PSYCHOLOGICAL CAUSES AND PSYCHO-SOCIAL MANAGEMENT OF SCHIZOPHRENIA

DR. E.SAMBANDAM
Associate Professor, Dept of Clinical Psychology,
School of Rehabilitation and Behavioural Sciences,
Aarupadai Veedu Medical College &Hospital,
Vinayaka Mission's Research Foundation, Puducherry – 607 402.

Abstract:
Schizophrenia is a neuropsychiatric disorder characterized by the heterogeneous display of positive, and negative symptoms, and cognitive deficits. Classification based on etiological principles has been separate 'reactive psychoses' made for cases having an intimate relationship to psycho-social causation. The stressful life events are related to psycho-social causes of the onset of depressive disorder. The impact of events such as early trauma is the link between post-traumatic stress disorder and schizophrenia. People suffering from reactive psychosis showed more affective symptoms and more vulnerable personalities than those with non-reactive conditions. Several authors have found that life events 'trigger' episodes of schizophrenia. The life event's stress merely adds the final impetus toward illness in somebody who was already strongly predisposed because of an underlying diathesis. The recurrence of psychotic symptoms was not the only response to stressful life events of those who have experienced prior episodes of schizophrenia, but also the development of non-psychotic depressive symptoms. Evidence shows that there is a close relationship between post-traumatic stress disorder (PTSD) and psychotic symptoms. Some people who have been exposed to extreme trauma develop psychotic symptoms whose content is closely related to the details of the traumatic experience. Researchers and practitioners have acknowledged the necessity of maintenance treatment of persons with schizophrenia, using psycho-social rehabilitation as well as drug therapies. Continuous application of bio-psychosocial therapies can reduce the long-term disability and persisting psychotic symptoms inherent in disabling mental disorders such as schizophrenia. Effective intervention for acute psychotic episodes is important for minimizing long-term disability, using continuous comprehensive psycho-social rehabilitation services for symptom control, prevention of relapses, and maximizing the chronically ill patient's performance in social, vocational, educational, and familial roles.

Keywords: Schizophrenia, stressful event, Psycho-Social Rehabilitation Services.

DOI Number: 10.48047/nq.2022.20.19.NQ99058 **NeuroQuantology 2022; 20(19): 624-643**

Introduction:

Schizophrenia is a neuropsychiatric disorder that affects approximately 0.5% of the human population (Saha et al., 2005). The disease is characterized by the heterogeneous display of positive symptoms (e.g., hallucinations, delusions, and thought disorder), negative symptoms (e.g., a volition, restricted affect, poverty of speech, and social withdrawal), and cognitive deficits (e.g., working memory deficits, executive dysfunction, and attentional impairments). The onset of schizophrenia typically occurs during early adulthood and is usually associated with lifelong disability (Lewis and Lieberman, 2000; Cirulli et al., 2009; Schmitt et al., 2014; Flores et al., 2016).

DOMAINS OF PSYCHOSOCIAL STRESS

Psychiatric classification is primarily based on the clinical features of individual disorders. Classification based on etiological principles has been successful in relatively few conditions. The early attempts were to separate 'reactive psychoses' made for cases having an intimate relationship to psychosocial causation (Adamcio et al., 2009). The stressful life events are related to psychosocial causes of the onset of depressive disorder (Ventura J, Nuechterlein KH, Subotnik KL, Hardesty JP, & Mintz J, 2000). That is the psychosocial causation in the remaining disorders is more subtle. Schizophrenia as a socially reactive condition has become an accepted view in clinical psychology over the last 40 years. Since then, knowledge about the influence of psychosocial stress on schizophrenia has certainly been extended (Corcoran et al., 2003; Thompson et al., 2004; Phillips et al., 2007; Yuii et al., 2007; Walker et al., 2008). The study of the impact of events such as early trauma, the links between post-traumatic stress disorder and schizophrenic, the relationship between events and the onset of schizophrenia, and studies on Expressed Emotions (EE) have added to the already strong consensus that the above factors are related to schizophrenia and also predict relapse.

Stress and Reactive psychoses

Nearly half the cases of psychosis in Scandinavia are diagnosed as reactive (Lindvall et al. 1993), and Scandinavian psychiatrists, at any rate, appear to be capable of making this diagnosis with acceptable reliability. Kapur and Pandurangi (1979); Pandurangi & Kapur 1980) suggest that people suffering from reactive psychosis showed more affective symptoms and more vulnerable personalities than those with non-reactive conditions. Stephens et al. (1982) found more precipitating stress in reactive psychoses than in process schizophrenia, Reactive psychosis case can be distinguished from nuclear schizophrenia both by its close relationship to antecedent stress and by its clinical features.

George Brown and John Wing first established a relationship between the poverty of the social environment and the prevalence of negative symptoms in schizophrenia

(Kendler et al., 1995; Bermanzohn et al., 2000; Pallanti et al., 2004; Voges and Addington, 2005, Wing & Brown 1970; Drake & Sederer 1986). Much pressure placed on patients in rehabilitation programs sometimes led to the re-emergence of positive florid symptoms of schizophrenia (Wing et al.1964). (Birley and Brown, 1970; Ventura et al., 1989, 1992) Carried out their study into the effects of life events on schizophrenia. They reported also that stresses within the families of patients may provoke relapse, through the expressed emotion (EE). The social reactivity of the condition is nowadays generally accepted. EE research in the last 20 years has provided some of the strongest evidence for the social reactivity of schizophrenia.

Expressed emotion and relapse in schizophrenia

An important indication of the social reactivity of schizophrenia is based on the work about the impact of family atmosphere on its course. EE is rated from an audio tape of an interview with a career, the Camberwell Family Interview (CFI) of Amaresha. A, C &Venkatasubramaniam, G (2012) and five-minute speech sample (Shimodera et al 1999). This is intended for the rating of emotional aspects of communication regardless of specific content. Five scales are rated from the interview: frequency ratings of the number of critical comments (CCs) and positive remarks, and global ratings of hostility, warmth, and emotional over-involvement (EOI). Critical comments, hostility, and over-involvement are the most predictive of relapse.

The strength of association between high EE and relapse was found to be high where contact was high, Living in high contact with a low EE relative was, protective in nature. Multivariate analyses of this data confirmed that the association of relapse with high EE was highly significant. Predictive studies of EE in schizophrenia in the early 1990s indicated that the predictive capacity of the measure is established beyond doubt.

The concept that the family atmosphere has a role in a relapse in schizophrenia led to several intervention studies McCreadie et al. 1991; Linszen et al. 1997, Overall, these interventions have been successful, indicating that it is possible to modify family atmosphere and thus to reduce relapse rates. The impact of social factors on psychosis has been corroborated by EE studies, and confirms that such factors are powerful, and amenable to change (Butzlaff & Hooley, 1998).

The influence of Life Events on Schizophrenia

The strategies used to establish a link between life events and schizophrenia are: Reaction to a single type of event and a wide range of life events. To understand the inference of causality, Brown, and Harris (1970) developed a rating of independence, i.e., the degree to which events could be regarded as independent of behavior altered by an impending breakdown.

If we examine a wide range of events, there are different ways in which the association between life events and relapse in schizophrenia can be tested.

The concept of triggering

Several authors have found that life events 'trigger' episodes of schizophrenia. The life event's stress merely adds the final impetus toward illness in somebody who was already strongly predisposed because of an underlying diathesis (Brown et al. 1968). The 'triggering' hypothesis is related to the length of the casual period in which life events are thought to operate.

An early study found a significantly raised rate of life events limited to the 3 weeks before the onset or relapse of schizophrenic illness (Brown & Birley 1968). Some statistically significant excess was found for independent events in the 3 or 4 weeks before relapse compared with control periods. Thus, the multi centre World Health Organization (WHO) study (Day et al. 1987) in five of six centers found results similar to those of Brown and Birley (1968). Ventura et al. (1989) studied life events with patients on regular neuroleptic medication and found positive results. Hultman et al. (1997) also found an excess of events in 3 weeks before relapse. Bebbington et al. (1996) reported that the association between life events and psychosis was not affected by the type of onset or by the number of prior episodes. Some of the negative studies did find non-significant patterns of elevation of life event rates preceding illness onset. Ventura et al. (2000) reported that the recurrence of psychotic symptoms was not the only response to stressful life events of people who have experienced prior episodes of schizophrenia, but also the development of non-psychotic depressive symptoms.

Life events and post-traumatic stress disorder

Evidence shows that there is a close relationship between post-traumatic stress disorder (PTSD) and psychotic symptoms. Some people who have been exposed to extreme trauma develop psychotic symptoms whose content is closely related to the details of the traumatic experience (DSM – V, 2013). For veterans exposed to extreme combat stress, the distinction between flashbacks and psychotic symptoms can be made (Ivezic et al. 2015). Psychotic symptoms in response to combat experiences are common. Forty percent of Vietnam veterans had experienced psychotic symptoms (Kilcommons AM & Morrison AP, 2005).

Adverse Social Environment and Schizophrenia

The stress-vulnerability paradigm in schizophrenia is applied with the view that the vulnerability is genetic and related to the early physical environment. The biological indicators of vulnerability are usually not universal in individuals with schizophrenia. Therefore vulnerability in some cases is psychological, arising

from early parental loss and more common in people with psychiatric diagnoses (Agid et at. 1999). This applied to people with schizophrenia (n=76) as well as those with bipolar disorder and major depressive disorder. Ellason and Ross (1997) found a significant association between child physical and sexual abuse with psychotic symptoms (van Os J, Hanssen M, Bak M, Bijl RV, & Vollebergh W. 2003)., (van Os J, Pedersen CB, Mortensen PB, 2004).

The evidence for the impact of the adverse environment in childhood comes from the prospective study of Myhrman et al. (2018). At follow-up, the prevalence of schizophrenia was twice as high (1.5% vs. 0.7%) in those offspring who had been unwanted babies.

The early environment can create conditions that lead to chronic and poor outcomes. In a German multivariate study of schizophrenia, traumatic experience and adverse circumstances in childhood were related to relapse and re-hospitalization (Read J, van Os J, Morrison AP, & Ross CA., 2005), (Doering et al. 1998). Fowler (1999) found that severe distal trauma histories are common in those with chronic psychosis, but not those in their first episode. So far we have seen the evidence for causation of psychoses. Now let us see the psychosocial management with special reference to schizophrenia.

PSYCHOSOCIAL MANAGEMENT

During the last 2 decades, the mental health profession has undergone a positive evaluation of the family and family has been recognized as important allies for professionals.

Researchers and practitioners have acknowledged the necessity of maintenance treatment of persons with schizophrenia, using psychosocial as well as drug therapies Bustillo et al (2001), Pekkala and Merinder (2002), Pfamatter et al (2006), Lincoln et al (2007), Charabarthi et al (2008) &Solanki et at (2009). Continuous application of biopsychosocial therapies can reduce the long-term disability and persisting or relapsing psychotic symptoms inherent in disabling mental disorders such as schizophrenia, (Liberman, 1992; Liberman et al. 1999). Effective intervention for acute psychotic episodes is important for minimizing long-term disability, using continuous comprehensive service for symptom control, prevention of relapses, and maximizing the chronically ill patient's performance in social, vocational, educational, and familial roles.

Studies have shown that significant symptomatic and social recovery can be achieved in more than half of individuals with chronic schizophrenia with continuous rehabilitative services. Psychosocial treatments give positive outcomes in these areas, such as reduced relapse rates, treatment compliance, and increased social and independent living skills. Cognitive behavioral therapies have significant positive effects on the areas such as improved cognitive functioning, reduction of psychotic symptoms refractory to

medications, and lower rates of risky behaviors. Rehabilitation programs include psychoeducational approaches, cognitive behavior therapy-supported employment, social and life skills training, creative therapies, and recreation (Glynn et al.1994). Skills training programs are a core element in rehabilitation addressing the multiplicity of needs associated with independent functioning, Such as making friends, managing one's illness, establishing independent recreation, managing money, self-care, and domestic skills.

Conceptual framework

A fluctuating course of mental disorder is best conceptualized by the vulnerability-stress-competence model (Anthony & Liberman 1986) Biological vulnerabilities predispose a person to schizophrenia when exposed to environmental stress (e.g life events, changes in life phase) These stresses can be mitigated by interventions that enhance coping and competence, such as medication, social support and skill building. Symptoms and disabilities emerge when these protective factors are overwhelmed by stress, or when they 'atrophy as a result of disease, reinforcement of the sick role or, loss of motivations' (Anthony & Liberman 1986).

Long-term goals are dealing with the relevant domains of life namely – social, familial, interpersonal, medical vocational, and recreational. Short-term goals are for weeks or a few months, aimed at long-term goals, and they should be (specific, measurable, achievable, realistic, and time-limited. Carried out in collaboration with the patient, relatives, and other natural supporters.

Principles of Psychosocial management

Services should enable patients to function better and should be individualized and specific to the phase and type of the person's disorder. Motivation for treatment is generated by the services provided through therapeutic relationships. Patients, family members, and other natural supporters should from active participants. Services should be linked to individualized needs, deficits, strengths, and neurocognitive functioning. Cognitive remediation may provide the ground for skills training and rehabilitation services.

Though generalization of behavior does not take place automatically; it requires planning and programming for opportunities, encouragement, and reinforcement from the natural environment to empower others to function at higher levels and to have a better quality of life (Hirsch and Weinberger 2003).

METHODS OF PSYCHOSOCIAL INTERVENTION:

Psycho-education for the Family

Family is typically an important part of the patient's natural support system and living environment. Knowledge and coping skills regarding mental illness can result in better opportunities, encouragement, and enforcement for the generalization of social and independent living skills.

Psychoeducation for the family has given significant benefits for both patient outcomes and family adjustment. On average, relapse rates among patients with schizophrenia with family therapy are 24% vs. 64% for those receiving standard care (Bustillo et al.2001).

In psycho-educational programs, relatives are engaged as essential allies in treatment and rehabilitation. The psychoeducational model has 4 major aims:

1. to develop relationships among the treatment team, family members, and other support persons;
2. to educate the family about the patient's particular mental disorder, and to direct them to locally available treatment and rehabilitation resources;
3. to strengthen treatment alliances by acknowledging the efforts and basic good intentions of family members;
4. to develop step-by-step communication and problem-solving skills and to correct EE.

Usually, a psycho-educational session begins with information about the nature of schizophrenia and the medication and psychosocial interventions available for its treatment. Topics include positive and negative symptoms, the effects of psychotropic medications, and treatment options in rehabilitation. Educational programs are aimed to enhance basic skills training of the patients and relatives in interpersonal communication, problem-solving, and contingency management. These traditional cognitive-behavioral techniques are called behavioral family management (Fallon et al.1985).

Several well-controlled studies (Hogarty & Anderson 1986; Tarrier et al.1988) have shown that the rate of relapse and subsequent hospitalization for patients whose families participate in psycho-education and skills training is significantly less than for customary treatments, Family members are distressed by the patient's bizarre behavior, anxious about increased financial burden for the patient's treatment, uncertain about plans and isolated from their social supports as a result of care giving responsibilities, stigma, and embarrassment. In some families, these stressors produce high levels of expressed emotion such as criticism, disappointment, hostility, and over-protectiveness. Patients who return to families with highly expressed emotions are more likely to relapse than those whose families are low in expressed emotion ; (Leff, 2018). Changes in expressed emotion form part of the beneficial effect of family education and treatment. (Rangaswamy, (2012), Pilling et al (2002).

Social skills training:

There are three approaches to building skills in individuals with schizophrenia and other serious mental disorders; one is the token economy, which is the systematic application of behavioral learning principles and contingent

reinforcement in the living environment. The other two approaches require the application of social learning theory: social skills training and cognitive remediation. In the social skills training, the social and independent living skills of the individual being targeted for enhancement. In cognitive remediation, therapeutic targets are cognitive functions such as memory, verbal learning, sustained attention, and reaction time.

Social skills training, improving social and daily living skills for independence in the community, is the most widely utilized psychosocial intervention in the rehabilitation of severely mentally ill people (Liberman & Program. 1993; Bellack & Alan. S, (2004). Participants learn the expressive components of social skills-the examples are how to introduce themselves, paying attention to non-verbal expressions, and appropriate content. The social problem–solving approach teaches social norms and rules to improve the patient's ability to interpret cues from the social environment and generate appropriate responses to these cues.

Social skills training is usually combined and carried out by a step-by-step method of instruction. Complex interpersonal behaviors are broken down into smaller steps which can be addressed through a variety of teaching methods including motivational interviewing, didactic instruction, shaping, modeling, corrective feedback, and homework exercises. Further, functional assessment is carried out to determine the patient's assets, deficits, and resources available for strengthening skills. This is a process carried out periodically to evaluate progress and suggest changes in the goals and techniques. Skills training is carried out in an individual, family, or group format.

Many clinical trials of psychosocial skills training showed benefits over standard care in terms of improved conversational skills, assertiveness, recreational skills, grooming, job finding, and medication management (Heinssen et al. 2000; Tsang & Cheung, 2005). There is some evidence for the benefit of including booster sessions and for carrying out in-vivo training exercises in addition to the initial treatment. Skills training methods have also been employed with acute inpatients (Kopelowicz 1998; Smith et al. 1999), persons with residual symptoms (Hayes et al. 1995), and those with severe and persistent illness (Wallace et al.1998; Spaulding et al.1999). Most patients can benefit if procedures for skills training are adapted to their particular deficits, symptom profiles, and cognitive impairments (Pilling et al (2002), Randall et al (2013).

Cognitive remediation in Schizophrenia:

The types and extent of dysfunctions vary greatly in schizophrenia, recent evidence has accumulated that abnormalities in verbal learning, verbal recall, secondary verbal memory, spatial and verbal working memory, sustained

attention and executive functions are correlated with psychosocial functioning in work, self-care, and interpersonal domains (Mueser et al. 1991; Storzbach & Corrigan 1996; Green & Nuechterlein 1999). Prospective studies have indicated that poorer neurocognition at baseline predicted the amount of learning of community living skills that takes place subsequently (Kopelowicz et al. 2005). Remediation of these neurocognitive impairments leads to improved personal and social functioning.

Research reports provide substantial evidence for effectiveness, but conclusive verification will require large-scale highly controlled outcome studies (Olbrich & Mussgay 1990; Spaulding 1997). Training courses are designed around broad deficits found in most persons with schizophrenia. The approach has grown from the basic rehabilitation principle that has long recognized the importance of tackling complex tasks in small steps. The Integrated Psychological Therapy (IPT) model, developed at the University of Bern by Brenner, Hodel, and their colleagues (Brenner et al.1992), comprises five subcomponents arranged hierarchically so that simple cognitive processes are addressed first, followed by increasingly complex tasks such as cognitive differentiation, social perception, verbal communication, social skills and problem-solving. Controlled studies have shown IPT to be superior to standard hospital treatment (Brenner et al. 1992).

Cognitive Behavior therapy

Evidence is increasing on the efficacy of cognitive-behavioral therapy (CBT) as an adjunctive treatment in the management of schizophrenia. CBT focuses on altering the content of thoughts, including beliefs, attitudes, and interpretations of events, through rational disputation and consideration of alternative perspectives. CBT interventions are distinguished from cognitive rehabilitation or cognitive remediation approaches, which focus on changing the neurocognitive process.

The first reports of psychological interventions in schizophrenia using cognitive techniques were published 50 years ago. Beck (1952) reported a case study in which cognitive techniques were used to treat delusional beliefs. The number of case studies focused predominantly on the application of CBT to the management of delusions or hallucinations (Watts et al. 1973, Alford et al. 1982).

Randomized controlled trials of CBT in schizophrenia have focused on patients with positive psychotic symptoms which persisted despite adequate drug treatment. Some have reported outcomes favoring CBT over longer-term follow-up (Drury et al, (2000); Tarrier et al, (2000). There is also evidence for the efficacy of CBT in reducing negative symptoms, with9-months follow-up (Sensky et al. 2000).

Taken together, the studies provide strong support for the effectiveness as well as the efficacy of CBT for schizophrenia. Individually, each study has methodological

limitations, but most of these limitations are not common to all the studies cited. Results have been fairly consistent across the published reports (Pinto et al (1999), Valmaggia et al (2005) and Rathod et al (2008).

Vocational Rehabilitation

Supported employment has become the most important new development in the vocational rehabilitation of the severely mentally ill (Anthony & Blanch 1987). Supportive employment uses a 'place-then-train' approach, in the seriously mentally ill (Bond 1992). Emphasis is given to helping the individual to maintain the job. When the participant has to get new work and skills, an employment specialist assists, through verbal instruction, and encouragement, in association with the individual's supervisor. Most studies of supported employment have found superior vocational outcomes as compared with more traditional mental health treatment (Mueser & bond 2000). Positive findings in other areas of outcome reported for supported employment are lower hospital admissions, better medication compliance, less abuse of alcohol, better familial role performance, higher self-esteem, and more social activity (Bond 1992).

Affordable and acceptable housing is important in vocational rehabilitation services. It is aimed at enabling as many individuals as possible to live in ordinary housing with support. The community homes were much less restrictive than the hospital wards and provided a comfortable atmosphere, and were favored by patients. But individual patients with large fluctuations in symptoms, there was no overall change in the psychiatric state during the follow-up period. Problems with social behavior also remained stable (Anderson et al. 1993).

The US Department of Health and Human Services and the Department of Housing and Urban Development funded experimental programs targeted at the homeless mentally ill, placing many in the appropriate community-based housing found reductions in symptoms, reduced hospitalization, and some improvement of social functioning and quality of life. There were considerable communication and social interaction for the homeless schizophrenics treated in community homes (Paul, 2008). & Randol et al (2003) concluded that occupational therapy and medication were more effective than medication alone.

Future directions of psychosocial treatments

Though advances are made in genetic and neurobiological understanding and improvements in antipsychotic medication, the focus on the psychological treatment of psychotic disorders is likely to continue to grow considerably in importance in the coming years.

There is a need for:

1. Improved attitudes toward the affected cases;
2. Better standards of psychological care;

3. Need for Biopsychosocial perspective.

In keeping with the multifaceted nature of schizophrenia, many types of interventions will prove to be worthwhile in the management of Psychosis.

References:

1. Adamcio, B., Havemann-Reinecke, U., and Ehrenreich, H. (2009). Chronic psychosocial stress in the absence of social support induces pathological pre-pulse inhibition in mice. Behav. Brain Res. 204, 246–249. doi: 10.1016/j. bbr.2009.05.030.
2. Agid, O., Shapira, B., Zislin, M., Ritsner, M., Hanin, B., Murad, H., Troudart, T., Bloch, M., Heresco-levy,U, & Lerer, B. (1999). Environment and vulnerability to major psychiatric illness: a case control study of early parental loss in major depression, bipolar disorder and schizophrenia. Molecular Psychiatry, $, 163 – 172.
3. Alford, G.S., Fleece, L., & Rothblum, E. (1982). Hallucinatory-delusional verbalizations: Modification in a chronic schizophrenic by self-control and cognitive restructuring. Behavior modification, 6 (3), https://doi.org/10.1177/01454 45582630.
4. Amarresha, A. C & Venkatasubramanian, G (2012). Expressed Emotion in schizophrenia. Indian Journal Psychology Medicine, 34(1): 12–20. doi: 10.4103/0253-7176.96149.
5. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5. Washington, DC: APA; 2013.
6. Andersén, A., Larsson, K., Lytsy, P., Berglund, E., Kristiansson, P & Anderzén. I. (2018). Strengthened General Self-Efficacy with Multidisciplinary Vocational Rehabilitation in Women on Long-Term Sick Leave: A Randomised Controlled Trial. Journal of Occupational Rehabilitation volume 28, page s691–700.
7. Anthony, W. A., & Blanch, A. (1987). Supported employment for persons who are psychiatrically disabled: An historical and conceptual perspective. Psychosocial Rehabilitation Journal, 11(2), 5–23. https://doi.org/10.1037/h0 099582.
8. Anthony, .A, & Liberman, R.P. (1986). The practice of psychiatric rehabilitation: historical, conceptual, and research base. Schizophrenia Bulletin, 12 (4), 542 – 559.
9. Beck, A.T. (1952). Successful outpatient psychotherapy of a chronic schizophrenic with a delusion based on borrowed

guilt. Interpersonal and Biological Processes, 15 (3), 305 – 312.

10. Bellack & Alan. S, (2004). Skills training for people with severe mental illness. Psychiatric Rehabilitation Journal, 27 (4), 375 – 391.
11. Bermanzohn, P.C., Porto, L., Arlow, P.B., Pollack, S., Stronger, R., Siris, S.G., 2000.
12. Birley, J., Brown, G.W., 1970. Crisis and life changes preceding the onset or relapse of acute schizophrenia: clinical aspects. The British Journal of Psychiatry 16, 327–333.
13. Bond G.e., Robert E., & Drake, Deborah R., Becker, & Kim T. Mueser, (1992). Effectiveness of Psychiatric Rehabilitation Approaches for Employment of People with Severe Mental Illness. Journal of Disability policy studies, 10 (1), https://doi.org/10.1177/10442 0739901000.
14. Brenner, H., Hodel, B., Roder, V., Corrigan, P, (1992). Treatment of cognitive dysfunctions and behavioral deficits in schizophrenia. Schizophrenia Bulletin, 18 (1), 21– 26, https://doi.org/10.1093/sc hbul/18.1.21.
15. Brown, R, (1973). Schizophrenia, language, and reality. American Psychologist, 28 (5), 395 – 403.
16. Brown, G.W. and Birley, J.L.T. (1968) Crises and life changes and the onset of schizophrenia. Journal of Health and Social Behaviour, 96, 203-214. http://dx.doi.org/10.2307/294 8405.
17. Bustillo, J., Lauriello, J., Horan, W., & Keith, S. (2001). The psychosocial treatment of schizophrenia: an update. American Journal of Psychiatry, 158(2):163-75. doi: 10.1176/appi.ajp.158.2.163.
18. Butzlaff, R.L., Hooley, J.M., 1998. Expressed emotion and psychiatric relapse: a metaanalysis. Archives of General Psychiatry 55, 547–552.
19. Cirulli, F., Francia, N., Berry, A., Aloe, L., Alleva, E., and Suomi, S. J. (2009). Early life stress as a risk factor for mental health: role of neurotrophins from rodents to non-human primates. Neurosci. Biobehav. Rev. 33, 573–585. doi: 10.1016/j. neubiorev.2008.09.001.
20. Corcoran, C., Walker, E., Huot, R., Mittal, V., Tessner, K., Kestler, L., Malaspina, D., 2003. The stress cascade and schizophrenia: etiology and onset. Schizophrenia Bulletin 29, 671–692.
21. Day, R., Nielsen, J.A., Korten, A., Emberg, G., Dube, K.C., Genbhart, J., Jablensky, A., Leon, C., Marsella, A., Olatawura, M., Sartorius, N.,

eISSN 1303-5150

Stromgern, E., Takahashi, R., Wig, N & Wynne, L.C. (1987). Stressful life events preceding the acute onset of schizophrenia: a cross-national study from the world health organization. Culture Medicine and Psychiatry, 11, 123 – 205.

22. Doering, S., Muller, E., Kopcke, W., Pietzcher, A., Gaebel, W., Linden, M., Muller, P, Spahn, F., Tegeler, J, & Schussler, G. (1993). Predictors of relapse and re-hospitalization in schizophrenia and schizoaffective disorder. Schizophrenia Bulletin, 24 (1), 87–98, https://doi.org/10.1093/oxfordjournals.schbul.a033316.
23. Drake, R.E & Sederer, L.I, (1986). The adverse effects of intensive treatment of chronic schizophrenia. Comprehensive Psychiatry, 27(4):313-26. doi: 10.1016/0010-440x(86)90007-6.
24. Drury. V., Birchwood, M, & Cochrane, R. (2018). Cognitive therapy and recovery from acute psychosis:a controlled trial. The British Journal of Psychiatry, 177 (1), 8 – 14, DOI: https://doi.org/10.1192/bjp.177.1.8.
25. Egbe, C.O. , Brooke-Sumner, C. , Kathree, T. , Selohilwe, O. , Thornicroft, G. & Petersen, I. (2014). Psychiatric stigma and discrimination in south africa: perspectives from key stakeholders. BMC Psychiatry, 14, 1–14.
26. Ellason, J. W., & Ross, C. A. (1997). Childhood trauma and psychiatric symptoms. Psychological Reports, 80 (2), https://doi.org/10.2466/pr0.1997.80.2.447.
27. Fallon, P & Coffman, S, (2010). Cognitive behavioural treatment of survivors of Victimization. Psychotherapy in Private Practice, 9 (3), 53 – 63.
28. Flores, G., Morales-Medina, J. C., and Diaz, A. (2016). Neuronal and brain morphological changes in animal models of schizophrenia. Behav. Brain Res. 301, 190–203. doi: 10.1016/j.bbr.2015.12.034.
29. Glynn, S.M. (2014). Bridging psychiatric rehabilitation and recovery in schizophrenia: a life's work. American Journal of Psychiatric Rehabilitation, 17 (3), 214 – 224.
30. Green, M.F, & Nuechtertein, K.H, (1999). Should schizophrenia be treated as a neurocognitive disorder?. Schizophrenia Bulletin, 25 (2) , 309–319, doi.org/10.1093/oxfordjournals.schbul.a033380.
31. Hayes, R.L., Halford, W.K., Francis. T, & Varghese. (1995). Social skills training with chronic schizophrenic patients: effects on negative symptoms and community functioning.

eISSN 1303-5150

Behaviour therapy, 26 (3), 433 – 449.

32. Heinssen, R.K., Liberman, R.P, & Kopelowicz, A. (2000). Psychosocial skills training for schizophrenia: lessons from the laboratory. Schizophrenia Bulletin, 26 (1), 21–46, doi.org/10.1093/oxfordjournals.schbul.a033441.
33. Hierarchical diagnosis in chronic schizophrenia: a clinical study of co-occurring syndromes. Schizophrenia Bulletin 26, 517–525.
34. Hirsch, S.R, & Weinberger, D.R, (2003). Schizophrenia, IInd edt, Balck Well publisher.
35. Hogarty, G., Anderson, C.M., & Reless, D.J. (1986). Family psychoeducation, social skills training, and maintenance chemotherapy in the aftercare treatment of schizophrenia. Arch Genral Psychiatry. 1986;43 (7) ,633 - 642. doi:10.1001/archpsyc.1986.01800070019003.
36. Hultman, C. M., Weselgren, I., & Ohman, A. (2002). Relationships between social support, social coping and life events in the relapse of schizophrenic patients. Scandinavian Journal of Psychology, 38 (1), 3 – 13.
37. Ivezic, S.S., Petrovic, B.R., Urlic, I., Grah, M., Mayer, N., Stijacic, D., Jendricko, T & Biocina, S.M. (20015). Guidelines for individual and group psychodynamic psychosis and/or schizophrenia. Psychiatria Danubina, 29 (3), 432 – 440.
38. Kapur R. L, & Pandurangi, A. K (1979). A comparative study of reactive psychosis and acute psychosis without precipitating stress. British Journal of Psychiatry, 135:544-50. doi: 10.1192/bjp.135.6.544.
39. Kendler, K.S., McGuire, M., Gruenberg, A.M., Walsh, D., (1995). Examining the validity of DSM-III-R schizoaffective disorder and its putative subtypes in the Roscommon Family Study. The American Journal of Psychiatry 152, 755–764.
40. Kilcommons A.M, Morrison A.P. (2005). Relationships between trauma and psychosis: an exploration of cognitive and dissociative factors. Acta Psychiatry Scand, 112:351–359. doi: 10.1111/j.1600-0447.2005.00623.x.
41. Kopelowicz, A. (1998). Adapting social skills training for lations with schizophrenia. International Review of Psychiatry, 10 (1), 47 – 50.
42. Kopelowicz, A., Liberman, R.P., Ventura, J., Zarate, R, & Mintz, J. (2005). Neurocognitive correlates of recovery from schizophrenia. Psychological Medicine, 35 (8), , 1165 – 1173,

doi.org/10.1017/S0033291705004575,

43. Lewis, D. A., and Lieberman, J. A. (2000). Catching up on schizophrenia: natural history and neurobiology. Neuron 28, 325–334. doi: 10.1016/S0896-6273(00)00111-2.
44. Liberman, R.P., & Cprrogam. P.W. (1993). Designing new psychological treatments for schizophrenia. Interpersonal and Biological Processes, 56 (3), 238 – 249.
45. Liberman, R.P., & Kopelowicz, A. (2009). Recovery from schizophrenia: a challenge for the 21st century. International Review of Psychiatry, 14)4), 245 – 255. https://doi.org/10.1080/09540260210000016897.
46. Lincoln, T.M., Lullmann, E, & Rief, W. (2007). Correlates and long-term consequences of poor insight in patients with schizophrenia. A systematic review. Schizophrenia Bulletin, 33 (6), 1324–1342, https://doi.org/10.1093/schbul/sbm002.
47. Lindvall, Rolf Axelsson & Rolf Öhman (1993). Incidence of cycloid psychosis. European Archives of Psychiatry and Clinical Neuroscience volume 242, pages197–202.
48. Linszen, Dingemans, P,M, Nugter, M, (1997). Patient attributes and expressed emotions as risk factors for psychotic relapse. Schizophrenia Bulletin, 23 (1), 119–130,
49. Leff, J, (2018). Working with the families of schizophrenic patients. (S23) Integrated Approach to Schizophrenia. (1994) , The British Journal of Psychiatry , 164 (23 71 – 76.
50. McCreadie, Philips,J.A, Harvey, G, Waldron,M, Stewar & Baird. D, (1991). The nithsdale schizophrenia surveys. Viii: do relatives want family intervention-and does it help. British Journal of Psychiatry, 158, 110–113.
51. Mueser, K. T., Alan, S., Bellack., Margaret, S., Douglas., Julie, H, & Wasde, (1991). Prediction of social skill acquisition in schizophrenic and major affective disorder patients from memory and symptomatology, psychiatry Research, 37 (3), 281 – 296.
52. Mueser, K. T & Bond, G.R.b (2000). Psychosocial treatment approaches for schizophrenia. Current Opinion in Psychiatry, 13 (1), 27 - 35.
53. Myhrman,A., Rantakallio, P., Isohanni, M., Jones, P, & Partanen, U. (2018). Unwantedness of a pregnancy and schizophrenia in the child. The British Journal of Psychiatry , 169 (5) , 637 – 640.
54. (OAgid, B Shapira, J Zislin, M Ritsner, B Hanin, H Murad, T

eISSN 1303-5150

Troudart, M Bloch, U Heresco-Levy & B Lerer, (1999). Environment and vulnerability to major psychiatric illness: a case control study of early parental loss in major depression, bipolar disorder and schizophrenia, Molecular Psychiatry volume 4, pages163 –172

55. Olbrich, R & Mussgay, L. (1990). Reduction of schizophrenic deficits by cognitive training: an evaluative study. European archives of psychiatry and neurological sciences 239, 366 – 369.
56. Pandurangi, A. K & Kapur R. L, (1980). Reactive psychosis – a prospective study. Acta Psychiatrica Scandinavica, 61(2), 89-95, doi.org/10.1111/j.1600-0447.1980.tb00568.x
57. Pallanti, S., Quercioli, L., Hollander, E., (2004). Social anxiety in outpatients with schizophrenia: a relevant cause of disability. The American Journal of Psychiatry 161, 53–58.
58. Patrick Corrigan (2004). Enhancing personal empowerment of people with psychiatric disabilities. American Rehabilitation 28 (1) :10 - 21.
59. Paul, S., Corneau, s., Boozary, & ,Stergiopoulos, V. (2018). Coping and resilience among ethnoracial individuals experiencing homelessness and mental illness. International Journal of
60. Social Psychiatry, 64 (2). https://doi.org/10.1177/0020764017748.
61. Pekkala, E. T., & Merinder, L. B, (2001).. psychoeducation for schizophrenia. Cochrane Database of Systematic Reviews, https://doi.org/10.1002/14651858.CD002831.
62. Pfammatter, M., Martin, U, & Brenner, H.D. (2006). Efficacy of psychological therapy in schizophrenia: conclusions from meta analyses. Schizophrenia Bulletin, 32 (1), S64–S80, https://doi.org/10.1093/schbul/sbl030.
63. Phillips, L.J., Francey, S.M., Edwards, J., McMurray, N., (2007). Stress and psychosis: towards the development of new models of investigation. Clinical Psychology Review 27, 307–317.
64. Pilling, S., Bebbington, P., Kuipers, E., Garety, P., Geddes, J.,Orbach, G & Morgan,C. (2002). Psychological treatments in schizophrenia: i. Meta-analysis of family intervention and cognitive beahviour therapy. Psychological Medicine , 32 (5), 763 - 782DOI: https://doi.org/10.1017/S0033291702005895.

eISSN 1303-5150

65. Pinto, A., Pia, S.L., Mennella, R., Giorgio, D., & DeSimone, L. (1999). Rehab Rounds: Cognitive-Behavioral Therapy and Clozapine for Clients With Treatment-Refractory Schizophrenia. Published Online: Doi: 1999//doi.org/10.1176/ps.50.7.901.
66. Rangaswami, (2012). Twenty five years of schizophrenia: the madras longitudinal study. Indian Journal of Psychiatry, 54 (2), 134 – 137.
67. Randall, F., Corcoran, R., Day, J., & Bentall, R. (2013). Attention, theory of mind and causal attributions in people with persecutory delusions: a preliminary investigation. Cognitive neuropsychiatry, 8 (4), 287 – 294.
68. Rathod., Shanaya., Kingdon., David., Weiden & Peter. (0. Cognitive behavior therapy for medication resistant schizophrenia: a review. Journal of Psychiatric Practice: January 2008 - Volume 14 - Issue 1 - p 22-33 doi: 10.1097/01.pra.0000308492.93003.db.
69. Read J, van Os J, Morrison A.P, Ross C.A. (2005). Childhood trauma, psychosis and schizophrenia: a literature review with theoretical and clinical implications. Acta Psychiatry Scand. 112:330–350.
70. Saha, S., Chant, D., Welham, J., and McGrath, J. (2005). A systematic review of the prevalence of schizophrenia. PLoS Med. 2:e141. doi: 10.1371/journal.pmed.0020141.
71. Schmitt, A., Malchow, B., Hasan, A., and Falkai, P. (2014). The impact of environmental factors in severe psychiatric disorders. Front. Neurosci. 8:19. doi: 10.3389/fnins.2014.00019.
72. Scott B. Patten, (1991). Are the Brown and Harris "Vulnerability Factors" Risk Factors for Depression?. Journal of Psychiatry Neuroscience, 16 (5), 267 – 271.
73. Senky, T., Turkington., Kingdon, D., Scott, J.L., Scott, J., Siddle, R., O'Carroll., & Barnes, T,R. (2000). A randomized controlled trial of cognitive beahvioural therapy for persistent symptoms in schizophrenia resistant to medication. Arch Gen Psychiatry. 57 (2, 165 - 172. doi:10.1001/archpsyc.57.2.165.
74. Shimoder, S., YoshioMino., ShimpeiInoue., YujiIzumoto., YoshikiKishi., & ShuichiTanaka (1999). Validity of a five-minute speech sample in measuring expressed emotion in the families of patients with schizophrenia in Japan.

eISSN 1303-5150

Comprehensive Psychiatry 40 (5), 372-376.

75. Smith, B., Fowler, D, G., Freeman, D., Bebbington, P., Bashforth, H., Garety, P., Dunn, G., & Kuipers, E, (2006). Emotion and psychosis: links between depression, self-esteem, negative schematic beliefs and delusions and hallucinations. Schizophrenia Research, 86 (1-3), 181 – 188.
76. Smith, T.E., Hull, J.W., Romanelli, S, & Fertuck, E. (1999). Symptoms and neurocognition as rate limiters in skills training for psychotic patients. The American Journal of Psychiatry, 156 (11), 1817 – 1818.
77. Solanki, R. K., Singh, P & Munshi, D. (2009). Current perspectives in the treatment of resistant schizophrenia. Indian Journal of Psychiatry, 51(4), 254–260, doi: 10.4103/0019-5545.58289.
78. Spaulding, W. D. (1997). Cognitive models in a fuller understanding of schizophrenia. Interpersonal and Biological processes, 60 (4), 341 – 346.
79. Spaulding, W. D., Fleming, S. K., Reed, D., Sillivan, M., Storzbach, D, & Lam, M. (1999). Cognitive functioning in schizophrenia: implications for psychiatric rehabilitation. Schizophrenia Bulletin, 25 (2), 275 –289. doi.org/10.1093/oxfordjournals.schbul.a033378.
80. Stephens,J.H, Astrup, H, Carpenter J.R & Shalfer, J. W (1982). A comparison of nine systems to diagnose schizophrenia. Psychiatry Research, 6(2), 127-143.
81. Storzbach, D. M., & Corrigan, P. W. (1996). Cognitive rehabilitation for schizophrenia. In P. W. Corrigan & S. C. Yudofsky (Eds.), Cognitive rehabilitation for neuropsychiatric disorders (pp 299–328). American Psychiatric Association.
82. Tarrier, N., Barrowclough, C., Vaughn, C., Bamrah, J.S., Porceddu, K., watts, S & Freeman, H (2018). The community management of schizophrenia: a controlled trial of a behavioural intervention with families to reduce relapse. The British Journal of Psychiatry, 153 (4), 532 – 542.
83. Tarrier, N., Kinney, C., McCarthy, E., Humphreys, L., Wittkowski, A., & Morris, J. (2000). Two–year follow–up of cognitive–behavioral therapy and supportive counseling in the treatment of persistent symptoms in chronic schizophrenia. Journal of Consulting and Clinical Psychology, 68(5), 917–922. https://doi.org/10.1037/0022-006X.68.5.917.

eISSN 1303-5150

84. Thompson, J.L., Pogue-Geile, M.F., Grace, A.A., 2004. Developmental pathology, dopamine, and stress: a model for the age of onset of schizophrenia symptoms. Schizophrenia Bulletin 30, 875–900.
85. Tsang, H. W. H., & Cheung, L. C. C. (2005). Social Skills Training for People with Schizophrenia: Theory, Practice and Evidence. In J. E. Pletson (Ed.), Progress in schizophrenia research, 181–207. Nova Science Publishers
86. Valmaggia, L., Gaag, M.V., Tarrier, N., Pijnenborg, M., & Sloof, C, (2018). Cognitive behavior therapy for refractory psychotic symptoms of schizophrenia resistant to atypical antipsychotic medication. The British Journal of Psychiatry, 186 (4) , 324 – 330. doi.org/10.1192/bjp.186.4 .324.
87. Van Os J, Hanssen M, Bak M, Bijl RV, (2003). Vollebergh W. Do urbanicity and familial liability coparticipate in causing psychosis? American Journal of Psychiatry, 160, 477–482.
88. Van Os J, Pedersen C.B, Mortensen P.B. (2004). Confirmation of synergy between urbanicity and familial liability in the causation of psychosis. American Journal of Psychiatry, 161:2312–2314.
89. Ventura, J., Nuechterlein, K.H., Lukoff, D., Hardesty, J.P., 1989. A prospective study of stressful life events and schizophrenic relapse. Journal of Abnormal Psychology 98, 407–411.
90. Ventura, J., Nuechterlein, K.H., Hardesty, J.P., Gitlin, M., 1992. Life events and schizophrenic relapse after withdrawal of medication. The British Journal of Psychiatry 161, 615–620.
91. Ventura J, Nuechterlein KH, Subotnik KL, Hardesty JP, Mintz J (2000). Life events can trigger depressive exacerbation in the early course of schizophrenia. Journal of AbnormL Psychology, 109:139–144.
92. Voges, M., Addington, J., 2005. The association between social anxiety and social functioning in first episode psychosis. Schizophrenia Research 76, 287–292.
93. Walker, E., Mittal, V., Tessner, K., (2008). Stress and the hypothalamic pituitary adrenal axis in the developmental course of schizophrenia. Annual Review of Clinical Psychology 4, 189–216.
94. Wallace, C., Mullen, P.E., Burgess, P., Palmer, S & Ruschena, D. (1998). Serious criminal offending and mental disorder, case linkage study. The British Journal of Psychiatry , 172 (6) , 477 – 484. doi.org/10.1192/bjp.172.6.477 .

95. Watt, D. C., Katz, K & Shepherd, M. (2009). The natural history of schizophrenia: a 5 year prospective follow up of a representative sample of schizophrenics by means of a standardized clinical and social assessment. Psychological medicine, 13 (3), 663 – 670. doi.org/10.1017/S0033291700048091
96. Wing, J. K., et al. (1964). The industrial rehabilitation of long-stay schizophrenic patients: A study of 45 patients at an Industrial Rehabilitation Unit. Privy Council, Medical Research Council Memorandum, 42, 42.
97. Wing, J.K & Brown.G. W (1970). A comparative study of three mental hospitals: 1960-1968. Institutionalism and schizophrenia, DOI: https://doi.org/10.1017/CBO9780511753374.
98. Yuii, K., Suzuki, M., Kurachi, M., 2007. Stress sensitization in schizophrenia. Annals of the New York Academy of Sciences 1113, 276–290.

eISSN 1303-5150