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## Behavioral Research on the Severe and Persistent Mental Illnesses

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### Abstract

We are honored to introduce the special series highlighting behavioral research on the severe and persistent mental illnesses (SPMIs) that appears in this issue of *Behavior Therapy*. We begin this series by providing a succinct overview of this category of disorders, noting briefly their impact, cost, etiology, and management. We then identify four recent advances in the care of persons living with a SPMI, and provide an overview of the six articles that appear in this series. The series recognizes and showcases outstanding behavioral research, and seeks to encourage new and continuing participation by behavior therapists in the care of persons living with a SPMI.

### Overview of the Severe and Persistent Mental Illnesses

“Severe and persistent mental illness” is a term that is commonly used to refer to a collection of mental disorders that usually affect people in early adulthood and often have profound effects on family relations, educational attainment, occupational productivity, and social role functioning over the life course. Disorders typically subsumed under this rubric include schizophrenia, schizoaffective disorder, bipolar disorder, major depression, autism, and obsessive-compulsive disorder. Taken together, these disorders affect at least 2.8% of population, or 5 million people (National Advisory Mental Health Council [NAMHC], 1995).

Persons living with a SPMI represent a significant percentage of the clients of mental health services, and treatment for these disorders often involves psychiatric medications, periodic hospitalization, and community-based care. The economic impact of SPMIs in the US has been estimated at \$148 billion per year; the treatment costs (\$67 billion) represent 10% of the annual direct health care costs in the US (NAMHC, 1995). A substantial percentage of treatment costs for schizophrenia and mood disorders come from public funds (Rupp & Keith, 1993). Much is to be gained by research that enhances our understanding of the etiology of SPMI as well as the effectiveness of mental health services provided to this segment of the population.

The prevailing understanding of the etiology of SPMI invokes diathesis-stress models. Many psychopathologists believe that genetic and/or biological factors probably play a greater role the more severe the nature of the psychopathology (Torgersen, 1993; Torrey, 1995b). Nonetheless, most also recognize that behavioral factors contribute to a person’s vulnerability to SPMI and can influence the impact of environmental stresses (NAMHC, 1995; Lease & Ollendick, 1993).

Consistent with a biobehavioral perspective, treatments for the SPMIs often integrate pharmacological management with behavioral therapies such as social and coping skills training as well as family education and support (Kopelowicz & Liberman, 1995). The combination of biological and behavioral strategies results in mutually beneficial and interactive effects on treatment compliance, symptom management, and rehabilitation outcomes. Behavioral research, such as that described in this issue, has contributed to empirically-validated treatments including cognitive-behavioral therapy for medication

adherence in bipolar disorder; dialectic behavioral therapy for borderline personality disorder; behavioral, cognitive-behavioral, and interpersonal therapies for major depression; exposure and response prevention for obsessive-compulsive disorder; and social learning/token economy programs, family therapy, and social skills training for schizophrenia (Nathan & Gorman, 1998).

Behavioral treatment focuses on the nature and extent of impairments, disabilities, and handicaps rather than on psychiatric diagnosis. Here, impairment refers to the actual brain dysfunction, specifically “deficiencies in cognitive, attentional, and autonomic functions, and in regulation of arousal and information processing,” associated with an SPMI (Anthony & Liberman, 1992, p. 8). Readers familiar with the *Diagnostic and Statistical Manual of Mental Disorders*, 4<sup>th</sup> edition (American Psychiatric Association, 1994) will recognize that substantial overlap exists across diagnostic groups with regard to these impairments, and that variability also exists within diagnostic groups. Disabilities refer to the functional limitations imposed by psychiatric impairments. Difficulty with activities of daily living, interpersonal relationships, or in maintaining consistent work habits would be examples of functional disabilities experienced by persons with SPMI. Handicaps refer to the disadvantaged position that individuals with a SPMI experience relative to others because of their disabilities (Anthony & Liberman, 1992). Discrimination in housing or employment opportunities, or social stigma associated with “being different” constitute handicaps that many persons with SPMI cope with on a regular basis. It is important to remember that, from a behavioral or psychiatric rehabilitation perspective, traditional classifications may guide us best if we think of them as moderator variables (Paul, 1990).

Empirical research on outcomes of persons with SPMI demonstrates the importance of a contextual (behavioral) analysis of impairments, disabilities, and handicaps. Anthony, Cohen, and Farkas (1990) argue that psychiatric diagnosis and symptom patterns of persons with SPMI do not correlate highly with community functioning. Instead, measures of skill and social support forecast community outcome. They remind us that assessment should focus on the person’s skills and supports as well as symptoms. Thus, behavior therapists involved in psychiatric rehabilitation can assist persons living with a SPMI through collaborative goal setting, functional assessments, assessment of environmental supports and resources, skills training, and programming for generalization (Anthony et al., 1990).

This brief overview provides only the most basic information about the nature, impact, cost, etiology, and management of the severe and persistent mental illnesses. Interested readers will find additional information in leading texts (e.g., Bellack & Hersen, 1993; Liberman, 1992). However, with this basic introduction in place, we now turn our focus to identifying several important developments in the care of persons living with a SPMI.

## Advances in the Care of Persons with a SPMI

Careful study of the empirical literature reveals at least four significant advances in the care of persons with SPMI. One advance involves the empirical evaluation of assertive community treatment (ACT) models. Consistent with the movement towards greater patient autonomy, ACT seeks to provide a comprehensive range of services -- treatment, rehabilitation, and support -- through a community-based multidisciplinary team. ACTs are characterized by high staff to client ratios and assertive engagement with frequent brief contacts; they seek to reduce the use of inpatient hospitalization and other crisis-oriented services, and increase outpatient service involvement at comparable or reduced cost compared to more traditional service delivery (Scott & Dixon, 1995). Recent randomized clinical trials support these conclusions, and also demonstrate improvements in symptoms, quality of life, and stability within

community (Lafave, deSouza, & Gerber, 1996; Lehman, Dixon, Kernan, DeForge, & Postrado, 1997).

Greater involvement of family members represents a second advance in the care of persons living with a SPMI. The rationale for family-based interventions comes from the recognition that even with biologically-based disorders, psychosocial stressors and interpersonal conflicts can affect the course of the illness. Furthermore, caring for a family member with a SPMI can be stressful and disruptive for other family members. Thus, both patients and families can benefit from interventions designed to better manage the stressors they face together (Torrey, 1995a). Several variations on family interventions have been developed and evaluated.

The behavioral family management approach for schizophrenia consists of (a) functional analysis of maladaptive behavior within the family as a unit, (b) education for both the patient and the family about the nature and course of schizophrenia, (c) communication skills training, and (d) problem solving training. Outcome studies demonstrate that this approach reduces symptoms, reduces rates of relapse, enhances social functioning and reduces the burden felt by family caregivers (summarized in Mueser, Glynn, & Liberman, 1994).

Developments in the treatment of bipolar disorder also include family members (see Miklowitz & Goldstein, 1997). This family-focused treatment adapts the basic components used for schizophrenia to be relevant to the challenges faced by bipolar patients and their families. Functional assessment, psychoeducation, communication enhancement training, and problem solving are used to assist the patient and relatives in (a) integrating the experiences associated with episodes of bipolar disorder, (b) accepting the notion of vulnerability to future episodes, (c) accepting a dependency on psychotropic medication for symptom control, (d) distinguishing between the patient's personality and his or her bipolar disorder, (e) recognizing and learning to cope with stressful life events that trigger recurrences of bipolar disorder, and (f) reestablishing functional relationships after the episode. These family-based approaches strengthen the armamentarium of professionals working with patients who have SPMI.

A third advance involves the increased recognition of the importance of comorbid substance use disorders in the care of persons with a SPMI. Epidemiological data confirm that the presence of SPMI increases the risk of having a substance use disorder (Regier et al., 1990). For example, persons with schizophrenia and bipolar disorder experience four to six times the risk of developing substance abuse or dependence, whereas obsessive-compulsive or panic disorder confers two to three times the risk of substance abuse or dependence. Co-occurring substance abuse increases rates of relapse and rehospitalization, suicidality, and aggressive behavior; decreases treatment compliance and compromises treatment outcomes (Mueser, Bellack, & Blanchard, 1992).

Behavioral therapists have emphasized that mental health professionals need to increase their vigilance with regard to the assessment of substance use disorders and consideration of appropriate treatment options (Miller & Brown, 1997). Guidelines for substance use assessment (Carey & Correia, 1998) and treatment (e.g., Carey, 1996; Drake, Bartels, Teague, Noordsy, & Clark, 1993) in the context of SPMI are now available. Such empirically-based guidelines rely heavily on contributions of behavior therapists (e.g., Miller, Andrews, Wilbourne, & Bennett, 1998; Rotgers, Keller, & Morgenstern, 1996).

The fourth theme that we wish to highlight involves the increasing attention paid to health-related behavior among persons with a SPMI, including sexual behavior that increases risk of infection with human immunodeficiency virus (HIV; Cournos & Bakalar, 1996). Studies of the seroprevalence of HIV among persons with SPMI suggest infection rates that are many times that of the general population (Carey, Weinhardt, & Carey, 1995). Research regarding specific behaviors that increase risk for infection suggests that engaging in unprotected

intercourse is the most common mode of transmission. Ample evidence indicates that at least 50% of all persons with SPMI are sexually active, and a sizable minority report having sex with multiple, often high-risk partners; trading sex for basic survival needs (e.g., money, a place to stay, drugs or alcohol); and infrequent use of condoms (Carey, Carey, & Kalichman, 1997). Specific psychiatric disabilities, social consequences of having a mental illness, and substance use are factors that must be taken into account when designing interventions to change HIV risk behavior.

Health promotion and risk reduction strategies that have been developed specifically for the SPMI rely heavily on cognitive-behavioral skills training, such as identification of high-risk situations, modeling and role playing condom use skills, communication skills training and problem solving (Kalichman, Sikkema, Kelly, & Bulto, 1995; Kelly et al., 1997; Weinhardt, Carey, Carey, & Verdicias, 1998). These interventions have been used in conjunction with inpatient, outpatient, and day treatment care, and as fully integrated or supplemental programs. Patients tend to welcome the focus on “normal” behaviors, and the opportunity to explore strategies to reduce their risk for common health threats (Gordon, Carey, Carey, Maisto & Weinhardt, 1999).

These four trends represent a few of the recent advances in the care of persons with a SPMI. Through active family advocacy and scientific research, new developments are emerging in psychiatry, social work, psychiatric nursing, clinical psychology, and related mental health fields. This special series provides a sample of recent scientific work being conducted by investigators with a decidedly behavioral focus.

## Overview of Articles in the Special Series

The six papers included in this special series illustrate some of the foregoing advances, and also highlight new directions for behavioral research regarding the SPMIs.

Kalbag, Miklowitz, and Richards (1999) contribute to our understanding of the behavioral topography of bipolar disorder across time. Using retrospective psychiatric history data and life charting software, they reliably identified seven subtypes of bipolar disorder that describe different course of illness patterns. Their results challenge current classification schemas, and offer a promising strategy to evaluate progress in response to behavioral therapies.

Kring and Earnst (1999) also describe innovative research on basic psychopathology, although they focus on the stability of affective responding in persons living with schizophrenia. They used a counterbalanced crossover design, in which patients were studied both while taking and not taking their neuroleptic medication, to determine that medication did not influence emotional responding. These and other results from their study led them to conclude that persons living with schizophrenia do indeed experience emotions (despite the appearance of “flat affect”) and that emotional responding is stable over time.

Work reported by our group (Carey et al., 1999) focuses on HIV-related risk behavior among adults with a SPMI. We used chart data from a large public psychiatric hospital to document substance use and sexual behavior in a cohort of outpatients. Our results indicated that approximately one-half of all outpatients reported that they had been sexually active in the previous year and only 11% could be classified as “high risk” for HIV infection. These hospital-wide (i.e., census) rates of sexual behavior and HIV-risk taking are lower than the rates found in previous research, which has tended to use smaller, convenience samples. We also employ statistical modeling to develop and cross-validate a profile of those patients most likely to engage in risky practices, information that can be used to guide intervention development and allocate precious prevention resources.

Two papers in the series address the problem of homelessness. Trumbetta and colleagues (1999) describe an assessment of social network characteristics among a sample of homeless outpatients dually diagnosed with a SPMI and a substance use disorder. This article highlights the fact that different social network characteristics predict outcomes among persons with SPMI or substance abuse alone, and this work represents one of the first studies to evaluate social networks of individuals with comorbid disorders. Social network dimensions assessed include structural aspects (e.g., size, density, degree), functional aspects (frequency of contact and relationship multiplexity), as well as composition (e.g., number and proportion of substance users). Baseline social network characteristics do predict improvement on psychiatric symptoms and reductions in substance use severity. Longitudinal modeling of network change and clinical outcome revealed complex relationships that may be heuristically useful for the design of future studies.

Toro and his colleagues (1999) draw upon data from a probability sample to investigate the covariation of mental illness and homelessness. A key finding from this group is confirmation that rates of mental illness detected in homeless samples vary widely depending upon the operationalization of mental illness (e.g., formal diagnosis vs. symptom reporting). This finding helps to clarify confusion that has emerged from prior research. Toro et al. also note that, over time, homeless adults report declining levels of stress, physical and psychological symptoms, and that most also report better incomes. These encouraging findings do not diminish the need for aggressive and creative interventions to decrease the prevalence and consequences of homelessness for persons who are mentally ill.

The final paper in the series is provided by Ryan, Sherman, and Robinson (1999) assess outcomes in an intensive case management program. They address the question of whether high levels of intensive services are needed on an ongoing basis for all psychiatric patients who require them initially. Ryan and colleagues identify three distinct patterns of outcomes for those patients who had achieved high levels of functioning with intensive case management: continued stability, gradual decompensation, and quick decompensation with gradual improvement. By identifying predictors of these patterns of outcomes, their research can inform decision-making regarding the allocation of intensive services such as case management to those who are most likely to need it.

Overall, this special series provides a snapshot of current behavioral research on the severe and persistent mental illnesses. From this overview and the following articles, we hope that you will agree that behavior therapists possess the skills needed to conduct high quality research, assessment, and interventions with this under-served population. These skills represent important resources in the efforts to understand the causes of SPMI, and to help affected individuals to manage their disorder and improve the quality of their lives, and to assist family members who care for and about their loved ones.

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