



Psychosocial Interventions and Long-term Outcomes of Children and Adolescents with Schizophrenia Spectrum Disorder: Gaps in Research



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Abstract

Early identification and intervention programs for children and adolescents at risk for Schizophrenia Spectrum Disorder utilize cognitive behavioral therapy, cognitive remediation, psychoeducation, social skills training, family supportive services and other psychosocial interventions. Early intervention programs aim to prevent a transition to psychosis, to promote supportive family communication, to provide treatment for comorbid disorders and prodromal symptoms and to facilitate positive developmental outcomes. The interaction effects and the impact of combining psychosocial interventions on the long-term outcome of at risk children and adolescents and those with Schizophrenia Spectrum Disorder have not been thoroughly investigated. This review summarizes the gaps in the literature that should be addressed in order to inform clinical practice.

Keywords: Schizophrenia; Prodromal Symptoms; Psychosocial Interventions; Early Intervention; Prevention

Introduction

Early identification and prevention programs for children and adolescents who are at risk for early onset Schizophrenia Spectrum Disorder (SSD) seek to provide supportive, therapeutic environments for youth and families. Their primary goals are to prevent a transition to psychosis and to treat frequently occurring comorbid disorders and associated impairments while facilitating positive adaptive functioning. Recovery model based services for adults with SSD stress the individuals' acceptance of their strengths and vulnerabilities, their compliance with treatment and their capacity for sustained hope for the future [1]. Early identification and prevention programs for children and adolescents at risk for SSD have similar goals even though psychotic like experiences are fairly common in youth and prodromal symptoms are not always associated with later poor psychosocial functioning [2]. In addition to cognitive behavioral therapy (CBT) and the appropriate use of medication for attenuated psychotic symptoms and comorbid disorders, early intervention programs provide a range of psychosocial services, including cognitive remediation, supportive family counseling, psychoeducation and social skills training in keeping with the awareness of SSD as an at times disabling developmental and psychiatric disorder.

A growing number of studies of high-risk youth and those who develop SSD point to the importance of psychosocial

interventions in facilitating positive functional outcomes [3]. Early intervention programs strive to promote positive family communication, to minimize stigma and secondary trauma and to encourage optimism for the future while providing treatment for comorbid conditions and prodromal symptoms. Although CBT, cognitive remediation, psychoeducation, social skills training, supportive family counseling and case management are all well-established components of prevention and treatment services, questions remain about which combinations of interventions have the most beneficial effect on the short-term and long-term outcome of high-risk youth and those who develop SSD. Addressing these gaps in the research is especially critical for high-risk youth and those with SSD who may also experience a history of trauma, comorbidity and deficits in cognitive, social and emotional functioning.

Recovery Models for Adults and Early Intervention Models for at Risk Youth

In recent decades, community mental health centers have implemented recovery-based services for adults with schizophrenia that exceed the use of antipsychotic medication and encompass psychosocial interventions that are intended to destigmatize psychotic disorders and to prevent unnecessary hospitalizations [4]. The individualized treatment plans are

similarly designed to engender optimism and cooperative partnerships between consumers, family members and mental health providers. Recovery-based combined treatments have been successful in reducing overwhelming levels of stress and anxiety associated with the onset and exacerbations of psychotic disorders and in addressing trauma symptoms that are often associated with positive symptoms [5,6]. In keeping with these goals, recovery model based programs highlight the importance of psychoeducation and supportive services for families [7].

In the last 15 years, there has been a proliferation of early identification and prevention programs for children and adolescents at risk, such as those with attenuated or prodromal signs of psychosis and the younger siblings or offspring of individuals with schizophrenia. Early intervention programs endorse the psychosocial principle of optimizing high-risk children and adolescents' awareness of their own strengths and areas of vulnerability with the goals of maximizing their social, emotional and cognitive functioning and maintaining their hope for the future [8]. They likewise emphasize the treatment of comorbid disorders as well as family counseling and support for maintaining healthy family communication patterns. Given the often negative experiences of families seeking help for at risk youth or youth with psychotic symptoms and the trauma associated with involuntary hospitalizations, early intervention programs serve essential preventative functions [9].

Literature reviews of youth with SSD suggest that the combination of early onset of psychosis, a history of developmental delays, poor premorbid adjustment, negative symptoms and thought disorder may all be associated with poor long-term outcomes [10,11]. While antipsychotic medications have efficacy with children and adolescents who are experiencing psychosis, potential side effects remain a serious concern, and studies are lacking that compare the long-term impact of antipsychotics with psychosocial interventions in terms of physical health, social, cognitive and adaptive functioning [12]. Long-term longitudinal outcome studies of psychosocial interventions for high-risk youth and those who experience first episode psychosis in childhood or adolescence are relatively few in number [13].

Psychosocial Interventions with High-Risk Youth and Youth with SSD

In keeping with the currently accepted neurodevelopmental theory of schizophrenia, which underscores structural and functional problems in neural development, cognitive therapies can be used to target specific areas of vulnerability in early onset schizophrenia [14]. CBT treatments have proven to be effective in reducing positive and negative symptoms of schizophrenia [15]. The potential effectiveness of CBT for prodromal symptoms of psychosis and of combining CBT and cognitive remediation for schizophrenia has also been subject to research scrutiny [16]. Psychological treatments for childhood trauma and ongoing trauma associated with experiencing psychotic symptoms likewise play a prominent role in early intervention programs [17], as do

efforts to lower caregiver' stress and minimize deviant family communication patterns [18,19]. Cognitive remediation training that strives to improve attention and memory in adolescents with psychosis has yielded promising results [20,21].

A large meta-analysis of cognitive remediation with over 1100 adults with schizophrenia revealed improvements in cognition, overall functioning and symptoms with moderate effect sizes [22], but evidence is lacking for sustained, long-term improvements in cognitive functioning in children and adolescents with SSD [23]. Psychoeducational programs for families have also proven to be helpful in reducing relapse and rehospitalization rates for adults with schizophrenia, but the long-term effectiveness of similar programs with children and adolescents is an under-investigated area [24]. Additionally, treatment effectiveness studies are needed with children and adolescents that will assess the impact of combining individual and family psychotherapy approaches with psychosocial interventions, such as cognitive remediation and social skills training.

Psychosocial Interventions and High-Risk Studies

The use of psychosocial interventions as preventative measures with high-risk youth and those with SSD thus constitutes a promising area of investigation. One half to two thirds of elementary school aged children of adults with schizophrenia have neurodevelopmental problems, including speech and language delays or social skills deficits, though only a minority of at risk youth will transition to psychosis and many will later manifest other forms of psychopathology [25]. The highly influential North American Prodrome Study has revealed that the transition to psychosis is associated with the presence of early positive and negative symptoms, sleep problems, and poor social functioning [26]. With increasing knowledge of the developmental pathways associated with the transitions to psychosis and other forms of psychopathology, specific targets for psychosocial interventions are becoming increasingly possible for high-risk youth, for example, social skills training for youth with nascent negative symptoms [27]. Very recently, there has also been an effort to provide greater specificity about the variations in high-risk adults' outcome trajectories, and similar efforts with high-risk and prodromal youth may be fruitful [28,29].

Psychosocial Interventions and Outcome Studies

Literature reviews of youth at risk for SSD suggest that an early onset of psychosis, poor premorbid adjustment and symptom severity in combination can all be associated with a worse long-term outcome [30]. Although they also indicate that children and adolescents who develop SSD can benefit from outpatient services that incorporate family interventions, CBT, social skills training, cognitive remediation and psychoeducation, outcome studies are lacking that match combinations of interventions with patients' clinical characteristics and impairments [31,32]. The few long-term longitudinal studies of high-risk children and youth who transition to schizophrenia report generally poor functional outcome. For example, a follow up study of adolescents who had

been hospitalized for the treatment of schizophrenia, which reassessed the youth after 10 years, found that two thirds had not been able to attain their occupational or educational goals [33]. Limitations in memory, attention and executive functioning among high-risk youth seem to predict a poor response to psychosocial interventions [34]. However, comprehensive follow-up studies of the impact of psychosocial interventions with high-risk children and adolescents who later experience psychosis are still few in number.

Summary

Studies are necessary that will compare the efficacy and long-term impact of CBT, cognitive remediation training, family support, psychoeducation, social skills training and case management for children and adolescents at high-risk as well as those with SDS. The few randomized controlled trials of psychosocial interventions with youth with schizophrenia have not demonstrated significantly greater benefit from any specific combination of interventions. It is premature to conclude which combinations of psychosocial interventions will be most effective in reducing first episode psychosis and which will have the most enduring positive impact on developmental delays as well as symptomatic and functional outcomes. Additional investigations are also essential in order to determine which combination of interventions will be most beneficial for children and adolescents with SDS who experience trauma, comorbid disorders and adverse physical health problems.

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