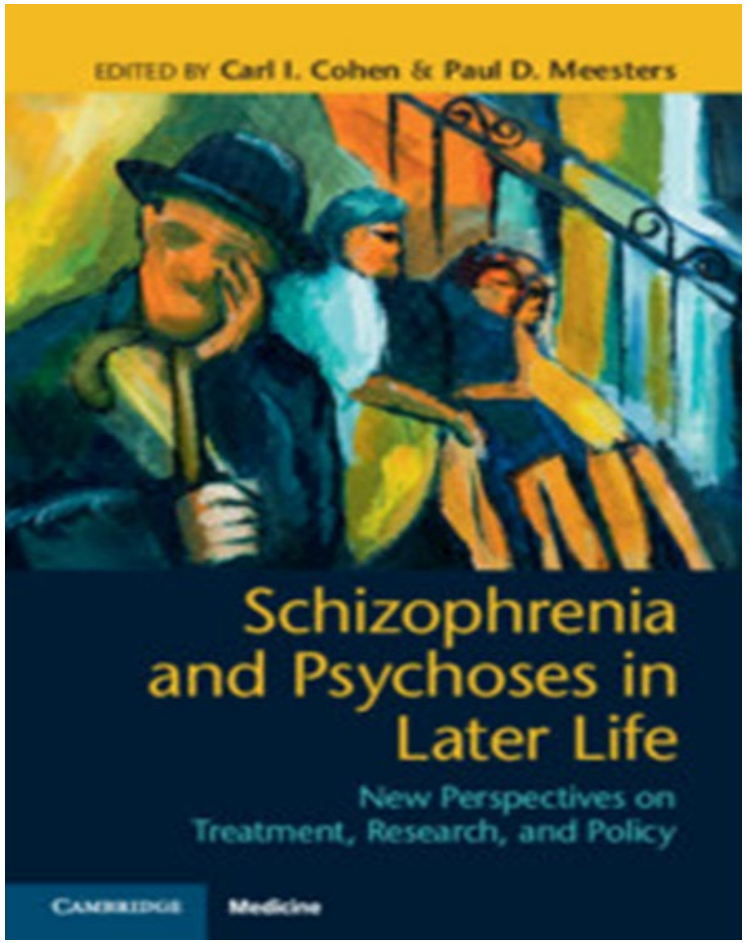
Mean scores on QLI

Schizophrenia sample=22.5
Community=23.9
Chronic pain=17.4
Chronic Fatigue Syndrome =12.6
Chronic renal disease=20.7

Not covered today

- **Point 7. OAS have higher rates of dementia and cognitive impairment vs their age-peers, and the strategies for enhancing cognitive performance and preventing loss.**
- **Point 8. OAS have very high rates of depression (60%) that need more systematic interventions.**
- **Point 9. OAS continue to show higher mortality rates (approx. double) than their age peers**

Further Reading and Thoughts



Why study older adults with schizophrenia?

"Perhaps the secrets of schizophrenia can be found in later life when it has reached its most developed and complex forms."

Cohen, CI et al. Advances in the conceptualization and study of schizophrenia in later life: 2020 Update. *Clin Geriatr Med* 36:221–236, 2020.