

BEHAVIOR ANALYSIS AND THE TREATMENT OF SCHIZOPHRENIA: AN ALTERNATIVE TO WONG'S (2006) VIEW OF THE POLITICAL ECONOMY

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The history of behavior analysis and schizophrenia is a very long and interesting one (Wong, 2006). In addition, the corresponding influence and power of biological psychiatry is also interesting as pointed out by Wyatt and Midkiff (2006). When studied as a behavioral problem, schizophrenia is debilitating. Developmentally, schizophrenia typically begins in early adult life and tends to persist through the remainder of the life span. Prominent behavioral excesses and deficits associated with schizophrenia include hallucinations, delusions, disorders of thinking, blunted affect, anhedonia, apathy, and impairment of attention. People with schizophrenia have been described as failing to learn important social cues, lacking attention from others, and retreating into fantasy world. Their behavior and behavior patterns are often characterized as "odd" and "eccentric". Their behavior and patterns of behavior often lead them to being labeled as odd or schizophrenic. Unfortunately, hospitalization often exacerbates maladaptive behaviors.

While this author is in general agreement with Wong's (2006) policy analysis of the political climate that influences the funding and non-funding of studies, it is my contention that the author has missed a basic underlying mechanism of funding in the 1980s and 1990s, which may have accounted for the rejection of the pilot program discussed in his article. Simply, the program was inpatient treatment oriented, and such treatments were being limited for a number of reasons.

By the 1990s, inpatient treatment was substantially limited by health maintenance organizations (HMOs) looking for ways to reduce costs. Under HMOs, the average hospital stay was reduced from months to weeks and then to days. Politically, beginning in the 1960s a backlash against institutionalization began that continued thorough the 1990s (see Rosenhan, 1973; Spitzer, 1975; Fuller, 1997). Indeed, deinstitutionalization was fostered by many sources, not just financial, including legal cases and court rulings, which lessened the view that custodial care was adequate. For example, *Wyatt v. Stickney* called for reforms that many states could not meet. It called for individualized treatment that required increased levels of staffing over custodial care. In addition, it explicitly stated that the goal of such individualization must be to foster release. The easier path was to lessen the number of state hospital beds. Several legal cases and state legislative

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efforts from 1960-1980 changed the commitment process (Stromberg & Stone, 1983). While a complete listing of cases is not appropriate for a brief reply, several US Supreme Court cases are important. For example, in 1975, *O'Connor v. Donaldson*, the Supreme Court of the United States held that the finding of mental illness alone did not justify commitment and that only a level of dangerousness justified such commitment. In a second case, *Addington v. Texas* (1978), the Supreme Court of the United States ruled that indefinite commitment is only permitted if the person is proven by clear and convincing evidence to be a danger to self or others. These decisions made it much harder to retain people in institutions. In the late 1980's into the early 1990's, the trend towards downsizing and closing state hospitals continued.

The above conditions did not create an anti-behavioral bias (as was witnessed in the justice system—see Cautilli and Weinberg, 2007), but rather a bias against restrictive treatment settings such as hospitals and institutions. Medication could meet the needs for persons with schizophrenia while retaining them in the community rather than the institution/state hospital. For example, most drug treatment could be delivered on an outpatient basis. Thus, medications could help lawmakers meet their political goals of deinstitutionalization. Indeed, behavioral programs in the community setting continued to receive funding and funding increases, especially as many of the deinstitutionalized became homeless (see Coates, 1990). From Wong (2006), “With the exception of social skills training, other forms of behavioral programs are virtually ignored,” (p. 157) may have reflected not a decline in interest in behavioral programming but a shift in programming toward interventions that could be delivered outside the hospital. The movement away from state hospitals, was certainly the political call of the day. As many “experts” agreed at the time, individuals with schizophrenia released from state hospital required extensive services to survive in the community (Grob, 1991). Indeed, behavioral treatment of schizophrenic behavior in the natural environment shifted to focus on habilitative programs such as social skills (as suggested by Wong, 2006) and the study of aversive factors, which made remaining in the community difficult for many patients. One such program was behavioral family treatment (Falloon, Boyd, McGill, Razani, Moss, & Gilderman, 1988).

Derived from the social learning theory of Bandura (1969, 1977), which combines operant conditioning with social modeling, behavioral family therapy is considered one of the most effective treatments to reduce relapse rates of schizophrenics (Penn & Mueser, 1996). Behavioral family therapy approaches schizophrenic behavior with a functional view of problem behaviors and sequences of interactions (Falloon et al., 1988). In most populations, behavioral family therapy views the problems as being caused by ineffective patterns of reinforcement between parents and children or between marital partners; however, for schizophrenics the problem is conceptualized in terms of the amount of punishment (punishment density) or random aversive delivered between family members. Of particular interest, to researchers in this area is the concept of negative expressed emotionality.

Negative expressed emotionality (often referred to as *expressed emotion* [EE]) refers to the communication of affect in the family, in particular through criticism or hostility

directed at the person with schizophrenia. EE has been shown to lead the child to increased chances in developing the spectrum of behaviors and behavior patterns associated with schizophrenia. In addition, the relapse rates are higher in people with schizophrenia whose immediate family members in their household are critical, unsupportive, or emotionally over-involved (Falloon, et al. 1988). EE is defined by a specific set of behaviors directed at people with schizophrenia by their family members. Halford, Steindl, Varghese and colleagues (1999) described this category of responses as criticism, negative solution, disagreement, justification, or listening with negative non-verbal responses. Halford (1991) focused on the fact that negative EE is not a trait but represents the coercive exchanges between family members. Behavioral family therapy attempts to lessen EE by retraining communication patterns, increasing problem solving and use of positive reinforcement and other behavioral techniques.

Lessening EE, as an approach, was not unique and had been receiving empirical momentum from outside of behavior analysis as early as the 1960s. For example, Brown and Rutter (1966) demonstrated, and Butzlaff and Hooley (1998) replicated, that people with schizophrenia who returned to families rated as being high in EE were more likely to experience a relapse during the following year. This was true despite adequate pharmacotherapy.

Although high EE environments are not specific to families of people with schizophrenia, the EE literature provided the background for most of the initial randomized controlled trials of family therapy aimed at reducing relapse and preventing hospitalization in psychotic disorders. A large body of evidence has demonstrated the superiority of a variety of family therapy interventions that employ behavioral and psycho-educational techniques over customary outpatient care or individual therapy in terms of the primary outcome measures of psychotic relapse and rehospitalization. (For a review see Penn and Mueser, 1996). The goal of these interventions is to reduce the overall level of expressed negative emotions (decrease punishment density) (Halford et al., 1999). On average, relapse rates among schizophrenic patients whose treatment involves family therapy are approximately 24% as compared to about 64% among those who receive routine treatment (Mueser & Glynn, 1998). In addition, the beneficial effects of long-term family interventions (i.e., greater than 9 months) appear to be quite durable and may be maintained for up to 2 years (Mueser & Glynn, 1998) or longer (Tarrier, Barrowclough, Porceddu, & Fitzpatrick, 1994).

This author's point is not to suggest that behavioral family therapy does not have limitations, but rather to show that behavioral treatment outside the state hospital system has received research funding. Critical questions regarding the effectiveness of behavioral family therapy remain to be answered. For example, is reduction in relapse specific to behavioral family treatment or is it a characteristic of family therapy in general? While additional research is needed, one study has suggested cultural factors and differences might mitigate the effect. Telles, Karno, Mintz, Paz, Arias, Tucker, and Lopez (1995) applied the model of Falloon et al. (1982) to Hispanic families. They found no differences between behavioral family therapy and standard treatment. This study suggests the impact of behavioral family treatments to non-Caucasian cultures is unclear.

Indeed, studies published since the Penn and Mueser (1996) are remarkable for failure to replicate the findings of a relapse prevention role for family therapy to reduce EE. For example, Linszen and colleagues (1996), who looked at lowering EE, studied adolescent patients recently diagnosed with schizophrenia. This study found a very low (16%–20%) overall rehospitalization rate at one year, with no advantage for the patients whose treatment included family therapy. While this study did not discuss whether the families were high on negative EE prior to intervention, it appears to be a replication failure. The newness of the pattern of hospitalization may have played a factor in the relapse rate. In another study with chronic patients, however, Hogarty et al. (1997) included a general approach to family therapy for patients residing with their families. They found no advantage for family therapy over supportive therapy in preventing relapse.

It seems clear from these studies that interventions focused on function of behavior in the family context, problem solving around such functions and alternative behaviors, and decreasing punishment density and the use of aversive behavior directed toward the person with schizophrenia were still being funded through the 1990s, as long as the focus was to help achieve the political goal of deinstitutionalization. Of particular focus for funding agencies were factors in the family which predict rehospitalization rates. In addition, as Wong (2006) mentioned, behavioral interventions which fostered skill learning that could be completed either in the community or while transferring to the community were also funded. These interventions proved moderately effective (see Dilk & Bond, 1996). Thus, an alternative view is plausible—that no bias existed against behavioral interventions, so long as they were administered outside the state hospital.

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BEHAVIOR ANALYSIS AND THE TREATMENT OF SCHIZOPHRENIA

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