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Learning Medication Self-Management Skills in Schizophrenia: Relationships with Cognitive Deficits and Psychiatric Symptoms

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Previous research has shown that the psychosocial skill learning of patients with schizophrenia is associated with several aspects of information processing. These processes may limit the effectiveness of skills training. The contributions of visual vigilance, verbal memory, conceptual flexibility, and psychiatric symptoms to medication self-management skill learning were examined in 30 subjects with schizophrenia. Results showed that skill learning was significantly associated with recall memory and visual vigilance but not with conceptual flexibility. Additional analyses showed that skill learning was not related to psychotic symptoms; nonsignificant trends were found with an index of negative symptoms. These findings may help clinical investigators develop cognitive rehabilitation strategies that facilitate psychosocial skill learning for this population.

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The psychosocial deficits of schizophrenia are vast and pervade all stages of the illness (Avison & Speechley, 1987; Klorman, Strauss, & Kokes, 1977). Various skills training methods have been developed to remediate these deficits by increasing the patient's repertoire of interpersonal and coping skills. Patients have been trained on a range of specific skills, including basic conversation, interpersonal problem solving, and medication management. In the prototypical skills training paradigm, trainers provide succinct statements regarding the skills to be learned, model these skills, facilitate role-plays of the targeted behaviors, provide feedback regarding the role play, and reinforce successive approximations to the targeted behaviors. Hence, participants must be able to look, listen, and practice from verbal instructions, demonstrations, and role-play situations.

Research has shown that many patients who participate in skills training are able to improve their repertoire of interpersonal and coping behaviors (Bellack, Turner, Hersen, and & Luber, 1984; Hansen, St. Lawrence, & Christoff, 1985; Liberman, Mueser, & Wallace, 1986). Unfortunately, some patients are unable to acquire targeted behaviors in traditional skills training programs (Liberman, Massel, Mosk, & Wong, 1985; Massel, Corrigan, Liberman, & Milan, 1991; Wong & Woolsey, 1989). In cases like these, clinical investigators have often sought to identify treatment limitations in terms of the intervention itself; e.g., dismantling research designs that examine which components of an intervention have no impact on patients. Alternatively, limitations in social skills training may be explained by individual differences that interact with treatment procedures to produce treatment response or lack thereof. Two domains of person variables—information-processing deficits and psychiatric symptoms—may be especially relevant for understanding the effects of interpersonal and coping skills training for patients with schizophrenia.

Several investigations have examined the interrelationship of information processing and skill learning. Two studies found significant correlations between measures of visual vigilance and skill learning. Bowsen et al. (1989) showed that short-term (within session) acquisition of medication management skills was significantly associated with visual vigilance as measured on the Degraded-Stimulus Continuous Performance Test (DS-CPT). Similarly, Kern, Green, and Satz (1992) found that DS-CPT performance predicted acquisition and maintenance of symptom-management skills. Two studies also demonstrated that skills training was significantly predicted by short-term recall memory (Bowen et al., 1989; Kern et al., 1992; Mueser, Bellack, Douglas, & Wade, 1991). Bowen and her colleagues (1989) found visual vigilance and recall memory to be independently correlated with skill learning.

The manner in which psychiatric symptoms affect skill learning has also been examined. Negative symptoms that include social and emotional withdrawal have been shown to predict psychosocial skill learning in this population. Bellack, Morrison, Mueser, and Wade (1989) demonstrated that patients with negative symptoms produced lower scores on measures of social skill and role functioning than did a comparison group not exhibiting extreme social withdrawal. Interestingly, research has suggested that skills training is relatively unrelated to level of psychotic symptoms (Eckman et al., 1992).