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Supplementary appendix

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Supplementary appendix A

OVERVIEW OF THERAPY MODELS

The 18 models identified in the literature are evenly divided between at risk populations, and first episode and early (usually adolescent) onset BD populations. Most are described as BD-specific approaches, whilst five interventions (two for first episode and three for early onset disorders) are aimed at youth with affective and non-affective psychoses (HORYZONS; EPPIC; SR-CBT; CBTpA) or individuals with a range of psychological problems and disorders (YES).

a) At Risk

Most interventions for individuals at risk of BD are designed for offspring of BD parents aged between about 9–17 year olds (eg FFT-HR; IPSRT; MB-CBT), or youth aged 15–25 years with depression and other risk syndromes for BD (eg CBT-R), although Pfennig and colleagues[1] will recruit individuals up to the age of 30 years. The course of therapy is usually less intense than for established cases of BD (8–14 sessions over 3–6 months). For example, the IPSRT model for the offspring of BD parents[2] represents a briefer version of the IPSRT-A model, with 12 sessions delivered over six months. The exception is CBT-R, which targets individuals with a current depressive episode and extends to 24 sessions[3].

None of the CBT interventions for individuals at risk of BD employ the traditional 'Beckian' model that is most often applied to mood disorders in older adults. Modifications involve changes to the delivery format, such as a group approach that incorporates techniques used with individuals at risk of psychosis[1], mindfulness-based groups targeting BD offspring with anxiety[4] or mood dysregulation[5] or a model that specifically targets regulation of cognitive-emotional (especially rumination) and circadian processes (especially delayed sleep phase), and physical activity[3].

The multi-family group approach to 'at risk' individuals of Nadkarni and Fristad[6] is an application of the model used for children with BD and other diagnoses such as disruptive behaviour disorders[7] whilst the 12 session FFT-HR model of Miklowitz and colleagues[8] draws on their FFT model for adults with established BD. Many of the techniques employed aim to support high-risk youth and family members to differentiate between significant mood dysregulation from developmentally appropriate emotional reactivity and to identify any emerging prodromal symptoms of a typical mood disorder. The FFT model is the only 'BD at risk' intervention described in a published manual, with a book[9] and an on-line version available[10].

b) First Episode

Although some interventions are targeted at first episode BD cases specifically, other studies included a sub-group of cases receiving a BD diagnosis for the first time. As such, the interventions described in this section overlap with the 'early onset' interventions.

The interventions have cross-modality similarities as well as some differences. Therapies were delivered in individual format (n=3), comprised a mixture of group and individual work (EPPIC), or were delivered via an internet programme that allows for peer-to-peer social networking and individually tailored interactive psychosocial interventions (HORYZONS). The duration of intervention was not uniform, and courses of therapy lasted from three months to two years (eg. the integrated intervention at EPPIC).

Similar to the therapies used in adult cases of established BD, all the interventions identify the need for psycho-education about BD, problem-solving skills training and development of relapse prevention strategies, and most also aim to enhance medication adherence. However, it is notable that none of the interventions is based specifically on peer group psycho-education alone.

The CBT models varied from a standard CBT approach with only minor adaptations, eg the addition of home visits[11] to the TEAMS approach which aims to increase a person's awareness of their internal state[12] through to a multi-modal approach that can be employed in EIP settings (see below)[13].

Although the main clientele for EPPIC and HORYZONS have first episode non-affective psychoses, the individually tailored elements of these interventions mean that the approaches can be adapted for affective psychoses and other BD

presentations. For example, Alvarez-Jimenez and colleagues[14] use on-line behavioural interventions integrating peer-to-peer social networking, individually tailored psychosocial interventions, and expert inter-disciplinary and peer-moderation. As reported by Conus and colleagues[15] used the case-management intervention developed at EPPIC[16,17] to meet a number of specific challenges in working with early onset severe mental disorders, not least those related to engagement with services and treatment, as well as comorbidities. The manual by Macneil and colleagues[13] actually evolved largely because of the recognition that the EPPIC approach did not address some of the specific needs of individuals with first episode BD. The therapy is longer than many other BD interventions, but is fairly flexible, and can be adapted according to the clinical/psychological needs of the adolescent and/or the severity of the initial BD presentation. Notably, this CBT model and EPPIC emphasize functional recovery.

c) Early Onset

Many therapies for adolescents or young adults suggest that they are targeted at the early stages of severe mental disorders, not just at early onset BD. Of the six models with published descriptions available, three are specific to BD (FFT-A; FFT-SUD; IPRST-A).

Most of the therapies applied to early onset BD describe age-appropriate modifications to existing interventions, eg specific sessions focused on social maturation or developmental issues such as the young person's functioning at school, managing peer group pressures or relationship conflicts, individuation from parents and social role transitions. For example, the IPSRT-A approach emphasizes that interpersonal issues are a risk factor for adolescent mood instability, and also includes communication with the school to support educational/vocational role expectations as well as highlighting the relevance of structured social routines and sleep regularity. Although social rhythm dysregulation is a key theoretical element of IPSRT-A, other therapies target either social rhythm or circadian/sleep dysregulation, as these are recognized as a potential precipitants of BD relapses[18]. The YES model[18] comprises two phases, targeting psychosocial/cognitive-emotional issues and physical/behavioural issues; it is the only intervention to specifically examine physical health in youth with BD.

Interventions for individuals presenting to psychosis services (EIP or adolescent inpatient services) mainly employ established CBT models for psychosis, although their targets are quite different: Fowler and colleagues[19] focus on social recovery (CBT-SR), whilst Browning and colleagues[20] use CBTpA to reduce clinical symptoms and improve functioning.

The FFT-A model is specifically targeted at relapse prevention in adolescents with a diagnosis of BD, and the three main modules are the same as for FFT-HR, but are of longer duration. An important goal of FFT-A is to decrease stress and interpersonal conflicts by reducing the levels of expressed emotion in the family and by enhancing flexible and adaptive interpersonal patterns. Families have homework each week, such as completing a mood chart, identifying early warning signs and practicing communication or problem-solving skills. Lastly, FFT-SUD[21] is the only intervention that uniquely targets substance use disorders (SUD), the intervention closely follows the FFT-A manual, but incorporates an SUD module that addresses SUD in young people, especially focusing on alcohol and cannabis misuse.

References

NB: reference numbers for studies included in the appendix differ from those in the main text

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