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Positive family environment predicts improvement in symptoms and social functioning among adolescents at imminent risk for onset of psychosis

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Abstract

This study investigated whether family factors, such as criticism, emotional over-involvement (EOI), warmth, and positive remarks, as measured by the Camberwell Family Interview (CFI), predict symptom change and social outcome for individuals identified as at imminent risk for conversion to psychosis. Twenty-six adolescent patients were administered the Structured Interview for Prodromal Syndromes and the Strauss–Carpenter Outcome Scale at baseline and follow-up assessment approximately three months later. Patients' primary caregivers were administered the CFI at baseline. After controlling for symptom severity at baseline, there were significant associations between caregivers' EOI at baseline and improvement in high-risk youths' negative symptoms and social functioning at follow-up. Similarly, caregivers' positive remarks at baseline were associated with improvement in negative and disorganized symptoms at follow-up, and warmth expressed by caregivers was associated with improved social functioning at follow-up. Although family members' critical comments were not related to patients' symptoms, the majority of critical remarks were focused on patients' negative symptoms and irritability/aggression, which may be important targets for early intervention. These preliminary results provide a first glimpse into the relationship between family factors and symptom development during the prodrome and suggest that positive family involvement predicts decreased symptoms and enhanced social functioning at this early stage. The finding that four-fifths of the youth enrolled in this early intervention clinical research program have shown symptomatic improvement by the three-month assessment point is very encouraging from an early detection/early intervention standpoint.

Keywords: Family environment; Expressed emotion; High-risk youth; Prodrome

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1. Introduction

Recently established methods for early detection of "prodromal" individuals at imminent high risk for conversion to psychosis (Miller et al., 2002) allow for investigation of additional predictive risk and protective factors. Given that the majority of these prodromal individuals are adolescents (Mason et al., 2004; Miller et al., 2003; Phillips et al., 2002; Woods et al., 2003; Yung et al., 2004), investigation of family risk and protective factors may be particularly relevant to the design of developmentally appropriate early interventions. Psychosocial stress is included in most etiologic models of schizophrenia, frequently conceptualized as a precipitating factor for psychosis in individuals with a genetic diathesis (Nuechterlein and Dawson, 1984), and evidence from adoption (Tienari et al., 2004), expressed emotion (EE; Butzlaff and Hooley, 1998; Kavanagh, 1992), and treatment studies (Pitschel-Walz et al., 2001; Smith and Birchwood, 1987) indicates that family environment plays a key role in the evolution of symptoms. Despite the demonstrated promise of family environment as a prognostic variable and target of intervention for psychotic adults, we know of no published reports examining family environment as a predictor of outcome for prodromal adolescents. Ongoing questions regarding the degree and type of family involvement that is needed at various stages of a psychotic disorder (Diamond and Siqueland, 2001) require research into family risk and protective factors to inform treatment efforts. Little is known about the family's potential at a very early stage of illness to effectively buffer stress through involvement, and to contribute to symptom reduction as well as enhanced functional outcome.

One of the most commonly used measures of family environment, the Camberwell Family Interview (CFI; Vaughn and Leff, 1976), elicits relatives' emotional attitudes toward patients. Traditionally, the criticism, hostility, and emotional over-involvement (EOI) scales have been used to determine designations of high or low EE. Although there is support for the validity of the EE construct in the adult schizophrenia literature (Miklowitz et al., 1984; Hahlweg et al., 1989; Kuipers et al., 1983), recent empirical work indicates that the EE construct does not hold together as well for youth (McCarty et al., 2004). While family members' critical comments may serve the same function for adolescents at risk for psychosis as for adults, so called emotional "over"-involvement (EOI) has been associated with positive outcomes in adolescent populations (Stevenson et al., 1991). Further, examining criticism and emotional involvement variables as separate and continuous measures avoids relying on cut-off scores for EE that are based mainly on research conducted with adults diagnosed with schizophrenia spectrum disorders, and boosts statistical power (Chambless and Steketee, 1999).

The current study hypothesizes that family members' critical comments will be associated with symptom exacerbation and reduction in social functioning, while family members' warmth, positive remarks, and "over"-involvement will be associated with symptom reduction and enhanced social functioning for prodromal adolescents. Exploratory analyses are conducted to better understand aspects of youths' behavior that are the target of family members' critical comments. Overall, we expect that patients' participation in a specialized prodromal clinic will lead to improvement in symptoms and functional outcome.

2. Method

2.1. Subjects

English speaking individuals, age 12 to 35, were recruited to participate in the Staglin Music Festival Center for the Assessment and Prevention of Prodromal States (CAPPS), a clinical research center at the University of California, Los Angeles that identifies youth who are at high risk for developing psychosis, assesses them longitudinally, and offers psychiatric and psychosocial treatment. After phone screening, patients and parents sign informed consent documents approved by the Institutional Review Board, and then complete the Structured Interview for Prodromal Symptoms (SIPS; Miller et al., 2002). Exclusion criteria include a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, mental retardation, current drug or alcohol dependence, or the presence of a neurological disorder. Of 209 individuals interviewed, 63 were invited to participate. The sample reported in this paper consists of 26 patients and primary