

Evidence-Based Family Psychoeducational Interventions for Children and Adolescents with Psychotic Disorders

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Abstract

Introduction: Family psychoeducational interventions have consistently been found to impact families positively and reduce relapse rates in individuals with psychotic disorders. Research finds that, for adults, family psychoeducational interventions are effective in preventing relapse and improving social and occupational functioning. Psychotic disorders are increasingly recognized as having early onset, yet limited psychoeducational evidence-based intervention services are available and no intervention has centered exclusively on youth with a psychotic disorders and their families. **Method:** This article reviews the evidence-based literature on family psychoeducational interventions for persons with a psychotic disorder, with a specific focus on the gaps, strengths, and limitations of family psychoeducational treatment for children and adolescents. This article incorporates current research in the proposed development of a family psychoeducational intervention exclusively for adolescents with a psychotic disorder and their parents. **Results:** A conceptual psychoeducational multiple family group intervention (PMFG) for adolescents with a psychotic disorder is presented. **Conclusion:** The impact of these disorders affects not only the diagnosed adolescents and their families, but places a significant burden on the health care system and society. This article adapts an evidence-based intervention to improve prognosis, social and peer functioning, and reduce relapse in children and adolescents throughout their life cycle.

Key words: schizophrenia, psychosis, adolescents, family psychoeducation, multiple family groups, intervention

Résumé

Introduction: On constate que les interventions psycho-éducatives familiales ont un impact positif sur la famille des patients psychotiques et diminuent le nombre de rechutes chez ces derniers. Les travaux de recherche montrent que les interventions psycho-éducatives familiales aident à prévenir les rechutes chez les sujets adultes et améliorent le fonctionnement social et professionnel de ceux-ci. Bien qu'on constate de plus en plus fréquemment que le premier épisode de psychose survient tôt dans la vie du sujet psychotique, il existe peu de services d'intervention factuelle psycho-éducative, et aucune intervention n'est ciblée exclusivement sur l'enfant ou l'adolescent psychotique et sa famille. **Méthodologie:** Cet article passe en revue la littérature factuelle sur les interventions psycho-éducatives familiales destinées aux sujets psychotiques; il analyse tout particulièrement les écarts, les points forts et les limites des traitements psycho-éducatifs familiaux destinés aux enfants et aux adolescents. Il fait le point sur un programme d'intervention psycho-éducatif familial spécifiquement conçu pour les adolescents psychotiques et leurs parents. **Résultats:** L'article présente une intervention familiale multiple de type psycho-éducatif pour adolescents psychotiques. **Conclusion:** Les troubles psychotiques ont un impact non seulement sur les adolescents et leur famille, mais aussi sur le système de santé et la société. Cet article présente une intervention factuelle destinée à améliorer le pronostic, le fonctionnement en société et avec les pairs, et à réduire le nombre de rechutes tout au long de la vie des enfants et des adolescents psychotiques.

Mots clés: schizophrénie, psychose, adolescents, psycho-éducation familiale, intervention familiale multiple, intervention

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Introduction

Primary psychotic conditions are serious and persistent mental health disorders that grossly impair reality testing, which can be manifested by delusions, hallucinations, negative symptoms, highly disorganized behavior, or disorganized speech. Due to early symptom manifestation and overlap, it is often challenging to distinguish psychotic disorders from a mood disorder with psychotic features in youth (Werry, McClellan, Andrews, & Ham, 1994), resulting in 20% to 30% of adolescents (Kampman, Kiviniemi, Koivisto, Vaananen, Kilkku, Leinonen et al., 2004) being rediagnosed. In adults the overall prevalence rate of schizophrenia is 0.5 to 1.5 per 100 and the annual incidence is 5 to 50 per 100,000

(American Psychiatric Association, 2000). In youth under 15 years prevalence rates have been reported between 1.6 per and 1.9 per 100,000 (Burd & Kerbeshian, 1987; Gillberg, 1984; Gillberg, 2001; Gillberg & Steffenburg, 1987; Nylander & Gillberg, 2001), but increase substantially in adolescents, 15 to 18 year old to 230 per 100,000 (Gillberg, 2001). Although there is little epidemiological research on affective psychosis (Lloyd, Kennedy, Fearon, Kirkbride, Mallett, Leff, Holloway, Harrison, Dazzan, Morgan, Murry, & Jones, 2005), the annual incidence of bipolar affective disorder is 2.6 to 20.0 per 100,000 (Lloyd & Jones, 2002). Males tend to have an earlier onset ranging between 15 and 25 years of age, females have a later age of onset with a range

between 25 to 35 years (Hafner, Maurer, Loffler, Fatkenheuer, an der Heiden, Riecher-Rossler et al., 1994), Research has found that 39% of males and 23% of females will experience first episode before the age of 19 years (Davis & Schultz, 1998). The relapse rates of these psychiatric conditions in adults range from 22% in 6 months, 36% to 48% in a year, 54% in 2 years, 80% in 5 years, and 86% in 7 years (Colenda & Hamer, 1989; Friis et al., 1991; Geddes et al., 1994; Giron & Gomez-Beneyto, 1995; Muller, 2004; Parker & Hadzi-Pavlovic, 1995). While the relapse rates in children and adolescents are understudied (Gillberg, 2001; McClellan & McCurry, 1999), they closely parallel adult findings: 33% of youth are readmitted within the first year of discharge, 44% within 2 years, and 58% within 5 years (Gearing, 2007).

Adolescents with psychotic disorders experience poorer prognostic outcomes than adults; these manifest in episodic symptom relapses, readmission to hospital, and impaired social functioning (Eaton et al., 1992; Lay, Blanz, Hartmann, & Schmidt, 2000; Schmidt, Blanz, Dippe, Koppe, & Lay, 1995). The significant impact of psychotic disorders in youth extends to their families and the larger society because, following discharge from hospital, management of these conditions shifts from the inpatient setting to the community (Cassidy, Hill, & O'Callaghan, 2001). For child and adolescent patients, the responsibility of monitoring, managing and supporting their conditions typically moves to the parents, as the majority of these patients reside with their families (Davis & Schultz, 1998; Schooler, 1995). All too often, families and parents feel burdened, stigmatized (Doane & Becker, 1993; Dyck, Hendryx, Short, Voss, & McFarlane, 2002), and ill-prepared to manage (Cassidy, Hill, & O'Callaghan, 2001), or question the diagnosis and treatment recommendations (Favre, Huguelet, Vogel, & Gonzalez, 1997), which can contribute to poor treatment, low medication adherence (Olfson, Mechanic, Boyer, & Hansell, 1998), insufficient support, relapse, and rehospitalization. Parents report a sense of burden and feelings of anxiety, anger, and helplessness when their child develops a primary psychotic disorder such as schizophrenia (Asarnow, Tompson, & Goldstein, 1994;

Foldemo, Gullberg, Ek, & Bogren, 2005; Spaniol, Zippel, & Lockwood, 1992). Individual and family outcomes are further impacted by patients' ability to adhere to treatment and medication (Bergen, Hunt, Armitage, & Bashir, 1998; Caton & Goldstein, 1984; Muller, 2004; Olfson et al., 2000; Sullivan, Wells, Morgenstern, & Leake, 1995; Verdoux et al., 2000; Weiden & Olfson, 1995) and the level of expressed emotion within the family environment (Bebbington & Kuipers, 1994; Birchwood, Todd, & Jackson, 1998; Heinrichs, Bertram, Kuschel, & Hahlweg, 2005; Jackson, Smith, & McGorry, 1990; Lenior, Dingemans, Schene, Hart, & Linszen, 2002; Loebel et al., 1992; Wyatt, Damiani, & Henter, 1998). Although the economic costs of treating children and adolescents with these conditions are unknown, their service needs are among the most expensive in the system, extending into tens of billions of dollars annually (Buchanan & Carpenter, 2000; Weiden & Olfson, 1995).

The most effective form of intervention for individuals with these serious and persistent conditions prevents relapse (Linszen, Lenior, De Haan, Dingemans, & Gersons, 1998) in the critical period immediately following symptom manifestation (Birchwood, Todd, & Jackson, 1998). Although little research and no interventions have focused on adolescents with these psychiatric conditions, psychoeducational family intervention programs with adults have consistently been associated with improved outcomes and a reduction in relapse and hospitalization (McDonnell, Short, Hazel, Berry, & Dyck, 2006; McFarlane, Link, Dushay, Marchal, & Crilly, 1995; Pitschel-Walz, Leucht, Bauml, Kissling, & Engel, 2001). For example, involving parents of younger patients in the treatment regimen enhances medication adherence and prognosis (Robinson et al., 2002). Recent family interventions developed for youth diagnosed with emotional and behavioral problems (Ruffolo, Kuhn, & Evans, 2006; Ruffolo, Kuhn, & Evans, 2005) and depression and bipolar conditions (Fristad, Gavazzi, & Mackinaw-Koons, 2003; Fristad, Goldberg-Arnold, & Gavazzi, 2002; Lofthouse & Fristad, 2004; Miklowitz, 2004; Miklowitz, George, Richards, Simoneau, & Suddath, 2003) demonstrate some success in reducing symptom manifestation and relapse rates, and improving

the family environment. The US Surgeon General's report on mental health (U.S. Public Health Service, 1999) and the President's New Freedom Commission on Mental Health (New Freedom Commission on Mental Health, 2003) recognize families as essential partners in the delivery of mental health services to children and adolescents.

Existing evidence-based practice interventions with relatives of adult patients diagnosed with schizophrenia have been found to be effective in stabilizing symptoms and reducing or forestalling rehospitalization (Pitschel-Walz et al., 2001). Despite the success of family interventions with adults diagnosed with schizophrenia and supports for families of children and adolescents with affective or behavioral diagnoses, no intervention has been tailored exclusively for adolescents diagnosed with psychotic conditions and their families (Davis & Schultz, 1998). This article reviews the existing literature on family psychoeducational interventions and presents a conceptual model for psychoeducational multiple family group intervention (PMFG) for adolescents with psychotic disorder and their parents or caregivers.

Method

This article reviews the evidence-based literature on family psychoeducational interventions for persons with a psychotic disorder and mood disorders with psychotic features, with a specific focus on the gaps, strengths, and limitations of this treatment modality. PubMed, MEDLINE, and PsychInfo search engines were used between 1977 and 2007 to review two areas of the literature 1) family psychoeducational for adults, and 2) the emerging application of treatment of family psychoeducation for children and adolescents with these disorders.

Results

Part I: Family Psychoeducational Interventions

Family psychoeducational interventions have consistently been found to impact families positively and reduce relapse rates in individuals with psychotic disorders. Research finds that, for adults, family psychoeducational interventions are more effective in preventing relapse than either medication or individual treatment alone (Cassidy et al., 2001; Falloon, Marshall, Boyd, Razani, & Wood-Siverio, 1983;

Leff, Kuipers, Berkowitz, Eberlein-Fries, & Sturgeon, 1984; McFarlane et al., 1995; Pitschel-Walz et al., 2001; Xiong, Phillips, Hu, Wang, & et al., 1994). Family psychoeducation has been found to reduce the rates of symptom relapse requiring hospital readmission between 20% and 50% (McFarlane, Dixon, Lukens, & Lucksted, 2003; Pitschel-Walz et al., 2001). A recent review of family psychoeducational interventions found reduction in relapse and readmission rates, and improvement in psychosocial functioning in patients diagnosed with schizophrenia (Pekkala & Merinder, 2002).

Several models have emerged in the three decades following the development of psychosocial family interventions, including behavioral family management, family psychoeducation, and PMFGs (McFarlane et al., 2003). A central component underlying each of these interventions is a psychoeducational element that combines therapeutic factors with the imparting of information (Pitschel-Walz et al., 2001) and therapeutic support (Hogarty et al., 1986) to enable patients to engage in behavioral change (Pekkala & Merinder, 2002). The behavioral family model by Fallon and colleagues (Falloon, 1985) focused on behavioral changes that influence family communication and problem-solving techniques. The family educational model, centered on intensive engagement of several families together, provides evidence-based education about schizophrenia and its treatment and guidelines for recovery (Anderson, Hogarty, & Reiss, 1980). While these models achieved a level of initial clinical success, the PMFG approach, which integrates the strengths of the two earlier models into a more cohesive model, has been found to be the most effective. The PMFG model positively influences a number of social and clinical factors associated with the management of schizophrenia (McFarlane et al., 2003), including extending periods of remission (McFarlane et al., 1995), lowering relapse rates (Dyck et al., 2002), reducing inpatient stays, increasing knowledge (Cassidy et al., 2001; McDonnell, Short, Hazel, Berry, & Dyck, 2006; Mullen, Murray, & Happell, 2002) enhancing medication adherence rates (Pitschel-Walz et al., 2001), and promoting family support and problem-solving skills training (Lehman et al., 1998). While a number of reviews strongly validate the

PMFG model (Dixon et al., 2001; Goldstein & Miklowitz, 1995), three older studies found family psychoeducation to be ineffective (Kottgen, Sonnichsen, Mollenhauer, & Jurth, 1984; Linszen et al., 1996; Telles et al., 1995), perhaps due to the concentrated focus on exploring psychodynamic and dysfunctional aspects within families (McFarlane et al., 2003).

The PMFG is a flexible approach that has been incorporated into various models for different settings and/or populations. PMFG interventions are designed to support families with a member who is experiencing a psychotic disorder, usually schizophrenia (Asen & Schuff, 2006; Pitschel-Walz et al., 2001). They directly support and help the family and the patient; family pathology is not assumed, and competencies, not deficits, are stressed (Dixon & Lehman, 1995). The aims of these approaches center on achieving the best possible outcomes for the patient through treatment and management, and work to alleviate suffering among family members by promoting collaboration with professionals, families, and patients (McFarlane et al., 2003). PMFGs are semi-structured interventions, in which 5 to 8 families attend a closed group over a period of time ranging from 2 months to 2 years. The approach is characterized by three broad phases of group development: join and collaborate, work to improve patients' functioning, and expand the intervention into a support network that can continue after the group concludes (McFarlane, 1997).

The fundamental long-term goal of the PMFG model is to help individuals with a psychotic disorder attain full symptom recovery and participation in life, with the short-term goals of preventing secondary relapses and promoting recovery from functional losses following psychotic episodes (McFarlane, 2002; McFarlane et al., 2003). The model engages families as partners and allies in the treatment of patients with severe and persistent mental health conditions such as psychosis. Families are brought together to form a mini support organization. Biological, psychological, and social perspectives are incorporated into the four cornerstones of PMFG treatment: education, joining, problem solving, and networking (McFarlane et al., 2003). The principal tech-

niques of the PMFG include improving communication, problem solving, medication adherence, symptom management, and use of crisis intervention, as well as the development of social support networks and coping skills (Dyck et al., 2002; Goldstein & Miklowitz, 1995; Ruffolo et al., 2005).

Part II: Family Psychoeducation Interventions with Children and Adolescents

A review of the literature identified the development and application of some family psychoeducational interventions to children and adolescents with various psychiatric conditions (Fristad et al., 2002; Miklowitz et al., 2003; Pollio, McClendon, North, Reid, & Jonson-Reid, 2005; Ruffolo et al., 2005). Despite calls in the literature, however, the PMFG model has not been exclusively applied or adapted to adolescents diagnosed with psychotic disorders and their parents (Davis & Schultz, 1998).

Fristad and colleagues (Fristad, Goldberg-Arnold, & Gavazzi, 2002b) investigated the impact of PMFG on 35 children and 47 parents. This family intervention focused on children 8 to 12 years of age with primary mood disorders: major depression (37%); dysthymia (17%); bipolar I (14%); and bipolar II (31%) (Fristad et al., 2002a; Fristad et al., 2003a). In six 75-minute structured sessions, children and family members were separated into two groups after a brief introduction (Fristad, Gavazzi, & Soldana, 1998; Fristad, Goldberg-Arnold, & Gavazzi, 2003b). Parent and family group sessions focused on "developing strategies to deal with negative family cycles, the stress of parenting a child with a mood disorder and specific issues for managing manic and depressive symptoms" (Fristad, in press, p. 18). Children's sessions fostered social skills training and working on the "lesson" of the day. In the initial investigation, parents reported positive family interaction, and the children's perception of support and service utilization increased. However, negative family interactions did not decrease (Fristad et al., 2003a; Fristad et al., 1998). The intervention was refined by increasing the session numbers from six to eight and time length from 75 to 90 minutes (Fristad, in press). The eight sessions focused on 1) symptoms/disorders, 2) medications, 3) family systems, 4)

negative family cycles, 5) improving problem solving, 6) improving communication, 7) improving symptom management, and 8) wrapping up (Fristad, in press). This PMFG intervention demonstrated efficacy in its adaptation for young children managing mood disorders. Fristad is currently developing a manual for this eight-session PMFG for children 8 to 12 years of age with mood disorders and further testing it on 165 children (Fristad, 2006b).

Ruffolo and colleagues at the University of Michigan have made progress in adapting the PMFG for parents/primary caregivers of children with serious emotional disturbances (SED), specifically Attention Deficit Hyperactivity Disorder (ADHD) and Oppositional Defiant Disorder (ODD) (Ruffolo, Kuhn, & Evans, 2006; Ruffolo et al., 2005). The intervention is based on a problem-solving framework that emphasizes building social supports and increasing knowledge of child mental illness to foster parental empowerment (Ruffolo et al., 2005). In a randomized control trial (RCT), 94 parents of youth were enrolled in either a PMFG intervention (experimental group) that focused on support, empowerment, and education or in the standard intensive case management (ICM) services (treatment as usual control) (Ruffolo et al., 2005). Five to nine parents met for 2 hours twice monthly for 6 months, while their children (mean age 11.68 years) met in separate groups (Ruffolo, 2006). The key variables of parent social support network use, parent problem solving, parent coping skills, and youth behavior symptoms were measured at baseline, 9 months, and 18 months. Results did not show statistical differences on the key variables but found improvement in youth behavior, both in the treatment and control groups (Ruffolo et al., 2005). Authors cited budget cuts during the intervention stage and the established effectiveness of ICM as confounding factors and recommended further research in this area.

Pollio and colleagues' (2005) school-based psychoeducational intervention found that 13 of the 15 families who completed the brief intervention rated the experience as positive and helpful. McKay and colleagues (1999) applied the PMFG to low-income, urban children with disruptive behavior. Family involvement in the 16-week intervention versus involvement in

individual or family therapy found higher rates of mental health service use and lower attrition rates (McKay, 1999).

Miklowitz and colleagues (2004) at the University of Colorado have effectively adapted and applied the family-focused psychoeducational intervention Family-Focused Treatment (FFT) to single families with an adult family member diagnosed with a bipolar disorder. The FFT intervention consists of three components: psychoeducation for the family, communication enhancement training, and problem-solving skills training (Miklowitz, & Goldstein, 1997). The focus on single families limits benefits of the multiple family group model. Specifically, the inclusion of families in psychoeducational intervention is essential to counteract isolation, reduce the impact of expressed emotion, and minimize negative relationships that could emerge in families with a child or adolescent suffering from bipolar disorder (Miklowitz, 2006). Also, youth are generally dependent on their family of origin, and parents have strong potential to influence the course of the disorder (Miklowitz et al., 2004).

The FFT is a highly structured 9-month program with 21 hour-long sessions (12 weekly, 6 biweekly, then 3 monthly) that involve the patient with their family members (Miklowitz, & Goldstein, 1997; Rea et al., 2003). Investigations of FFT programs found that the adult participants diagnosed with bipolar disorders demonstrated fewer relapses, a reduction in mood symptoms, and improved medication adherence (Miklowitz et al., 2003; Rea et al., 2003). Adapted to adolescents, the Family-Focused Treatment for Adolescents (FFT-A) focuses on six interrelated goals: i) make sense of cycling mood and influencing factors, ii) recognize their vulnerability to the disease and plan to prevent or delay future symptoms, iii) accept medications, iv) accept the illness, v) manage stressors, and vi) promote a stable family environment (Miklowitz et al., 2004). In one FFT-A pilot study, 20 adolescents (aged 13 to 17 years) scored a 38% drop in depression, 46% drop in mania, and had fewer problem behaviors (Miklowitz et al., 2004).

Discussion

The developing family psychoeducational research with children and adolescents has

revealed a number of strengths to build upon and has highlighted areas for improvement. Family psychoeducational intervention can be effectively adapted to specific populations. The PMFG and FFT-A demonstrate this application to children with mood disorders and emotional and behavioral difficulties. However, the PMFG and FFT-A have not been adapted for adolescents with psychosis, despite over 20 years of research and effective application of PMFGs to adults with schizophrenia (Anderson, Hogarty, & Reiss, 1980; Falloon et al., 1985; Hogarty & Anderson, 1986; McFarlane et al., 2003).

When adapted from adult applications, the PMFG has largely been applied to children under the age of 12 years (Fristad et al., 2003a; Ruffolo et al., 2005) and has rarely been applied to adolescents transitioning into adulthood. The adaptation of the PMFGs for younger populations has resulted in parallel, but separate, groups for children and parents/caregivers, rather than the combined PMFGs used for adults. While parallel groups may be necessary for young children (Fristad, 2006a), the separation of families from patients may reduce the effectiveness of the intervention, which found limited or no evidence of success in addressing parental problem-solving skills, parent coping skills, or negative family interaction (Fristad et al., 2003a; Pollio et al., 2005; Ruffolo et al., 2005). In addition, FFT-A's focus on single families rather than multiple families has not fully addressed issues relating to improved family relationships, feelings of isolation, and family burden, or issues such as the stigma associated with relapse, increasing medication adherence, and improving social function. Emerging research in adapting FFT-A to families of bipolar adolescents, however, does reflect some success in reducing mood symptoms and problem behaviors (Miklowitz et al., 2004). Also, family members benefit from participating in multiple family groups that develop positive family interaction, promote social networking, increase knowledge of psychiatric conditions, and improve service utilization (Fristad et al., 2003a; McKay, 1999). Even so, FFT-A interventions have not been found to reduce negative family interactions or increased parental use of their support network (Ruffolo et al., 2005).

The impact and interaction of medication

adherence and the family environment (as operationalized by expressed emotion) are recognized as fundamental to the success of psychoeducational interventions (Dixon & Lehman, 1995; Fristad, et al., 1998; Fristad et al., 2002; Fristad et al., 2003a; Lofthouse & Fristad, 2004; McFarlane, 2002; McFarlane et al., 2003; Miklowitz et al., 2004). Research has supported an association between relapse and a family environment characterized by negative expressed emotion (EE), including emotional over-involvement, negative family interactions, and criticism and dissatisfaction, all of which increase adolescents' stress and burden (Bebbington & Kuipers, 1994; Birchwood et al., 1998; Heinrichs et al., 2005; Jackson, Smith, & McGorry, 1990; Lenior et al., 2002; Loebel et al., 1992; Wyatt et al., 1998). On the other hand, positively involved families and parents are associated with increased medication adherence (Robinson et al., 2002). An essential goal of psychoeducation is to decrease EE within the family environment and increase medication adherence, thereby reducing the risk of psychotic relapse (Leff, Kuipers, Berkowitz, & Sturgeon, 1985). The development and research on PMFGs needs to include, address, and investigate these factors.

While the adaptation of the PMFG intervention builds upon a number of strengths, it also addresses potential obstacles to the success of the program. Dixon and colleagues have reported that family psychoeducation is an evidence-based intervention that is effective in reducing relapse and facilitating recovery; however, its use in routine practice may be limited by specific barriers (Dixon et al. 2001; Glynn et al., 2006; McFarlane et al. 2003). These include factors that may impact family members' ability or willingness to participate, such as constraints on their time and resources, as well as fears of taking on additional caregiving responsibilities, experiencing stigma, and losing autonomy to treatment teams. The PMFG adaptation for adolescents will require attention of time and resource constraints through careful scheduling and the provision of resources to cover expenses associated with transportation, child care for other siblings, etc. The vast majority of adolescent patients reside with their families (Davis & Schultz, 1998; Schooler, 1995); as a result,

most parents/caregivers have automatically assumed the caregiving responsibilities and may find the group a means to relieve rather than add to their existing responsibilities. Also, the adaptation of the PMFG for adolescents is designed to help improve the lives of parents/caregivers by providing education and social support to help destigmatize mental illness, engender hope (Dixon et al., 2001; Glynn et al., 2006; McFarlane et al., 2003), reduce family burden, and support their active involvement in their child's treatment. Consequently the utility of PMFGs may be more appropriate with children and adolescents and their families than adults, as it directly addresses many of the potential obstacles of PMFGs for adults.

Conclusion

Family psychoeducation interventions underscore the importance of working with youth and their families through a clear, concrete, and delineated structure. Adapted and manual-based family psychoeducational programs have effectively demonstrated the success of adult interventions that incorporate education, coping skills and problem-solving strategies. The US Surgeon General's first report on mental health (U.S. Public Health Service, 1999) called for the transfer of evidence-based treatments and prevention interventions to other areas and populations. Despite the Surgeon General's recommendation, the low costs of providing psychoeducational programs, and their recognized effectiveness with families, to date, no family psychoeducation intervention has been tailored to adolescents with psychosis.

Psychosis and mood disorders with psychotic features are serious and persistent mental health problems that are increasingly recognized as having early onset and affecting adolescents, their families, and society at large. These conditions can have a poor prognostic course with children and adolescents. In a sample of 87 children and adolescents with psychotic disorders, one study found that 6 out of 10 youth will relapse and require hospitalization (Gearing, 2007). The impact of these psychiatric conditions affects not only the diagnosed individuals and their families, but places a significant burden on the health care system

and society. This article proposes the conceptual development of a PMFG for adolescents to address an existing gap in the field by developing an intervention with goals to improve prognosis, social and peer functioning, and reduce relapse in adolescents.

Acknowledgements/Conflict of Interest

The author has no financial relationships to disclose.

References

- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, Text Revision* (4th ed.). Arlington, VA: American Psychiatric Association.
- Anderson, C. M., Hogarty, G. E. & Reiss, D. J. (1980). Family treatment of adult schizophrenic patients: a psycho-educational approach. *Schizophrenia Bulletin*, 6(3), 490-505.
- Asarnow, J. R., Tompson, M. C. & Goldstein, M. J. (1994). Childhood onset schizophrenia: A follow-up study. *Schizophrenia Bulletin*, 20(4), 599-617.
- Asen, E. & Schuff, H. (2006). Psychosis and multiple family group therapy. *Journal of Family Therapy*, 28(1), 58-72.
- Bebbington, P. & Kuipers, L. (1994). The predictive utility of expressed emotion in schizophrenia: an aggregate analysis. [erratum appears in *Psychological Medicine* 1995 Jan;25(1):215]. *Psychological Medicine*, 24(3), 707-718.
- Bergen, J., Hunt, G., Armitage, P. & Bashir, M. (1998). Six-month outcome following a relapse of schizophrenia. *Australian & New Zealand Journal of Psychiatry*, 32(6), 815-822.
- Birchwood, M., Todd, P. & Jackson, C. (1998). Early intervention in psychosis. The critical period hypothesis. *British Journal of Psychiatry - Supplementum*, 172(33), 53-59.
- Buchanan, R. W. & Carpenter, W. T. (2000). Schizophrenia. In B. J. Saddock & V. A. Saddock (Eds.), *Comprehensive Textbook of Psychiatry* (7th ed., pp. 1096-1110). Philadelphia: Lippincott Williams & Wilkins.
- Burd, L. & Kerbeshian, J. (1987). A North Dakota prevalence study of schizophrenia presenting in childhood. *Journal of the American Academy of Child & Adolescent Psychiatry*, 26(3), 347-350.
- Cassidy, E., Hill, S. & O'Callaghan, E. (2001). Efficacy of a psychoeducational intervention in improving relatives' knowledge about schizophrenia and reducing rehospitalisation. *European Psychiatry: the Journal of the Association of European Psychiatrists*, 16(8), 446-450.
- Caton, C. L. & Goldstein, J. (1984). Housing change of chronic schizophrenic patients: a consequence of the revolving door. *Social Science & Medicine*, 19(7), 759-764.
- Colenda, C. C. & Hamer, R. M. (1989). First admission young adult patients to a state hospital: relative risk for rapid readmission. *Psychiatric Quarterly*, 60(3), 227-236.
- Davis, D. J. & Schultz, C. L. (1998). Grief, parenting, and schizophrenia. *Social Science & Medicine*, 46(3), 369-379.

- Dixon, L., McFarlane, W. R., Lefley, H., Lucksted, A., Cohen, M., Falloon, I., et al. (2001). Evidence-based practices for services to families of people with psychiatric disabilities. *Psychiatric Services, 52*(7), 903-910.
- Dixon, L. B. & Lehman, A. F. (1995). Family interventions for schizophrenia. *Schizophrenia Bulletin, 21*(4), 631-643.
- Doane, J. A. & Becker, D. F. (1993). Changes in family emotional climate and course of psychiatric illness in hospitalized young adults and adolescents. *New Trends in Experimental & Clinical Psychiatry, 9*(3), 63-77.
- Dyck, D. G., Hendryx, M. S., Short, R. A., Voss, W. D. & McFarlane, W. R. (2002). Service use among patients with schizophrenia in psychoeducational multiple-family group treatment. *Psychiatric Services, 53*(6), 749-754.
- Eaton, W. W., Mortensen, P. B., Herrman, H., Freeman, H., Bilker, W., Burgess, P., et al. (1992). Long-term course of hospitalization for schizophrenia: Part I. Risk for rehospitalization. *Schizophrenia Bulletin, 18*(2), 217-228.
- Falloon, I. R. (1984). Relapse: a reappraisal of assessment of outcome in schizophrenia. *Schizophrenia Bulletin, 10*(2), 293-299.
- Falloon, I. R., Boyd, J. L., McGill, C. W., Williamson, M., Razani, J., Moss, H. B., et al. (1985). Family management in the prevention of morbidity of schizophrenia. Clinical outcome of a two-year longitudinal study. *Archives of General Psychiatry, 42*(9), 887-896.
- Falloon, I. R., Marshall, G. N., Boyd, J. L., Razani, J. & Wood-Siverio, C. (1983). Relapse in schizophrenia: a review of the concept and its definitions. *Psychological Medicine, 13*(3), 469-477.
- Favre, S., Huguelet, M. A., Vogel, S. & Gonzalez, M. A. (1997). Neuroleptic compliance in a cohort of first episode schizophrenics: A naturalistic study. *European Journal of Psychiatry, 11*(1), 35-42.
- Foldemo, A., Gullberg, M., Ek, A. C. & Bogren, L. (2005). Quality of life and burden in parents of outpatients with schizophrenia. *Social Psychiatry & Psychiatric Epidemiology, 40*(2), 133-138.
- Friis, S., Hauff, E., Island, T. K., Lorentzen, S., Melle, I. & Vaglum, P. (1991). The Ullevål acute ward follow-up study: a personal 7-year follow-up of patients with functional psychosis admitted to the acute ward of a catchment area. *Psychopathology, 24*(5), 316-327.
- Fristad, M. A. (2006a). Psychoeducational treatment for school-aged children with bipolar disorder. *Developmental Psychopathology, 18*(4), 1289-1306.
- Fristad, M. A. (2006b). Telephone call on PMFG. In R. E. Gearing (Ed.). New York.
- Fristad, M. A. (in press). Psychoeducational treatment for school-aged children with bipolar disorder. *Development and Psychopathology, 1-48*.
- Fristad, M. A., Gavazzi, S. M. & Mackinaw-Koons, B. (2003). Family psychoeducation: an adjunctive intervention for children with bipolar disorder. *Biological Psychiatry, 53*(11), 1000-1008.
- Fristad, M. A., Gavazzi, S. M. & Soldana, K. W. (1998). Multi-family psychoeducation groups for childhood mood disorders: A program description and preliminary efficacy data. *Contemporary Family Therapy, 20*(3), 385-402.
- Fristad, M. A., Goldberg-Arnold, J. S. & Gavazzi, S. M. (2002). Multifamily psychoeducation groups (MFPG) for families of children with bipolar disorder. *Bipolar Disorders, 4*(4), 254-262.
- Fristad, M. A., Goldberg-Arnold, J. S. & Gavazzi, S. M. (2003a). Multi-family psychoeducation groups in the treatment of children with mood disorders. *Journal of Marital & Family Therapy, 29*(4), 491-504.
- Fristad, M. A., Goldberg-Arnold, J. S. & Gavazzi, S. M. (2003b). Multi-family psychoeducation groups in the treatment of children with mood disorders. *Journal of Marital & Family Therapy, 29*(4), 491-504.
- Gearing, R. E. (2007). *Developing a risk-model of time to first relapse for children and adolescents with primary psychotic disorders or mood disorders with psychotic features*. Dissertation Abstracts International, 68(1-A), 347 (UMI No. AAINR 22042).
- Geddes, J., Mercer, G., Frith, C. D., MacMillan, F., Owens, D. G. & Johnstone, E. C. (1994). Prediction of outcome following a first episode of schizophrenia. A follow-up study of Northwick Park first episode study subjects. *British Journal of Psychiatry, 165*(5), 664-668.
- Gillberg, C. (1984). Infantile autism and other childhood psychoses in a Swedish urban region: Epidemiological aspects. *Journal of Child Psychology and Psychiatry, 25*(1), 35-43.
- Gillberg, C. (2001). Epidemiology of early onset schizophrenia. In H. Remschmidt (Ed.), *Schizophrenia in Children and Adolescents* (pp. 43-59). Cambridge: Cambridge University Press.
- Gillberg, C. & Steffenburg, S. (1987). Outcome and prognostic factors in infantile autism and similar conditions: A population-based study of 46 cases followed through puberty. *Journal of Autism & Developmental Disorders, 17*(2), 273-287.
- Giron, M. & Gomez-Beneyto, M. (1995). Relationship between family attitudes measured by the Semantic Differential and relapse in schizophrenia: a 2 year follow-up prospective study. *Psychological Medicine, 25*(2), 365-371.
- Glynn, S. M., Cohen, A. N., Dixon, L. B. & Niv, N. (2006). The potential impact of the recovery movement on family interventions for schizophrenia: Opportunities and obstacles. *Schizophrenia Bulletin 32*(3), 451-463.
- Goldstein, M. J. & Miklowitz, D. J. (1995). The effectiveness of psychoeducational family therapy in the treatment of schizophrenic disorders. *Journal of Marital & Family Therapy Vol 21*(4) Oct 1995, 361-376.
- Hafner, H., Maurer, K., Löffler, W., Fatkenheuer, B., an der Heiden, W., Riecher-Rössler, A., et al. (1994). The epidemiology of early schizophrenia. Influence of age and gender on onset and early course. *British Journal of Psychiatry - Supplementum*(23), 29-38.
- Heinrichs, N., Bertram, H., Kuschel, A. & Hahlweg, K. (2005). Parent recruitment and retention in a universal prevention program for child behavior and emotional problems: barriers to research and program participation. *Prevention Science, 6*(4), 275-286.
- Hogarty, G. E. & Anderson, C. M. (1986). Medication, family psychoeducation, and social skills training: first year relapse results of a controlled study. *Psychopharmacology Bulletin, 22*(3), 860-862.
- Hogarty, G. E., Anderson, C. M., Reiss, D. J., Kornblith, S. J., Greenwald, D. P., Javna, C. D., et al. (1986). Family psychoeducation, social skills training, and maintenance chemotherapy in the aftercare treatment of schizophrenia. I. One-year effects of a con-

- trolled study on relapse and expressed emotion. *Archives of General Psychiatry*, 43(7), 633-642.
- Jackson, H. J., Smith, N. & McGorry, P. (1990). Relationship between expressed emotion and family burden in psychotic disorders: an exploratory study. *Acta Psychiatrica Scandinavica*, 82(3), 243-249.
- Kampman, O., Kiviniemi, P., Koivisto, E., Vaananen, J., Kilkku, N., Leinonen, E., et al. (2004). Patient characteristics and diagnostic discrepancy in first-episode psychosis. *Comprehensive Psychiatry*, 45(3), 213-218.
- Kottgen, C., Sonnichsen, I., Mollenhauer, K. & Jurth, R. (1984). Group therapy with the families of schizophrenic patients: Results of the Hamburg camberwell-family-interview study: III. *International Journal of Family Psychiatry Vol 5(1) 1984*, 83-94.
- Lay, B., Blanz, B., Hartmann, M. & Schmidt, M. H. (2000). The psychosocial outcome of adolescent-onset schizophrenia: A 12-year followup. *Schizophrenia Bulletin*, 26(4), 801-816.
- Leff, J., Kuipers, L., Berkowitz, R., Eberlein-Fries, R. & Sturgeon, D. (1984). Psychosocial relevance and benefit of neuroleptic maintenance: experience in the United Kingdom. *Journal of Clinical Psychiatry*, 45(5 Pt 2), 43-49.
- Leff, J., Kuipers, L., Berkowitz, R., & Sturgeon, D. (1985). A controlled trial of social intervention in the families of schizophrenic patients: two year follow-up. *British Journal of Psychiatry*, 146, 594-600.
- Lehman, A. F., Steinwachs, D. M., Dixon, L. B., Goldman, H. H., Osher, F., Postrado, L., et al. (1998). Translating research into practice: The schizophrenia patient outcomes research team (PORT) treatment recommendations. *Schizophrenia Bulletin*.
- Lenior, M. E., Dingemans, P. M., Schene, A. H., Hart, A. A. & Linszen, D. H. (2002). The course of parental expressed emotion and psychotic episodes after family intervention in recent-onset schizophrenia. A longitudinal study. *Schizophrenia Research*, 57(2-3), 183-190.
- Linszen, D., Dingemans, P., Van der Does, J. W., Nugter, A., Scholte, P., Lenior, R., et al. (1996). Treatment, expressed emotion and relapse in recent onset schizophrenic disorders. *Psychological Medicine*, 26(2), 333-342.
- Linszen, D., Lenior, M., De Haan, L., Dingemans, P. & Gersons, B. (1998). Early intervention, untreated psychosis and the course of early schizophrenia. *British Journal of Psychiatry - Supplementum*, 172(33), 84-89.
- Lloyd, T. & Jones, P. B. (2002). The Epidemiology of first-onset mania. In M. T. T. M. Tohen (Ed.), *Textbook in Psychiatric Epidemiology* (2nd ed., pp. 445-458). New York: Wiley-Liss.
- Lloyd, T., Kennedy, N., Fearon, P., Kirkbride, J., Mallett, R., Leff, J., Holloway, J., Harrison, G., Dazzan, P., Morgan, K., Murry, R. M. & Jones, P. B. (2005). Incidence of bipolar affective disorder in three UK cities: Results from the AESOP study. *British Journal of Psychiatry* 186(2), 126-131.
- Loebel, A. D., Lieberman, J. A., Alvir, J. M., Mayerhoff, D. I., Geisler, S. H. & Szymanski, S. R. (1992). Duration of psychosis and outcome in first-episode schizophrenia. *American Journal of Psychiatry*, 149(9), 1183-1188.
- Lofthouse, N. & Fristad, M. A. (2004). Psychosocial interventions for children with early-onset bipolar spectrum disorder. *Clinical Child and Family Psychology Review*, 7(2), 71-88.
- McClellan, J. & McCurry, C. (1999). Early onset psychotic disorders: Diagnostic stability and clinical characteristics. *European Child & Adolescent Psychiatry*, 8 Suppl 1, 113-119.
- McDonnell, M. G., Short, R. A., Hazel, N. A., Berry, C. M. & Dyck, D. G. (2006). Multiple-family group treatment of outpatients with schizophrenia: Impact on service utilization. *Family Process*, 45(3), 359-373.
- McFarlane, W. R. (1997). *Family psychoeducation: Basic concepts and innovative applications*: Henggeler, Scott W (Ed); Santos, Alberto B (Ed).
- McFarlane, W. R. (2002). *Multifamily Groups in the Treatment of Severe Psychiatric Disorders*. New York: The Guilford Press.
- McFarlane, W. R., Dixon, L., Lukens, E. & Lucksted, A. (2003). Family psychoeducation and schizophrenia: a review of the literature. *Journal of Marital & Family Therapy*, 29(2), 223-245.
- McFarlane, W. R., Link, B., Dushay, R., Marchal, J. & Crilly, J. (1995). Psychoeducational multiple family groups: four-year relapse outcome in schizophrenia. *Family Process*, 34(2), 127-144.
- McKay, M., Gonzales, J., Quintana, E., Kim, L. & Abdul-Adil, J. (1999). Multiple family groups: An alternative for reducing disruptive behavioral difficulties of urban children. *Research on Social Work Practice*, 9(5), 593-607.
- Miklowitz, D. J. (2004). The role of family systems in severe and recurrent psychiatric disorders: a developmental psychopathology view. *Developmental Psychopathology*, 16(3), 667-688.
- Miklowitz, D. J. (2006). Telephone call FFT and FFT-A. In R. E. Gearing (Ed.). New York.
- Miklowitz, D. J. & Goldstein, M. J. (1997). *Bipolar disorder: A family-focused treatment approach*. New York: The Guilford Press.
- Miklowitz, D. J., George, E. L., Axelson, D. A., Kim, E. Y., Birmaher, B., Schneck, C., et al. (2004). Family-focused treatment for adolescents with bipolar disorder. *Journal of Affective Disorders*, 82 Suppl 1, S113-128.
- Miklowitz, D. J., George, E. L., Richards, J. A., Simoneau, T. L. & Suddath, R. L. (2003). A randomized study of family-focused psychoeducation and pharmacotherapy in the outpatient management of bipolar disorder. *Archives of General Psychiatry*, 60(9), 904-912.
- Mullen, A., Murray, L. & Happell, B. (2002). Multiple family group interventions in first episode psychosis: Enhancing knowledge and understanding *International Journal of Mental Health Nursing*, 11(4), 225-232.
- Muller, N. (2004). Mechanisms of relapse prevention in schizophrenia. *Pharmacopsychiatry*, 37 Suppl 2, S141-147.
- New Freedom Commission on Mental Health. Achieving the Promise: Transforming Mental Health Care in America. Executive Summary. In: Rockville MDoHaHS, ed; 2003.
- Nylander, L. & Gillberg, C. (2001). Screening for autism spectrum disorders in adult psychiatric out-patients: a preliminary report. *Acta Psychiatrica Scandinavica*, 103(6), 428-434.
- Olfson, M., Mechanic, D., Boyer, C. A. & Hansell, S. (1998). Linking inpatients with schizophrenia to outpatient care. *Psychiatric Services*, 49(7), 911-917.

- Olfson, M., Mechanic, D., Hansell, S., Boyer, C. A., Walkup, J. & Weiden, P. J. (2000). Predicting medication noncompliance after hospital discharge among patients with schizophrenia. *Psychiatric Services*, 51(2), 216-222.
- Parker, G. & Hadzi-Pavlovic, D. (1995). The capacity of a measure of disability (the LSP) to predict hospital readmission in those with schizophrenia. *Psychological Medicine*, 25(1), 157-163.
- Pekkala, E. & Merinder, L. (2002). Psychoeducation for schizophrenia.[update of Cochrane Database Syst Rev. 2000;(4):CD002831; PMID: 11034771]. *Cochrane Database of Systematic Reviews* (2), CD002831.
- Pitschel-Walz, G., Leucht, S., Bauml, J., Kissling, W. & Engel, R. R. (2001). The effect of family interventions on relapse and rehospitalization in schizophrenia—a meta-analysis. *Schizophrenia Bulletin*, 27(1), 73-92.
- Pollio, D. E., McClendon, J. B., North, C. S., Reid, D. & Jonson-Reid, M. (2005). The promise of school-based psychoeducation for parents of children with emotional disorders. *Children & Schools Vol 27(2) Apr 2005*, 111-115.
- Rea, M. M., Tompson, M. C., Miklowitz, D. J., Goldstein, M. J., Hwang, S. & Mintz, J. (2003). Family-focused treatment versus individual treatment for bipolar disorder: results of a randomized clinical trial. *Journal of Consulting Clinical Psychology*, 71(3), 482-492.
- Robinson, D. G., Woerner, M. G., Alvir, J. M., Bilder, R. M., Hinrichsen, G. A. & Lieberman, J. A. (2002). Predictors of medication discontinuation by patients with first-episode schizophrenia and schizoaffective disorder. *Schizophrenia Research*, 57(2-3), 209-219.
- Ruffolo, M. C. (2006). Telephone call on PMFG. In R. E. Gearing (Ed.). New York.
- Ruffolo, M. C., Kuhn, M. T. & Evans, M. E. (2006). Developing a parent-professional team leadership model in group work: work with families with children experiencing behavioral and emotional problems. *Social Work*, 51(1), 39-47.
- Ruffolo, M. C., Kuhn, M. T. & Evans, M. E. (2005). Support, empowerment, and education: A study of multiple family group education. *Journal of Emotional and Behavioral Disorders*, 13(4), 200-212.
- Schmidt, M., Blanz, B., Dippe, A., Koppe, T. & Lay, B. (1995). Course of patients diagnosed as having schizophrenia during first episode occurring under age 18 years. *European Archives of Psychiatry & Clinical Neuroscience*, 245(2), 93-100.
- Schooler, N. R. (1995). Integration of family and drug treatment strategies in the treatment of schizophrenia: a selective review. *International Clinical Psychopharmacology*, 10 Suppl 3, 73-80.
- Spaniol, L., Zippel, A. M. & Lockwood, D. (1992). The role of the family in psychiatric rehabilitation. *Schizophrenia Bulletin*, 18(3), 341-348.
- Sullivan, G., Wells, K. B., Morgenstern, H. & Leake, B. (1995). Identifying modifiable risk factors for rehospitalization: a case-control study of seriously mentally ill persons in Mississippi. *American Journal of Psychiatry*, 152(12), 1749-1756.
- Telles, C., Karno, M., Mintz, J., Paz, G., Arias, M., Tucker, D., et al. (1995). Immigrant families coping with schizophrenia. Behavioral family intervention v. case management with a low-income Spanish-speaking population. *British Journal of Psychiatry*, 167(4), 473-479.
- U.S. Public Health Service. Mental health: A report of the surgeon general-Executive summary. In: Rockland MUSDoHaHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Health, ed; 1999.
- Verdoux, H., Lengronne, J., Liraud, F., Gonzales, B., Assens, F., Abalan, F., et al. (2000). Medication adherence in psychosis: predictors and impact on outcome. A 2-year follow-up of first-admitted subjects. *Acta Psychiatrica Scandinavica*, 102(3), 203-210.
- Weiden, P. J. & Olfson, M. (1995). Cost of relapse in schizophrenia. *Schizophrenia Bulletin*, 21(3), 419-429.
- Werry, J. S., McClellan, J. M., Andrews, L. K. & Ham, M. (1994). Clinical features and outcome of child and adolescent schizophrenia. *Schizophrenia Bulletin*, 20(4), 619-630.
- Wyatt, R. J., Damiani, L. M. & Henter, I. D. (1998). First-episode schizophrenia. Early intervention and medication discontinuation in the context of course and treatment. *British Journal of Psychiatry - Supplementum*, 172(33), 77-83.
- Xiong, W., Phillips, M. R., Hu, X., Wang, R. & et al. (1994). Family-based intervention for schizophrenic patients in China: A randomised controlled trial. *British Journal of Psychiatry Vol 165(2) Aug 1994*, 239-247.