

SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS (SJ SIEGEL, SECTION EDITOR)

Schizophrenia: Impact on Family Dynamics

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Abstract In many societies, family members are now the primary caregivers of mental health patients, taking on responsibilities traditionally under the purview of hospitals and medical professionals. The impact of this shift on the family is high, having both an emotional and economic toll. The aim of this paper is to review the main changes that occur in family dynamics for patients with schizophrenia. The article addresses three central themes: (i) changes in the family at the onset of the disorder, (ii) consequences for family members because of their caregiver role, and (iii) family interventions aimed at improving the complex dynamics within the family.

After analyzing and discussing these themes, it is observed that despite advances in the field, the viability of taking care of a patient with schizophrenia by the family remains a challenge. Improving care will require commitments from the family, the mental health service system, and local and national governments for greater investments to improve the quality of life of society in general and individuals with schizophrenia in particular.

Keywords Schizophrenia · Family · Impact · Dynamic · Care

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Introduction

The Effect of Schizophrenia on Families at the Beginning of the Disorder

Schizophrenia is a mental health disorder that is associated with high illness costs in a number of different respects. Although some will fully recover, a considerable portion of the patients suffers from long-term disability, which often includes irregular episodes [1]. Families play key roles in the early stages of the disease when help is first being sought. In addition, families provide long-term care and continued support for people experiencing schizophrenia with most of patients continuing or returning to live with relatives [2]. The caregiver role is often difficult and exerts a significant impact on the carer's own mental health [3]. Over a third of family caregivers reported a high level of perceived burden and difficulties coping with their child's or spouse's illness [4–9].

Soon after diagnosis, carers experience a range of different negative emotions as they attempt to deal with the diagnosis of a family member [10, 11]. However, some family members fare better than others do in terms of their wellbeing in the carer role. This response depends on many different factors.

One of the most important aspects in the caregiver response is the cognitive appraisal processes related to the illness. That is, how they interpret and make sense of the illness and the extent to which they feel they are capable of coping with the problems [12]. A negative illness perception on the part of relatives has been linked to heightened patient distress, which also predicts distress many months later, indicating the value of assessing and understanding the caregiver's adaptation to the disease [13–16]. Another aspect that increases distress in relatives is the age of the patient at diagnosis and of the onset of service use, especially if the family assessment of the costs of the illness is low [17, 18].

The factors that affect the relatives' responses to the illness are not only associated with family processes but are also related to the help-seeking experience. Relatives can feel excluded from the doctor-patient consultation process and experience negative attitudes directed toward them by health professionals. Mental health professionals have been criticized for under-appreciating the importance of conveying a schizophrenia diagnosis clearly and without bias, in particular of being judgmental instead of supportive and empathetic to the patient and the relatives [19•]. This is supported by research showing that patients preferred knowing that they had schizophrenia rather than not knowing what was wrong with them and suffering from uncertainty [20, 21]. Clear communication of the relevant information about their disease helps the patients make informed decisions about their own healthcare and adjust to their illness [20]. In addition, positive early interactions and clear communication with healthcare providers may also reduce the level of distress experienced by family members [22•]. It is recommended that contact with caregivers should be planned and included early in diagnostic discussions to prevent the expression of negative attitudes against the patients and to improve the outcomes of treatment [19•].

The help-seeking experience can also produce contradictory emotions, such as fear, guilt, and relief, in family members, which may in turn affect their own relationships and self-confidence. This can be both stressful and traumatic for the family [22•], particularly shortly after diagnosis, when interactions with healthcare providers are often tinged with despair. Whereas some individuals describe their interactions with mental health professionals as positive and the providers as compassionate toward the patient and family [23], some family members feel dismissed and provided with insufficient information. Thus, during this early period following initial diagnosis, the relationships between individual family members and healthcare providers are of central importance, potentially setting the stage for the overall experience and perception of the caregiver burden.

Additional factors that affect both the caregiver's and patient's wellbeing are the interactions within and between families. Notably, different family environments affect the coping strategies used by families during acute schizophrenic episodes. These can predict the recurrence of episodes in the future and the overall course and outcome of the disorder. Familial attitudes toward the patient and their effect on the patient's risk of relapse have been studied under the expressed emotion (EE) framework, with high levels of EE prognostic of worsening symptoms and future psychiatric episodes [4, 24]. High levels of EE within a family may in part be a reflection of the overall caregiver's burden and the manifestations of symptoms in the patients [25]. However, high-EE families of schizophrenia patients show a number of maladaptive behaviors. These include the frequent internalization of criticisms and/or inadequate expression of emotions and thoughts in response to criticisms from both patient and caregiver, which can increase the risk for relapse. In addition, EE correlates with the level of family cohesion and flexibility and with family burden, which appears to determine whether the household can change from a high-EE to low-EE family [21, 25].

From this analysis, we conclude that the impact of schizophrenia on the family is complex. Factors contributing to this complexity are the lack of provision of sufficient information about the diagnosis by healthcare providers, the family's reactions to the diagnosis and the patient, poor bidirectional communication between the family and patient, and ineffective coping strategies within the family environment that can affect the level of symptoms and increase the occurrence of relapses.



Consequences for Family Members Because of Their Role of Care

Role theory states that having a patient with schizophrenia disrupts normal family dynamics, with every family member affected in some manner and many caregivers' roles even being annulled [26-30]. Caring effects refers to the impact of providing care on the family in terms of individual, social, and economic changes [31]. Mental and physical health are significantly affected [32], with caregivers of patients of schizophrenia reporting worse health status than noncaregivers or caregivers of patients with other disorders, such as Alzheimer's disease or epilepsy [33•]. Families of psychiatric patients are affected by their role as caregivers on many levels, including lowering their quality of life and their ability to provide care [34–41]. Thus, the quality of life is defined by the level of caregiver's health and wellbeing relative to different dimensions of their lives [42]. One of the biggest factors influencing the caregiver's psychosocial burden is the course of the disorder. The positive symptoms of the schizophrenia patient have a clear impact; however, negative symptoms, such as impaired working memory and executive functioning, can also decrease caregivers' quality of life [30, 43–46].

Low caregiver quality of life often manifests as physical illness, the loss of vitality, and depressive and anxiety disorders [46–50]. These symptoms can be triggered by the unrelenting concerns of a caregiver, including being adequately competent to advise and assist the patient to adjust [30], managing patient's behavior and work and social interactions [51], and concerns about the patient's future [30, 40]. These factors affect the level of psychological distress experienced by the caregiver and can affect the overall caregiver experience [52•, 53–56].

Another significant deterioration experienced by the family (reported by up to one-third of family members) is the disconnection with other family members due to the existence of a mental disorder within the family [57–59]. This is also related to the stigma experienced by the family members [52•, 60–62] and to the low levels of social support that they usually receive [4, 43, 63]. Financial issues can also have negative consequences on family dynamics. These arise in part due to the limited capacity of the patient to work. In addition, the time burden on the caregiver required for patient care frequently prevents the caregiver from taking on full-time work as well [47].

Although most of the consequences of caring for a patient with schizophrenia tend to be negative, in recent years, some carers have begun to identify more positive and beneficial aspects of this role (e.g., feelings of been more sensitive, useful, and needed and a higher sense of strength) [33•, 64, 65]. Other changes deriving from the establishment of the diagnosis can have positive effects on the members of the family. These can include improvement of the family dynamics, such

as having more social support, having a job outside the home (for both patient and caregivers), and being treated through family interventions.

Assessing the impact of caregiving on families of schizophrenia patients is an important consideration not only for the wellbeing of the family but also for the health of the patients. Healthcare professionals need to recognize this issue and integrate such assessments into their treatment decisions, working more directly with the family to improve outcomes for the patient. Family experiences should be comprehensively assessed either on the individual level via interviews or on the group level (e.g., by using a focus group of caregivers). Standardized questionnaires, which have been validated with varying evidence [4, 46, 66, 67], may be of use in both clinical practice and research, leading to easier, objective, and reproducible assessments. However, the critical question for clinicians and researchers is which tool in their practice is the most relevant for this context. Several factors should be considered in making this choice. First, the questionnaire design should be a key factor. Because of discrepancies between families and experts' perspectives [68], a questionnaire based on the subjects' perceptions should be preferred. However, few of the existing questionnaires are based on the caregivers' and families' views. Second, the performance of the questionnaire should be validated in terms of its effectiveness [69], taking into consideration psychometric properties such as internal consistency, construct validity, and sensitivity to change. However, this information is not available for several commonly used instruments, and there is a particular lack of information regarding the sensitivity to change. This is a major problem for clinicians, especially when evaluating interventions such as psychoeducational or therapeutic programs. Third, the language in which questionnaires were developed is a factor. The direct translation of a questionnaire may be inadequate due to some concepts, such as quality of life and burden of care, being affected by cultural background. Such translations must be subjected to strict transcultural validation protocols, making it preferential in most cases to use questionnaires within their country of origin [12].

Finally, another existing assessment, the dyadic approach, could be of the utmost interest for clinicians but has been rarely explored in research. This approach globally incorporates the interactions between the patient and family to design interventions that address the needs of both groups. This approach has been used effectively in dementia patients to address both their mental and physical health [70, 71]. However, this approach has not yet been used to test interventions on the schizophrenia patient-caregiver dyad, and the impact of family interventions on the burden and quality of life of caregivers is currently unknown.



Family Interventions

Family interventions (FI) for schizophrenia consist of a combination of psychotherapeutic strategies aimed at developing a working relationship between the family and the medical team to support patient recovery [72]. FIs are recommended as evidence-based interventions and treatment of choice by some of the most important worldwide mental health institutions, including the American Psychiatric Association (APA) [73] and the National Institute for Health and Clinical Excellence (NICE) [74, 75].

Well-established research findings show that family interventions for people with schizophrenia spectrum disorders can prevent relapse and hospitalizations, increase medication adherence, maintain satisfactory family interactions, and have a positive impact on both patients' and relatives' quality of life [76–78]. On top of these positive achievements, recent clinical trials have also shown that FIs can improve participants' cognitive dysfunction [79] and relatives' guilt induction, dominance, and empathy [80]. In terms of maintenance of these results, longitudinal studies such as the one conducted by Ran and colleagues confirm that the effects are enduring [81].

No gold standard approach has been established. FIs usually include psychoeducation, stress management, emotional processing, assertive communication, cognitive reappraisal, and structured problem solving [31]. FIs are always conducted by mental health providers; however, they can differ in their theoretical basis, modality, and length. Advanced research in this field aims to investigate the mechanisms of change for these interventions. A recent systematic review conducted by Grácio, Gonçalves-Pereira, and Leff (2015) aimed to tease out the therapeutic process involved in FIs [82•]. These authors carefully analyzed the results of 22 relevant studies in order to discover the key elements of FIs, concluding that, following efficacy parameters, there are three key elements for a successful process: therapeutic alliance, education, and training in coping skills. When considering the participants' and relatives' points of view, the key elements are reduced to education, human connection (that can be also understood as therapeutic alliance), and reframing.

Format delivery and duration have been also targeted as potential mediators of change. According to Sin and colleagues, there are four main categories of format delivery: individual (therapist seeing a relative of the whole family); groups (relatives attend sessions together); mixed (a combination of the two previous options); or other (any format that differs from the previous ones). Overall, duration of the intervention ranges between 4 and 36 weeks, inclusive of 6 to 12 weekly or biweekly sessions [83]. Unfortunately, findings supporting an ideal and successful design for the type of delivery and duration of the program are inconclusive, and further meta-analyses are needed.

Finally, it is important to highlight that FIs are well accepted by both participants and relatives and that they express high levels of satisfaction when ending the programs [83, 84, 85•]. By using qualitative methods, it has been shown that participants and relatives commonly consider FIs a space "to listen to and share experiences" (a safe space) [83], to improve communication between family members [86], to better understand the illness and its impact on the individual, and to learn problem solving skills [87].

However, two big challenges remain that are related to FIs: the professional's training and the implementation of the intervention. Overcoming these two related challenges will have a tremendous impact on the access of patients and relatives to FIs. Staff training is required in order to disseminate the approach in conjunction with mental health services. However, some barriers that prevent clinicians and researchers from accessing training and implementing FIs exist. Notably, access to clinical supervision that provides specific training on adequate skills and the confidence to deal with family problems are some of the most common training needs reported by staff [76]. Furthermore, protected time and support from the management system and organization are prerequisites for clinicians to go in depth into FI training and to incorporate it into their daily work routine. In this regard, Eassom and colleagues claim that successful implementation of FIs critically depends on a change in organizational culture regarding the role of the family in the treatment process (e.g., prioritizing working with families) [76]. Discrete evidence-based FIs can be a solution because they do not require therapists trained to an expert level. Instead, evidence-based FIs can be delivered by frontline mental health professionals, being less dependent upon a redesign of services to undertake the work [88].

Online interventions may offer another potential solution to those looking for support and seeking information about schizophrenia. Technological advances and digital media are creating a revolution in healthcare that is also affecting the implementation and dissemination of FIs. Interestingly, Rotondi and colleagues designed a web-based psychoeducational intervention for people with schizophrenia and their supporters (the "schizophrenia online access to resources" website or SOAR) [89, 90•]. People who participated in the pilot study and were given access to the website showed a greater reduction of symptoms as well as a better understanding of their illness. Furthermore, their relatives/ supporters also showed a better understanding of the prognosis, in comparison to their counterparts receiving only routine care. Furthermore, the authors found a positive relationship between symptom reduction and the frequency of access to the online resources [89]. These authors are currently conducting a randomized controlled trial that aims to compare the SOAR to in-person, multi-family, psychoeducational treatment, and to treatment as usual (ClinicalTrials.gov Identifier: NCT02032680). Results of this trial are estimated to be



available in 2018. Focusing on first-episode psychosis, Sin and colleagues has also designed an online multicomponent psychoeducational intervention for siblings of individuals with a first-episode psychosis [91] (http://siblingpsychosis.org/, ISRCTN01416694). This innovative intervention combines two major components (psychoeducation and peer support) and has been built with the input of an expert advisory group that comprises siblings, parents, service users, mental health clinicians, youth organization personnel, and e-learning IT experts. Results of this rigorous clinical trial are expected to be available at the end of 2016.

Conclusion

Several decades have passed since the deinstitutionalization of mental health patients. With the noblest intentions, this process also highlighted the lack of resources that families and community supporters had to help people experiencing schizophrenia. Major steps have been made in the provision of mental healthcare since this decision was made back in the 1950s. However, the establishment of a diagnosis of schizophrenia spectrum disorder can still have a negative effect on the individual and on his/her family and friends, which implies that the diagnosis requires the readjustment of the whole family to the new situation.

Specific changes in the dynamics, areas of conflict, needs, maladaptive behaviors (e.g., EE), and protective factors in the patient's family must be assessed by clinicians as soon as the diagnosis is communicated. In addition, FIs should be offered regularly to families since they have been shown to be effective in improving symptomatology, illness awareness, and satisfaction levels in both patients and relatives. If this process is done properly, a successful recovery process and an improvement in the quality of life is much more likely to happen.

Politicians, clinicians, researchers, and community workers are fully aware that families are in need of greater support and resources to be able to cope with the consequences of schizophrenia. Staff training and implementation of FIs can have a tremendous impact on the lives of patients and family. These actions, therefore, should be implemented and offered to service users and their relatives in every single outpatient mental health service around the world.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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References

Papers of particular interest, published recently, have been highlighted as:

- · Of importance
- Harrison G, Hopper K, Craig T, Laska E, Siegel C, Wanderling J, et al. Recovery from psychotic illness: a 15- and 25-year international follow-up study. Br J Psychiatry. 2001;178:506–17.
- Addington J, Van Mastrigt S, Hutchinson J, Addington D. Pathways to care: help seeking behaviour in first episode psychosis. Acta Psychiatr Scand. 2002;106(5):358–64.
- Kuipers E, Onwumere J, Bebbington P. Cognitive model of caregiving in psychosis. Br J Psychiatry. 2010;196(4):259–65.
- Awad AG, Voruganti LN. The burden of schizophrenia on caregivers: a review. PharmacoEconomics. 2008;26(2):149–62.
- Barrowclough C, Tarrier N, Johnston M. Distress, expressed emotion, and attributions in relatives of schizophrenia patients. Schizophr Bull. 1996;22(4):691–702.
- Oldridge ML, Hughes IC. Psychological well-being in families with a member suffering from schizophrenia. An investigation into long-standing problems. Br J Psychiatry. 1992;161:249–51.
- Schene AH, van Wijngaarden B, Koeter MW. Family caregiving in schizophrenia: domains and distress. Schizophr Bull. 1998;24(4): 609–18.
- Winefield HR, Harvey EJ. Determinants of psychological distress in relatives of people with chronic schizophrenia. Schizophr Bull. 1993;19(3):619–25.
- Dyck DG, Short R, Vitaliano PP. Predictors of burden and infectious illness in schizophrenia caregivers. Psychosom Med. 1999;61(4):411–9.
- Gleeson JJH, Stavely H, Burnett PL. Family intervention in early psychosis. In: McGorry PD, Jackson J, editors. The recognition and management of early psychosis. Cambridge: Cambridge University Press; 1999. p. 376–405.
- McCann TV, Lubman DI, Clark E. First-time primary caregivers' experience of caring for young adults with first-episode psychosis. Schizophr Bull. 2011;37(2):381–8.
- Addington J, McCleery A, Addington D. Three-year outcome of family work in an early psychosis program. Schizophr Res. 2005;79(1):107–16.
- Barrowclough C, Gooding P, Hartley S, Lee G, Lobban F. Factors associated with distress in relatives of a family member experiencing recent-onset psychosis. J Nerv Ment Dis. 2014;202(1):40–6.
- Fortune DG, Smith JV, Garvey K. Perceptions of psychosis, coping, appraisals, and psychological distress in the relatives of patients with schizophrenia: an exploration using self-regulation theory. Br J Clin Psychol. 2005;44(Pt 3):319–31.
- Kuipers E, Watson P, Onwumere J, Bebbington P, Dunn G, Weinman J, et al. Discrepant illness perceptions, affect and expressed emotion in people with psychosis and their carers. Soc Psychiatry Psychiatr Epidemiol. 2007;42(4):277–83.
- Onwumere J, Kuipers E, Bebbington P, Dunn G, Fowler D, Freeman D, et al. Caregiving and illness beliefs in the course of psychotic illness. Can J Psychiatry. 2008;53(7):460–8.



- Barrowclough C, Parle M. Appraisal, psychological adjustment and expressed emotion in relatives of patients suffering from schizophrenia. Br J Psychiatry. 1997;171:26–30.
- Scazufca M, Kuipers E. Links between expressed emotion and burden of care in relatives of patients with schizophrenia. Br J Psychiatry. 1996;168(5):580–7.
- 19. Outram S, Harris G, Kelly B, Bylund CL, Cohen M, Landa Y, et al. 'We didn't have a clue': family caregivers' experiences of the communication of a diagnosis of schizophrenia. Int J Soc Psychiatry. 2015;61(1):10–6. This study shows the family caregivers' experiences of the communication of a schizophrenia diagnosis and related information.
- Clafferty RA, McCabe E, Brown KW. Telling patients with schizophrenia their diagnosis: patients should be informed about their illness. BMJ. 2000;321(7257):384.
- Schneider B, Scissons H, Arney L, Benson G, Derry J, Lucas K, et al. Communication between people with schizophrenia and their medical professionals: a participatory research project. Qual Health Res. 2004;14(4):562–77.
- 22. Cairns VA, Reid GS, Murray C. Family members' experience of seeking help for first-episode psychosis on behalf of a loved one: a meta-synthesis of qualitative research. Early Interv Psychiatry. 2015;9(3):185–99. Qualitative study that explores the search for help by family member of patients with schizophrenia experiencing first-episode psychosis.
- McCann TV, Lubman DI, Clark E. Primary caregivers' satisfaction with clinicians' response to them as informal carers of young people with first-episode psychosis: a qualitative study. J Clin Nurs. 2012;21(1–2):224–31.
- Wearden AJ, Tarrier N, Barrowclough C, Zastowny TR, Rahill AA.
 A review of expressed emotion research in health care. Clin Psychol Rev. 2000;20(5):633–66.
- Hooley JM, Gotlib IH. A diathesis-stress conceptualization of expressed emotion and clinical outcome. Appl Prev Psychol. 2000;9(3):135–51.
- Grandón P, Jenaro C, Lemos S. Primary caregivers of schizophrenia outpatients: burden and predictor variables. Psychiatry Res. 2008;158(3):335–43.
- Rafiyah I, Sutharangsee W. Review: burden on family caregivers caring for patients with schizophrenia and its related factors. Nurse Media J Nurs. 2011;1(1):29–41.
- Huang XY, Hung BJ, Sun FK, Lin JD, Chen CC. The experiences of carers in Taiwanese culture who have long-term schizophrenia in their families: a phenomenological study. J Psychiatr Ment Health Nurs. 2009;16(10):874–83.
- Riley G, Gregory N, Bellinger J, Davies N, Mabbott G, Sabourin R. Carer's education groups for relatives with a first episode of psychosis: an evaluation of an eight-week education group. Early Interv Psychiatry. 2011;5(1):57–63.
- Knock J, Kline E, Schiffman J, Maynard A, Reeves G. Burdens and difficulties experienced by caregivers of children and adolescents with schizophrenia-spectrum disorders: a qualitative study. Early Interv Psychiatry. 2011;5(4):349–54.
- Caqueo-Urízar A, Rus-Calafell M, Urzúa A, Escudero J, Gutierrez-Maldonado J. The role of family therapy in the management of schizophrenia: challenges and solutions. Neuropsychiatr Dis Treat. 2015;11:145–51.
- Hou S, Ke C, Su Y, Lung F, Huang C. Exploring the burden of the primary family caregivers of schizophrenia patients in Taiwan. Psychiatry Clin Neurosci. 2008;62(5):508–14.
- 33.• Gupta S, Isherwood G, Jones K, Van Impe K. Assessing health status in informal schizophrenia caregivers compared with health status in non-caregivers and caregivers of other conditions. BMC Psychiatry. 2015;21(15):162. An important work that examined health-related quality of life (HRQoL) and comorbidities experienced by caregivers of patients with schizophrenia.

- Quah S. Caring for persons with schizophrenia at home: examining the link between family caregivers' role distress and quality of life. Sociol Health Illn. 2014;36:596–612.
- Castilla Garcia A, López Alvarez M, Chavarría Perez V, Sanjuan M, Altemir PC, Martinez M, et al. La carga familiar en una muestra de pacientes esquizofrénicos en tratamiento ambulatorio. Rev Asoc Esp Neur. 1998;18:621–42.
- Thara R, Kamath S, Kumar S. Women with schizophrenia and broken marriages-doubly disadvantaged? Part II: family perspective. Int J Soc Psychiatry. 2003;49:233

 –40.
- Stam H, Cuijpers P. Brief report: effects of family interventions on burden of relatives of psychiatric patients in the Netherland: a pilot study. Community Ment Health J. 2001;37:179–87.
- Lauber C, Eichenberger A, Luginbühl P, Keller C, Rössler W. Determinants of burden in caregivers of patients with exacerbating schizophrenia. Eur Psychiatry. 2003;18:285–9.
- Gutiérrez-Maldonado J, Caqueo-Urízar A, Kavanagh D. Burden of care and general health in families of patients with schizophrenia. Soc Psychiatry Psychiatr Epidemiol. 2005;40:899–904.
- Caqueo-Urízar A, Gutiérrez-Maldonado J. Burden in families of patients with schizophrenia. Qual Life Res. 2006;15:719

 –24.
- Fleming DA, Sheppard VB, Mangan PA, Taylor KL, Tallarico M, Adams I, et al. Caregiving at the end of life: perceptions of health care quality and quality of life among patients and caregivers. J Pain Symptom Manag. 2006;31:407–20.
- Urzúa A, Caqueo-Urízar A. Calidad de vida: una revisión teórica del concepto. Ter Piscol. 2012;30(1):61–71.
- Goncalves-Pereira M, Xavier M, van Wijngaarden B, Papoila AL, Schene AH, Caldas-de-Almeida JM. Impact of psychosis on Portuguese caregivers: a cross-cultural exploration of burden, distress, positive aspects and clinical-functional correlates. Soc Psychiatry Psychiatr Epidemiol. 2013;48(2):325–35.
- Hanzawa S, Bae JK, Bae YJ, Chae MH, Tanaka H, Nakane H, et al. Psychological impact on caregivers traumatized by the violent behavior of a family member with schizophrenia. Asian J Psychiatr. 2013;6(1):46–51.
- Hjarthag F, Helldin L, Karilampi U, Norlander T. Illness related components for the family burden of relatives to patients with psychotic illness. Soc Psychiatry Psychiatr Epidemiol. 2010;45(2): 275–83
- Caqueo-Urízar A, Gutiérrez-Maldonado J, Miranda-Castillo C. Quality of life in caregivers of patients with schizophrenia: a literature review. Health Oual Life Outcomes. 2009;7:84.
- Boyer L, Caqueo-Urízar A, Richieri R, Lancon C, Gutiérrez-Maldonado J, Auquier P. Quality of life among caregivers of patients with schizophrenia: a cross-cultural comparison of Chilean and French families. BMC Fam Pract. 2012;13:42.
- 48. Gutiérrez-Maldonado J, Caqueo-Urízar A, Ferrer-García M, Fernández-Davila P. Influencia de la percepción de apoyo y del funcionamiento social en la calidad de vida de pacientes con esquizofrenia y sus cuidadores. Psicothema. 2012;24(2):255–62.
- Moller-Leimkuhler AM, Wiesheu A. Caregiver burden in chronic mental illness: the role of patient and caregiver characteristics. Eur Arch Psychiatry Clin Neurosci. 2012;262(2):157–66.
- Osman CB, Alipah B, Tutiiryani MD, Ainsah O. Depressive disorders and family functioning among the caregivers of patients with schizophrenia. East Asian Arch Psychiatry. 2010;20(3):101–8.
- Jagannathan A, Hamza A, Thirthalli J, Nagendra H, Nagarathna R, Gangadhar BN. Development and feasibility of need-based yoga program for family caregivers of in-patients with schizophrenia in India. Int J Yoga. 2012;5(1):42–7.
- 52.• Chen X, Mao Y, Kong L, Li G, Xin M, Lou F, et al. Resilience moderates the association between stigma and psychological distress among family caregivers of patients with schizophrenia. Personal Individ Differ. 2016;96:78–82. An important study that



shows the contribution of the resilience and stigma to caregivers' psychological distress.

- Mitsonis C, Voussoura E, Dimopoulos N, Psarra V, Kararizou E, Latzouraki E, et al. Factors associated with caregiver psychological distress in chronic schizophrenia. Soc Psychiatry Psychiatr Epidemiol. 2012;47:331–7.
- Rodrigo C, Fernando T, Rajapakse S, De Silva V, Hanwella R. Caregiver strain and symptoms of depression among principal caregivers of patients with schizophrenia and bipolar affective disorder in Sri Lanka. Int J Ment Heal Syst. 2013;7:2–7.
- Shah STH, Sultan SM, Faisal M, Irfan M. Psychological distress among caregivers of patients with schizophrenia. J Ayub Med Coll Abbottabad. 2013;25:27–30.
- Chang S, Zhang Y, Jeyagurunathan A, Lau YW, Sagayadevan V, Chong SA, et al. Providing care to relatives with mental illness: reactions and distress among primary informal caregivers. BMC Psychiatry. 2016;16:80.
- Ostman M, Kjellin L. Stigma by association: psychological factors in relatives of people with mental illness. Br J Psychiatry. 2002;181: 494–8
- Shibre T, Negash A, Kullgren G, Kebede D, Alem A, Fekadu A, et al. Perception of stigma among family members of individuals with schizophrenia and major affective disorders in rural Ethiopia. Soc Psychiatry Psychiatr Epidemiol. 2001;36(6):299–303.
- Struening EL, Perlick DA, Link BG, Hellman F, Herman D, Sirey JA. Stigma as a barrier to recovery: the extent to which caregivers believe most people devalue consumers and their families. Psychiatr Serv. 2001;52(12):1633–8.
- Hinshaw SP, Cicchetti D. Stigma and mental disorder: conceptions of illness, public attitudes, personal disclosure, and social policy. Dev Psychopathol. 2000;12:555–98.
- Miklowitz DJ. The role of family systems in severe and recurrent psychiatric disorders: a developmental psychopathology view. Dev Psychopathol. 2004;6(3):667–88.
- Kung W. The illness, stigma, culture or immigration? Burdens on Chinese – American caregivers of patients with schizophrenia. Fam Soc. 2003;84(4):547–57.
- Barrio C, Yamada AM. Culturally based intervention development: the case of Latino families dealing with schizophrenia. Res Soc Work Pract. 2010;20(5):483–92.
- Kulhara P, Kate N, Grover S, Nehra R. Positive aspects of caregiving in schizophrenia: a review. World J Psychiatry. 2012;2(3):43–8.
- Kate N, Grover S, Kulhara P, Nehra R. Positive aspects of caregiving and its correlates in caregivers of schizophrenia: a study from north India. East Asian Arch Psychiatry. 2013;23(2):45–55.
- Testart J, Richieri R, Caqueo-Urizar A, Lancon C, Auquier P, Boyer L. Quality of life and other outcome measures in caregivers of patients with schizophrenia. Expert Rev Pharmacoecon Outcomes Res. 2013;13(5):641–9.
- Zendjidjian XY, Boyer L. Challenges in measuring outcomes for caregivers of people with mental health problems. Dialogues Clin Neurosci. 2014;16(2):159–69.
- Slevin ML, Plant H, Lynch D, Drinkwater J, Gregory WM. Who should measure quality of life, the doctor or the patient? Br J Cancer. 1988;57(1):109–12.
- Boyer L, Baumstarck-Barrau K, Cano N, Zendjidjian X, Belzeaux R, Limousin S, et al. Assessment of psychiatric inpatient satisfaction: a systematic review of self-reported instruments. Eur Psychiatry. 2009;24(8):540–9.
- Teri L, Gibbons LE, McCurry SM, Logsdon RG, Buchner DM, Barlow WE, et al. Exercise plus behavioral management in patients with Alzheimer disease: a randomized controlled trial. JAMA. 2003;290(15):2015–22.
- Prick AE, de Lange J, Twisk J, Pot AM. The effects of a multicomponent dyadic intervention on the psychological distress of

- family caregivers providing care to people with dementia: a randomized controlled trial. Int Psychogeriatr. 2015;27(12):2031–44.
- Mueser KT, Deavers F, Penn DL, Cassisi JE. Psychosocial treatments for schizophrenia. Annu Rev Clin Psychol. 2013;9(9):465–97.
- APA. American Psychiatry Association. United States of America. www.apa.org/.
- 74. NICE. National Institute of Care Excellence. Schizophrenia-the NICE guideline on core interventions in the treatment and management of schizophrenia in adults in primary and secondary care (Updated edition ed.). United Kingdom.
- Mas-Exposito L, Amador-Campos JA, Gomez-Benito J, Lalucat-Jo L. Review of psychotherapeutic interventions for people with schizophrenia. UB J Psychol. 2013;43(1):101–16.
- Eassom E, Giacco D, Dirik A, Priebe S. Implementing family involvement in the treatment of patients with psychosis: a systematic review of facilitating and hindering factors. BMJ Open. 2014;4(10): e006108.
- Lee G, Barrowclough C, Lobban F. Positive affect in the family environment protects against relapse in first-episode psychosis. Soc Psychiatry Psychiatr Epidemiol. 2014;49(3):367–76.
- Yesufu-Udechuku A, Harrison B, Mayo-Wilson E, Young N, Woodhams P, Shiers D, et al. Interventions to improve the experience of caring for people with severe mental illness: systematic review and meta-analysis. Br J Psychiatry. 2015;206(4):268–74.
- Cai J, Zhu Y, Zhang WB, Wang YF, Zhang C. Comprehensive family therapy: an effective approach for cognitive rehabilitation in schizophrenia. Neuropsychiatr Dis Treat. 2015;11:1247–53.
- Giron M, Nova-Fernandez F, Mana-Alvarenga S, Nolasco A, Molina-Habas A, Fernandez-Yanez A, et al. How does family intervention improve the outcome of people with schizophrenia. Soc Psychiatry Psychiatr Epidemiol. 2015;50(3):379–87.
- Ran MS, Chan CL, Ng SM, Guo LT, Xiang MZ. The effectiveness of psychoeducational family intervention for patients with schizophrenia in a 14-year follow-up study in a Chinese rural area. Psychol Med. 2015;45(10):2197–204.
- 82.• Grácio J, Gonçalves-Pereira M, Leff J. What do we know about family interventions for psychosis at the process level? A systematic review. Fam Process. 2016;55(1):79–90. A major review regarding the effectiveness of family interventions for psychosis (FIP)
- Sin J, Norman I. Psychoeducational interventions for family members of people with schizophrenia: a mixed-method systematic review. J Clin Psychiatry. 2013;74(12):E1145–62.
- Allen J, Burbach F, Reibstein J. A different world' individuals' experience of an integrated family intervention for psychosis and its contribution to recovery. Psychol Psychother. 2013;86:212–28.
- 85.• Ince P, Haddock G, Tai S. A systematic review of the implementation of recommended psychological interventions for schizophrenia: rates, barriers, and improvement strategies. Psychol Psychother. 2015. doi:10.1111/papt.12084. An interesting study showing that, despite progress, there are several inequalities in the provision of psychological therapies for patients with schizophrenia.
- Onwumere J, Grice S, Kuipers E. Delivering cognitive-behavioural family interventions for schizophrenia. Aust Psychol. 2016;51:52– 61.
- 87. Nilsen L, Frich JC, Friis S, Norheim I, Rossberg JI. Psychosocial intervention patients and family members perceived benefits from psychoeducational family work in first-episode psychosis. Early Interv Psychiatry. 2014;8:156.
- Roddy S, Onwumere J, Kuipers E. A pilot investigation of a brief, needs-led caregiver focused intervention in psychosis. J Fam Ther. 2015;37(4):529–45.
- Rotondi AJ, Anderson CM, Haas GL, Eack SM, Spring MB, Ganguli R, et al. Web-based psychoeducational intervention for



- persons with schizophrenia and their supporters: one-year outcomes. Psychiatr Serv. 2010;61(11):1099–105.
- 90.• Rotondi AJ, Eack SM, Hanusa BH, Spring MB, Haas GL. Critical design elements of E-health applications for users with severe mental illness: singular focus, simple architecture, prominent contents, explicit navigation, and inclusive hyperlinks. Schizophr Bull. 2015;41(2):440–8. This work evaluated the effectiveness
- of an e-health design model for persons with severe mental illness
- Sin J, Henderson C, Pinfold V, Norman I. The E Sibling Projectexploratory randomised controlled trial of an online multicomponent psychoeducational intervention for siblings of individuals with first episode psychosis. BMC Psychiatry. 2013;13:123.

