

Promotion of mental health in children of parents with a mental disorder

Maria Cristina Verrocchio, Alessandra Ambrosini and Mario Fulcheri

Dipartimento di Scienze Psicologiche, Umanistiche e del Territorio, Università "G. d'Annunzio", Chieti-Pescara, Italy

Abstract

Mental disorders are associated with many difficulties in the activities of daily living, work, relationships and family, and they determine high social and economic costs that represent an important public health problem. The literature has shown that children of parents with mental disorders grow up in environments that are potentially harmful to their mental health and are at risk of neglect and maltreatment. Interventions to prevent mental disorders and psychological symptoms of children of parents with mental disorders are effective but supporting these families is a complex task which requires both cooperation between departments and an interdisciplinary knowledge. A greater knowledge of the responses provided to assist families with dependent children and a mentally ill parent, could stimulate reflections on critical issues and government actions aimed at promoting and protecting the mental health of children.

Key words

- children of parents with mental illness
- parenting
- family-focused care
- mental health

INTRODUCTION

Around the world many people suffer from mental disorders and are subject to social isolation, poor quality of life and high mortality. Mental disorders, present in all age classes, are associated with a number of difficulties relating to activities of daily living, work, interpersonal and family relationships and they lead to high social and economic costs and represent an important and timely issue.

This article examines the issues of parenting of individuals with mental disorders and the negative effects on the development of their children, the problems that emerged in providing the services and taking the actions that are necessary. The knowledge of international experiences could offer guidelines and models of effective intervention for the protection of children and the promotion of their mental health.

PARENTAL MENTAL DISORDER AND PARENTING

In a recent review Wittchen *et al.* [1] have shown that 38.2% of the European population (nearly 165 million people between 18 and 65 years – Italy including) is suffering from mental disorder or has been during the past 12 months. "Mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (*e.g.*, a painful symptom) or disability (*i.e.*, impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability or an important loss of freedom" [2].

Disorders that are associated more frequently with levels of disability and worsening of quality of life are anxiety disorders (14%), major depression (6.9%), somatoform disorders (6.3%) and dependence on alcohol and drugs (4%).

In Italy the first epidemiological study on the prevalence of mental disorders [3] confirmed the incidence rates in Europe and showed that the groups most at risk are women, the unemployed, housewives and people with disabilities. It is, moreover, important to note that two-thirds of these women are mothers and that the mother's mental disorder can cause negative consequences for children [4]. Even personality disorders affect a large number of people, but they are underdiagnosed because they often occur in less severe forms but are no less problematic. Samuels [5] has shown that 10.6% of individuals have a personality disorder.

We must consider that a majority of people with mental disorders are or will be parents and that it is necessary to give due consideration to the protection of their children. Children who receive proper care, protection, emotional warmth, stimulations, guidance and support, develop their autonomy and a proper sense of self; they learn to recognize their own emotional states, to establish satisfactory relations and to deal with life events.

The literature suggests that parental psychopathology is associated with parenting difficulties, including parents' lack of confidence in their ability to parent, high stress, too much or too little discipline, punishment and verbal hostility. These behaviors seem predictive of several problems noted in children, including psychiatric disorders, behavioral disorders and poor academic performance [6].

Brockington *et al.* [7] state that the parental concern present in parents suffering from anxiety disorders, obsessive disorders, psychoses and personality disorders is characterized by emotional instability, and may impair the affective attunement and the ability of the parent to respond adequately to the needs of children. Their involvement in persistent morbid activities, such as compulsive rituals, overeating and the drug abuse may compromise the quality of the attention given to children. The emotional unavailability observed in anxiety disorders, depression and psychosis can cause avoidance behavior toward the child, obsessive ideas of infanticide and extreme forms of withdrawal. Anger, irritability and explosiveness of some types of depression, acute psychosis, mania, poisonings by drugs or alcohol and some personality disorders, can be acted out on children, placing them at risk of abuse. These children, in turn, may respond with impulsive actions, sudden mood swings, or bizarre behavior. The parenting is also influenced indirectly by other factors often associated with mental disorders: the separation due to hospitalizations, deprivation and social stigma.

More specifically, the literature indicates that in the case of a depressive disorder, there is an increased risk of hostile and coercive parenting, corporal punishment neglectful behaviors and anaffective educational style [4]. The sadness, pessimism, irritability and lack of adequate stimulation by these parents can lead to emotional and behavioral difficulties in the development of their children (emotion regulation, cognitive problems and insecure attachment) [8].

Parents suffering from psychosis show an irregular and intermittent caregiving, insensitive to the needs of children, and lack of emotional involvement and responsiveness [7]. For example, it seems that mothers with schizophrenia, because of the quality of their psychotic symptoms, are very intrusive in the lives of their children. This results in a high conflict in the period of adolescence and helps to accentuate the symptoms [9]. In infants, the chaotic and unpredictable environment that mothers with schizophrenia tend to create, can structure patterns of behavior avoidance and withdrawal [10].

Anxious mothers show less warmth and more emotional disengagement and higher levels of criticism and control [11]. The children of anxious parents seem more likely to develop anxiety disorders. Moreover, there was a specific relationship between separation anxiety in children and panic disorder, social phobia or obsessive-compulsive disorder in the mother. In addition there would seem to be a similarity in symptomatology among children with anxiety disorders and their mothers, and this phenomenon does not seem to be present in relation to their fathers, highlighting, as has been identified in previous studies, that the associations between maternal psychopathology and that of children is stronger [12, 13].

Personality disorders have received less attention than the disorders coded on Axis I DSM-IV, with the exception of the borderline disorder. Borderline mothers are less sensitive to the needs of their children, are less able to structure satisfactory interactions with them

and they experience more stress in performing the parental role [14]. More generally all personality disorders are associated with problematic parenting behaviors even if in different ways and with different effects [13]. For example, it seems that the antisocial disorder can result in a very problematic parenting. However, a given which seems to be valid regardless of the type of disorder, is that there is more complex situation and an increased risk for the children when disorders are borne by the mother [15].

The risk that the children of a parent with mental illness will themselves have problems is not due to the diagnosis itself; the literature, instead, indicates that the following factors are decisive: the time of onset, severity and chronicity of psychopathology [16, 17]. We could say that the mental health of the child and its development depend on multiple and contextual factors. The literature has identified the following risk factors: the characteristics of the child (genetic predisposition and temperament, age, gender, self-esteem, intelligence, physical disabilities and learning disorders), mental functioning of the ill parent (violence, hostility, abusive behaviors, and role reversal), family functioning (marital conflict, dysfunctional communication, level of cohesion and adaptability/flexibility) [18].

It is clear that the development of problems by children of parents with mental illness is also linked to individual and family resilience [17]. Individual resilience comprises the ability to find positive meaning in challenging events and to positively adjust to adversity [19]. These abilities can be learnt and cultivated. Ungar [20, p. 225] defines resilience as “both the capacity of individuals to navigate their way to health-sustaining resources, including opportunities to experience feelings of well-being, and a condition of the individual’s family, community and culture to provide these health resources and experiences in culturally meaningful ways”. We believe that this construct of family resilience provides a useful perspective from which to work with mentally ill people and their family, including children.

ROLE OF SERVICES ON THE PROMOTION OF HEALTH IN CHILDREN WHEN PARENTS HAVE MENTAL ILLNESS

Mental ill health is not only a burden for the individual in question, but affects in many ways also the social environment. Due to mental health policy changes, much of the treatment of individuals with mental disorders has shifted to the community and the family and the children now play a determinant role in providing complex care. Furthermore, due to child welfare policy changes, the opportunity for each child to be raised in his family is now encouraged in cases where this is possible.

Mental health professionals and social workers play an essential role in identifying children at risk and in supporting their families. Nevertheless, many professionals do not consider this as part of their work, and/or don’t have adequate knowledge and skills in family-focused work [18]. Worldwide the care of mental illness has centered on the individual’s deficits. The health professionals have been educated within a biomedical

and individual-focused model, therefore they may neglect the need for support of their patients' family and children. Often providers of mental health services may neglect the role of the parents of their patients.

Many industrialized countries, including Italy, have promoted policies of mental health care that aim at the reduction of the stigma connected with mental illness, the promotion of recovery and the prevention of future illness. In Italy, the importance of identifying the "at risk population", as children of parents with mental illness, is still poorly acknowledged.

Reiss [21, p. 432] argued "we now know enough about co-occurring psychiatric disorders in parents and children to make substantial changes in how we provide care" encouraging the coordination of services for families, with the aim of preventing psychopathology in children of parents with mental illness. The literature indicates that interventions to prevent mental disorders and psychological symptoms in the offspring of parents with mental disorders may be effective [22], although the care of these families is a complex task. It requires appropriate organization and cooperation between services as well as an interdisciplinary knowledge. Gaps in service delivery for the children and their families were identified as including a lack of early identification and early intervention as well as lack of effective interagency collaboration.

Byrne *et al.* [23] found that service providers did acknowledge difficulties and problems specific to parents with a serious mental illness and their offspring. It was the lack of liaison between agencies and the lack of coordinated service provision that were barriers to effective service delivery. Despite an awareness of the overall problem, very few agencies had explicit policy guidelines for the management of their clients. In effect, information about whether adult clients had parental responsibilities or whether children were present in the home was not recorded on client files.

The reasons why effective collaboration between the child welfare and adult mental health services might be difficult were illustrated by the Icarus Project – 1998-2000 [24] which investigated the nature and level of support in the community for children and parents in families where there is parental mental illness in 11 European countries (Germany, Denmark, Greece, France, Ireland, Italy, Luxembourg, Norway, Sweden, UK, Scotland) and in Australia. It found that the "structural separation" between mental health and child welfare services was markedly different in England from other countries, in particular the Scandinavian and continental European countries.

The barriers to effective support and services for children and families living with parental mental illness are numerous, including: policy and management, interagency collaboration, clinician attitudes, skills and knowledge [25].

The Icarus Project has identified some necessary areas of action for the improvement of services that include: a) greater professional awareness of the needs of families with a parent with a mental illness and of children within the same; b) appropriate training; c) approach directed to the family by all services; d) organi-

zation that promotes cooperation between the different services.

The studies also identified insufficient time and heavy workloads as barriers, as well as adherence to a medical model of care that focuses on the individual and their pathology [18]. Owen [26] has shown future direction in five major areas: big picture context and leadership; policy and strategy; structures, systems, and processes; and resources.

A number of international initiatives (especially in Australia, the USA, and the UK) have taken place designed to improve collaborative working outcomes for families, including a national training program, the development of interagency protocols and the recruitment of specialized interface workers. Efficient Child and Family Program organized by STAKES in Finland is a good example of training that aims to strengthen the preventive approach and build up cooperation between services for adults and children. This is a nationwide development and training program for professionals who work with children and families at high risk, which aims to develop working processes for use by social and health care professionals, and different cooperating partners and organizations.

BEST PRACTICES ON THE PROTECTION OF CHILDREN OF PARENTS WITH MENTAL ILLNESS

Current projects and European initiatives (such as www.camhee.eu) or networks (such as "Crossing bridges") that deal with children whose parents have mental disorders indicate that there are very few countries in Europe with systematic preventive and promotion activities, and some recommendations are proposed here in response to this situation. The recommendations include: a mapping of existing practices related to parents and their families when a parent has mental health or substance abuse issues; community based mental health centers in place; multidisciplinary and inter-sectorial outreach teams extending their focus to prevention, promotion, and the well-being of all family members, among other actions.

An example of a good practice is the Children of Parents with a Mental Illness (COPMI) initiative undertaken by the Australian Infant Child Adolescent and Family Mental Health Association (AICAFMHA) for the Australian Government Department of Health and Ageing since 2002. The national COPMI initiative intends to promote better outcomes for children of parents with a mental illness and aims at: a) development and uptake of *good practice principles and guidelines* for services and people working with children of parents with a mental illness around Australia; b) availability to children of parents with a mental illness and their families, and to people working with them of appropriate *resource materials* in line with the good practice principles and guidelines; c) provision of high quality *information* to the Commonwealth Department of Health and Ageing to enhance future policy development regarding children of parents with a mental illness and their families. As part of this initiative, a website (www.copmi.net.au) was developed for a range of people working

with families and children affected by parental mental illness. It contains specific information pages for those working in general medical practice, schools, early childhood, youth and community services, the justice, child protection and welfare sectors, and the mental health and child and family health arena. It also contains downloadable materials for workers to use with family members. Booklets were developed with and for parents and families to provide information, encouragement and assistance to families, including information about where to seek help.

Additional useful indications are derived from World Psychiatric Association (WPA) guidance on the protection and promotion of mental health in children of persons with severe mental disorders [7]. This guidance written by a group of researchers from different nations (the UK, India, the USA, Egypt, Uganda and Colombia) details the needs of children, and the qualities of parenting that meet those needs. Furthermore, this guidance provides some recommendations that include: education of psychiatrists and related professions about the effect of parental mental illness on children; revision of psychiatric training to improve awareness of patients as caregivers, and to incorporate relevant assessment and intervention into their treatment and rehabilitation; standards of good practice for the management of child maltreatment when parents suffer from mental illness; the importance of multi-disciplinary teamwork when helping these families, supporting their children and ensuring child protection; the development of child and adolescent mental health service worldwide.

All mental health professionals must identify which patients are parents of dependent children, discuss with patients the impact of their illness on their children, assist parents in identifying their strengths and promote good parenting practices.

WPA guidance suggests that in the formulations of multidimensional systems of ICD-11 and DSM-V should be included encoding important contextual factors (for example, "Onset of mental disorder during childbirth", "Current care of a child under 18"). In the history segment of the clinical assessment questions about the lives of parents, marriages and the family should be added. Examples of such questions might be: "Are you looking after a child?", "How are you managing as a parent?", "Do you have any worries about the care you can provide for (name of child?)".

If there are risk conditions, a further assessment should be provided for in which some issues relating to: the quality of the parent-child relationship, domestic violence, school dropout, forms of maltreatment, overprotection or reversal of roles, emotional or behavioral disorders of children, sources of alternative care, social support available (extended family, school, agencies or departments of care, etc. can be explored). Furthermore, clinicians should provide relevant information to children about their parent's illness in an age-appropriate manner, and collaborate with other services in order to provide coordinated interventions for families with complex needs.

In this context, the social worker's task is to facilitate and contribute to assessment of needs. The collaboration of social workers with the professionals who treat parents with mental illness and their children should cover three areas: 1) evaluating the ability of parents to meet the needs of their children, including protecting them from harm; 2) assuring the needs of children are met across the age span; 3) ensuring continuity of contact between parent and child when it is necessary for children to be separated from their parent for any reason, and support for those providing alternative care for the children.

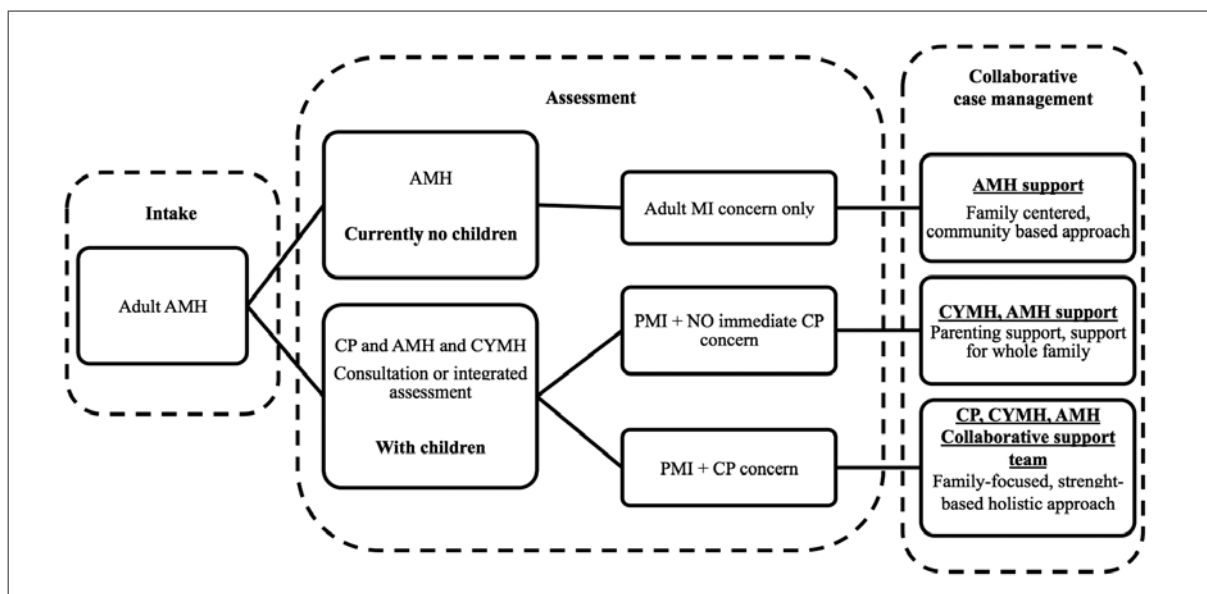


Figure 1 Organizational procedures and support by Public Health Services: intake, assessment, and case management. AMH: adult mental health; CP: child protection; CYMH: child and youth mental health; MI: mental illness; PMI: parental mental illness. Adapted from [27].

Now, it can be useful to illustrate a practical example that explains how to cope with the problem in the context of public health services in mental health.

In a study conducted by the child welfare policy team of the Ministry of Child and Family Development, British Columbia [27] guidelines for child welfare workers and mental health practitioners were developed to use when collaborating on cases involving children at risk of harm who are living with caregivers with mental health issues. The recommendations and findings were synthesized into a "case flow chart". This chart describes how in the context of public services in mental health the organizational procedures could work at the following three stages: intake, assessment, and case management (see *Figure 1*). It also states which sectors could or should be involved, and how each stage could connect to the next.

As regards to organizational procedures and support, in the *intake stage*: a) child protection register should include information about the mental health status of parents, drug abuse, alcohol abuse, parents with learning difficulties, etc; b) adults mental health services should record whether patients are parents, the ages of children, and who is caring for them. In the *assessment stage*, integrated assessment practices and introduction on new case review processes to identify clients who may require multiple service response (e.g. parenting support or support for whole family) are needed. Assessment must lead to careful planning of the intervention.

Finally, in the *case management stage*, collaboration between Adults Mental Health Service, Child Protection Service, and Child and Youth Mental Health Service is needed. The authors also suggest to introduce outposting of mental health workers in child protection teams and to provide mental health consultation to child protection staff.

The "case flow chart" and recommendations will be useful as a starting point for future cross-sectoral discussion and for policies that can be adopted in national programs.

These programs and guidelines demonstrate that interventions must be multidisciplinary and interdisciplinary in order to increase timely and transverse actions. The aim for all professionals must reside in the planning and implementation of integrated and effective interventions.

In conclusion, we refer to the United Nations Con-

vention on the Rights of the Child adopted by the UN General Assembly in 1989 and ratified by 192 nations, which stated that children need a family environment characterized by an atmosphere of serenity, full of love and understanding to develop their personality harmoniously. All nations should adopt appropriate strategies to protect children from all forms of physical or mental violence and to support their parents or other people who take care of them. Therefore, the actions of national and regional governments must be based on "the best interest of the child" with the knowledge that giving the highest priority to children's rights, their lives, their protection, their development, constitutes the general interest of our society.

CONCLUSION

Children whose parents have a mental illness are at significant risk of experiencing mental illness themselves. The importance of providing the necessary support and interventions for parents with mental illness and their children is now well recognized.

The literature on this subject has established the links between parental mental illness and child welfare and the need for mental health and child and family services to work together to meet the needs of families. However, a number of interrelated obstacles make it more difficult to achieve evidence-based collaborative practice. Large scale programs which are proactive and offer positive care and solutions to families in which there is a parent with mental illness are necessary. In Italy policy frameworks are needed to promote inter-sectorial cooperation and effective collaboration between child protection and mental health services. Good practice already developed in other countries could serve as guidance. Future initiatives should increase both the availability of information and public sensitivity to the needs of these forgotten children.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

Received on 3 June 2013.

Accepted on 21 October 2013.

REFERENCES

1. Wittchen H, Jacobi F, Rehm J, Gustavsson A, Svensson M, Jönsson B, Olesen J, Allgulander C, Alonso J, Faravelli C, Fratiglioni L, Jennum P, Lieb R, Maercker A, van Os J, Preisig M, Salvador-Carulla L, Simon R, Steinhausen H. The size and burden of mental disorders and other disorders of the brain in Europe 2010. *Eur Neuropsychopharmacol* 2011;21:655-79. DOI: 10.1016/j.euroneuro.2011.07.018
2. *Diagnostic and Statistical Manual of Mental Disorders. 4th ed. Text Revision.* Washington, DC: American Psychiatric Association; 2000.
3. De Girolamo G, Polidori G, Morosini P, Scarpino V, Reda V, Serra G, Mazzi F, Alonso J, Vilagut G, Visonà G, Fal-sirollo F, Rossi A, Warner R. Prevalence of common mental disorders in Italy. Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD). *Soc Psychiatry Psychiatr Epidemiol* 2006;41:853-61. DOI: 10.1007/s00127-006-0097-4
4. Kohl P, Jonson-Reid M, Drake B. Maternal mental illness and the safety and stability of maltreated children. *Child Abuse Negl* 2011;35:309-18. DOI: 10.1016/j.chiabu.2011.01.006

5. Samuels J. Personality disorders. Epidemiology and public health issues. *Int Rev Psychiatry* 2011;23(3):223-33. DOI: 10.3109/09540261.2011.588200
6. Vostanis P, Graves A, Meltzer H, Goodman R, Jenkins R, Traolach A, Brugha B. Relationship between parental psychopathology, parenting strategies and child mental health. Findings from the GB national study. *Soc Psychiatry Psychiatr Epidemiol* 2006;41:509-14. DOI: 10.1007/s00127-006-0061-3
7. Brockington I, Chandra P, Dubowitz H, Jones D, Mousa S, Nakku J, Quadros Ferre I. WPA guidance on the protection and promotion of mental health in children of persons with severe mental disorders. *World Psychiatry*, 2011;10(2):93-102.
8. Rothen S, Vandeleur C, Lustenberger Y, Jeanprêtre N, Ayer E, Fornerod D, Gamma F, Teichmann T, Halfon O, Ferrero F, Preisig M. Personality traits in children of parents with unipolar and bipolar mood disorders. *J Affect Disord* 2009;113:133-41. DOI: 10.1016/j.jad.2008.05.013
9. Seeman M. The mother with schizophrenia. In: Gopfert M, Webster J, Seeman M. (Eds). *Parental psychiatric disorder. Distressed parents and their families*. Cambridge: University Press; 1996.
10. Persson-Blennow I, Näslund B, McNeil T, Kaij L, Malmquist-Larsson A. Offspring of women with non-organic psychoses: Mother-infant interaction at three days of age. *Acta Psychiatr Scand* 1984;70:149-59. DOI: 10.1111/j.1600-0447.1984.tb01192.x
11. Woodruff-Borden J, Morrow C, Bourdland S, Cambron S. The behavior of anxious parents: Examining mechanisms of transmission of anxiety from parent to child. *J Clin Child Adolesc Psychol* 2002;31(3):364-74. DOI: 10.1207/S15374424JCCP3103_08
12. Chapman L, Petrie J, Vines L, Durrett E. The co-occurrence of anxiety disorders in African American parents and their children. *J Anxiety Disord* 2012;26:65-70. DOI: 10.1016/j.janxdis.2011.08.014
13. Johnson J, Cohen P, Kasen S, Brook J. A multiwave multi-informant study of the specificity of the association between parental and offspring psychiatric disorders. *Compr Psychiatry* 2006; 47:169-77. DOI: 10.1016/j.comppsy.2005.05.005
14. Kiel E, Gratz K, Moore S, Lutzman R, Tull M. The impact of borderline personality pathology on mothers' responses to infant distress. *J Fam Psychol* 2011;25(6):907-18. DOI: 10.1037/a0025474
15. Rasbash J, Jenkins J, O'Connor T, Tacket J, Reiss D. A social relations model of observed family negativity and positivity using a genetically informative sample. *J Pers Soc Psychol* 2011;100:474-91. DOI: 10.1037/a0020931
16. Kyoung Kahng S, Oyserman D, Bybee D, Mowbray C. Mothers with serious mental illness. When symptoms decline does parenting improve? *J Fam Psychol* 2008;22(1):162-66. DOI: 10.1037/0893-3200.22.1.162.
17. Verrocchio MC. Parental psychopathology and child maltreatment. *Maltreatment and child abuse* 2012;14(2):61-86.
18. Foster K, O'Brien L, Korhonen T. Developing resilient children and families when parents have mental illness. A family-focused approach. *Int J Ment Health Nurs* 2012;21:3-11. DOI: 10.1111/j.1447-0349.2011.00754.x
19. Jackson D, Firtko A, Edenborough M. Personal resilience as a strategy for surviving and thriving in the face of workplace adversity. A literature review. *J Adv Nurs* 2007;60(1):1-9. DOI: 10.1111/j.1365-2648.2007.04412.x
20. Ungar M. Resilience across cultures. *Br J Soc Work* 2008;38(2):218-35. DOI: 10.1093/bjsw/bcl343
21. Reiss D. Parents and children. Linked by psychopathology but not by clinical care. *J Am Acad Child Adolesc Psychiatry* 2011;50:431-34. DOI: 10.1016/j.jaac.2011.02.005
22. Siegenthaler E, Munder T, Egger M. Effect of preventive interventions in mentally ill parents on the mental health of the offspring. Systematic review and meta-analysis. *J Am Acad Child Adolesc Psychiatry* 2012;51(1):8-17. DOI: 10.1016/j.jaac.2011.10.018
23. Byrne L, Hearle J, Plant K, Barkla J, Jenner L, McGrath J. Working with parents with a serious mental illness. What do service providers think? *Australian Social Work* 2000;53(4):21-6. DOI: 10.1080/03124070008415217
24. Sheehan R, Paed-Erbrederis C, McLoughlin A. *The ICARUS Project: Implications for Children with Adult Relatives Under Stress*. Clayton, Victoria: Department of Social Work, Monash University; 2000.
25. Maybery D, Reupert A. Parental mental illness. A review of barriers and issues for working with families and children. *J Psychiatr Ment Health Nurs* 2009;16:784-91. DOI: 10.1111/j.1365-2850.2009.01456.x
26. Owen S. Organizational systems and services for children of parents with mental illness and their families. Processes of change and sustainability. *Adm Policy Ment Health* 2009;37(5):399-407. DOI: 10.1007/s10488-009-0256-5
27. Kido N., Miller G. Child welfare involvement when there is parental mental illness. In: G. Charles, K. Anderson, R. Lees, K. Hiemstra (Eds.). *Child and Youth Mental Health Matters. Third International World Congress on Children of Parents with Mental Illness. Proceedings*. Vancouver: May 6-8, 2012. p. 23.