Recovery and Recovering in Older Adults with Schizophrenia: A 5-Tier Model

Carl I. Cohen, M.D.[1]

Michael M. Reinhardt, M.D.[1]

[1] SUNY Downstate Medical University

Address correspondence to:

Carl I. Cohen, M.D.
SUNY Distinguished Service Professor & Director
Division of Geriatric Psychiatry
SUNY Downstate Medical University
MSC 1203
450 Clarkson Avenue
Brooklyn, N.Y.11203-2098
phone: 718-270-1750 or 718-270-2003
fax: 718-270-2619
email: carl.cohen@downstate.edu

Conflict of interest declaration: NONE
Funding: The National Institutes of Health (NIGMS SO6GM54650 and SO6GM74923)

supported this work.

Acknowledgment: The authors thank Paul Ramirez and Maria Correa for their assistance.

Abstract

Rationale: There are little recent data on clinical recovery in older adults with schizophrenia. This exploratory study uses an empirically measurable construct to address this issue.

Methods: From an original sample of 248 community-dwelling persons aged 55 and over with early-onset schizophrenia spectrum disorder, a subsample of 102 persons was reassessed at a mean of 52 months. Clinical recovery required meeting criteria for its two components: clinical remission and community integration.

Results: Prospective analysis generated a 5-tier taxonomy of recovery in which 12% remained persistently in clinical recovery at both baseline and follow-up (Tier 1) and 18% never met criteria of clinical recovery (Tier 5). The remaining 70% exhibited a variety of components of clinical recovery at baseline and follow-up (Tiers 2,3,4).

Conclusion: The findings generated a dynamic picture of recovery, with most persons being in varying states of "recovering." The 5-tier taxonomy of recovery adumbrated potential treatment strategies for each tier.

"Recovery" is a critical element in defining outcome in schizophrenia. The concept of recovery has been dichotomized into consumer and clinical constructs. The consumer model has been conceptualized as: "A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential." Liberman and Kopelowicz argue that adhering to the consumer model alone would destroy the boundaries between those persons who are dependent and disabled due to clinical symptoms and those who have achieved relatively normal mental and social functioning in their communities. Thus, the consumer construct is more akin to "recovering," and that the processes and stages of recovering are preparations for "recovery." The clinical construct of recovery—referred to here as "clinical recovery" -- can be assayed by reliable, normative parameters and viewed as the optimal outcome of recovering. There is a broad consensus in the literature that clinical recovery should include symptom and functional outcomes, although there are disagreements concerning the content of these components.

Despite being a crucial outcome indicator, there has been remarkably little written about clinical recovery in older adults with schizophrenia (OAS). Ten catamnestic studies (hospitalized patients re-interviewed after a mean of 22 to 37 years) conducted 30 to 50 years ago found recovery rates ranging from 12% to 55% based on a single assessment in later life. The investigators used varying diagnostic criteria and social indicators. In the only recent study of recovery in a relatively older age group, Auslander and Jeste found a "sustained remission" rate, described as "true recovery," of only 8% among persons aged 45 and over meeting DSM-III-R or DSM-IV criteria for schizophrenia. In a review of young and mixed age samples, Jaaskellainen and associates found a median rate of 13.5% (range: 0% to 58%) among persons meeting various recovery criteria for two or more years.

It is now recognized that clinical remission and normal social functioning are not stable states in OAS but that between one-third and two-fifths of individuals transition between these states. There have been no studies in OAS that have examined fluctuations in recovery over time. It would be valuable to examine various combinations of remission and social functioning in these transition states since it can provide empirical insight on the prevalence of various intermediate states on the pathway to and from clinical recovery, as well as suggest more targeted clinical interventions depending on the person's locus on this pathway.

The aim of this study is to address the limitations in the research of clinical recovery in OAS. In so doing, we use longitudinal data from a study of community dwelling OAS to answer the questions regarding the prevalence and patterns of recovery.

Methods

A detailed description of the cross-sectional and longitudinal study designs are provided elsewhere. Briefly, the initial community sample comprising 248 persons aged 55 and over living in New York City with early-onset schizophrenia spectrum disorder (before age 45) according to DSM-IV-TR criteria. The sample was generated using a stratified convenience sample of persons living in different community settings: 38% were living independently and 62% were living in various levels of supported residences. Persons with moderate to severe cognitive impairment, serious medical problems, or a history of serious head trauma or unconsciousness were excluded. Of the initial sample(n=248), we determined the subsequent status of 162 persons (65%), of whom 40 were deceased, 4 were in nursing homes and too disabled to be interviewed, 14 refused to be interviewed, and 88 persons could not be located; 102 completed a follow-up interview. Like many recovery studies, there was a broad range in the mean follow-up time: 12 to 116 months; (mean=52 months) and four-fifths of persons fell

within the 40- to 60-month range. Their mean age was 61 years; 54% were males; and 54% were white, 37% were black, 7% were Latino, and 2% other. A comparison of persons who participated in the follow-up study with those who were not included for any reason found no differences at baseline between groups in age, gender, race, median income, residential status, clinical remission, social integration scores, or recovery rates; the latter three variables being the outcome variables of interest in this study(see below). The study was approved by the institutional review board at SUNY Downstate Medical Center and each participant gave written informed consent.

Instruments

The dependent variable, "clinical recovery," required meeting criteria for both clinical remission and community integration as described below.

In the literature, there are many strategies for determining social functioning. Because our study focused on community elders, we used a more nuanced evaluation of social functioning. Our 12-item Community Integration Scale consisted of 4 components: independence (goes places, shops), psychological integration ("moderate/very satisfied" with respect to neighborhood satisfaction, house/apartment/residence satisfaction, emotional support from non-family, emotional support from family), physical integration (joins activities, does not avoid others, favorable self-esteem score), and social integration (≥3 reliable kin members, ≥3 formal network ties, attends church, senior center, or recreational programs). If persons obtained a score of 9 or more on the Community Integration Scale, they were considered to have achieved community integration. This score was based on the mean score attained by a non-psychiatric community comparison group.

For remission, we used an adaptation of the Remission in Schizophrenia Working Group that required subjects to score 3 or below on each of the 8 symptom domains derived from the PANSS and to have no history of psychiatric hospitalization within the previous year.

Results

In the follow-up subsample (n=102), the cross-sectional clinical recovery rates at baseline and 52-month follow-up, were 27% and 21%, respectively. Table 1 provides a taxonomy of the outcome states found on prospective analysis: 12% remained persistently in clinical recovery at both baseline and follow-up (Tier1); 18% attained no components of clinical recovery (remission or community integration) at baseline or follow-up (Tier 5); and 35% attained clinical recovery at either baseline, follow-up, or both (Tiers 1 and 2). Overall, 70% of the subjects exhibited a variety of components of clinical recovery at baseline and follow-up (Tiers 2,3,4).

Discussion

With respect to prevalence, we found cross-sectional clinical recovery rates of 27% and 21%, which was greater than the mean rate of 13.5% that had been reported in mixed age samples with a minimum of 2 years or more of stability by Jaaskellainen and coauthors, as well as higher than the 8% reported in middle-aged and older adults by Auslander and Jeste. Our persistent clinical recovery rate of 12% on 52-month follow-up was more consistent with the literature in younger samples and confirms the findings of Auslander and Jeste. It was difficult to compare our data with earlier catamnestic studies because of the heterogeneity in diagnostic and social functioning criteria, and varying geographic settings. Interestingly, Modestin and colleagues adjusted Bleuler's Swiss catamnestic study to DSM III criteria and found recovery rates of 12%.

An important finding in this investigation was that although the point prevalence of clinical recovery was similar between baseline (27%) and follow-up (21%), we found appreciable fluctuation in the number of subjects experiencing clinical recovery over time as well as a variegated pattern of partial recovery. This contravenes notions of a quiescent or stable end-state in later life. Our findings yielded a 5-tier taxonomy of recovery for OAS that has potential clinical relevance. Thus, the categories ranged from Tier 1, comprising persons in persistent "true" clinical recovery and likely to do well on their current regimens; intermediate tiers comprising those with varying states of "recovering" who might require treatment based on their deficits in the clinical and social outcome domains; to Tier 5 that comprised persons who never attained recovery and might not even be considered as "recovering," and who most likely require the most intensive interventions. Table 1 summarizes the prevalence rates and clinical characteristics of each tier.

Our study has several limitations, First, the generalizability of our findings may be affected by sampling within single geographical area with the majority living in supportive residences, and all having some contact with mental health providers. Second, only two-fifths of the original sample was available for follow-up; however, for nearly all the baseline demographic and clinical characteristics. persons who participated in the follow-up interviews did not differ from those who dropped out.

In summary, cross-sectionally, between one-fifth and one-fourth of OAS met criteria for clinical recovery, whereas only half of these persons met criteria for persistent clinical recovery on follow-up. Most persons were in varying states of "recovering" in that they were in clinical recovery part of the time or met some of the criteria for clinical recovery, i.e., either clinical remission or community integration. This exploratory investigation provides empirical grounding

for various states of what is often termed “recovery” or “recovering” that continues into later life. In so doing, we proposed a 5-tier taxonomy of recovery that adumbrated potential treatment strategies for each tier. Larger prospective studies from diverse geographic regions will be needed to corroborate our findings.

Disclosures: No disclosures to report

Author Contributions:
Dr Cohen designed and carried out the original study, analyzed the data, and supervised the writing of the manuscript.
Dr Reinhardt assisted with the data analysis and in the writing of the paper.

References

Table 1. Five-Tier Taxonomy of Recovery in Older Adults with Schizophrenia		
Tier1 (12%)	Stable state	Experienced persistent clinical recovery (i.e., "recovered")
Tier 2 (23%)	Fluctuating state	Fluctuated between 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 might require the most intensive interventions.