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Psychosocial interventions in schizophrenia: Focus on guidelines

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Abstract

Background: Schizophrenia is a lifelong condition with acute exacerbations and varying degrees of functional disability. Acute and long-term treatments are based on antipsychotic drugs, even if some domains of personal and social functioning are not addressed by psychopharmacotherapy. In fact, psychosocial interventions show a positive impact on patient's functioning and clinical outcome. In addition, psychosocial interventions are significantly associated with a lower number of relapses and hospitalizations in schizophrenia.

Methods: An analytical review of the International Guidelines on Psychosocial Interventions in Schizophrenia has been performed; we included the National Institute for Health and Care Excellence (NICE) guidelines, the Scottish Intercollegiate Guidelines Network (SIGN) guidelines, the Royal Australian and New Zealand College of Psychiatrists (RANZCP) guidelines, the Schizophrenia Patient Outcomes Research Team (PORT) guidelines and the American Psychiatric Association (APA) guidelines.

Results: The international guidelines recommend psychosocial interventions as supportive treatments alongside pharmaceutical or psychotherapeutic ones.

Conclusion: More research studies need to be conducted and included in the updated version of the international guidelines to confirm the effectiveness of psychosocial interventions in the long-term outcome of schizophrenia.

Keywords

Guidelines, schizophrenia, psychosocial interventions, social functioning, recovery.

Introduction

Nowadays, almost 26 million people suffer from schizophrenia worldwide (Fleischhacker et al., 2014). Schizophrenia is a lifelong condition with acute exacerbations and varying degrees of functional disability, due to an interaction of biological, genetic and environmental factors. As a consequence, people with schizophrenia may need integrated treatments including psychopharmacotherapy, psychosocial interventions, care of physical health and treatment of comorbidities (Altamura et al., 2015). Antipsychotic drugs are a key element in the acute and long-term treatment of psychosis (Remington et al., 2010). A lifetime pharmacological treatment for schizophrenia patients is essential to reduce the frequency and severity of relapses, to dampen the cognitive impairment and consequences on patient's personal functioning (Barry et al., 2012; Miyamoto et al., 2012). Psychosocial interventions aim to potentiate the effect of pharmacological treatments and are focused on specific areas of personal functioning, to improve the clinical outcomes and contribute to reduce the number of relapses and hospitalizations. According to the stress-vulnerability model, schizophrenia may be explained by a personal psychological and biological vulnerability, as the result of genetic and environmental interactions, including perinatal stressful events (e.g. obstetrical complications; Zubin & Spring, 1977). In fact, stressful events may trigger the biological vulnerability

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leading to the outbreak of psychosis and may have an impact on the lifetime course of illness in terms of relapses (Zubin & Spring, 1977). Nonetheless, the empowerment of personal coping strategies and social support may decrease the effects of stress on the outcome of illness with a reduction of relapses and hospitalizations (Liberman et al., 1986; Mueser et al., 2013). This evidence encourages the development and employment of psychosocial interventions in the treatment of schizophrenia and supports their role in the recovery-oriented approaches (Liberman et al., 1986; Mueser et al., 2013).

This narrative review reports on the available guidelines and recommendations regarding the efficacy and employment of psychosocial interventions in the individualized and recovery-oriented treatment of schizophrenia. The article provides evidence-based suggestions for mental health care professionals, patients and their caregivers, all involved in residential or community rehabilitation programs.

Methods

We reviewed and commented the international guidelines reporting evidence from the literature on the efficacy of psychosocial interventions (adherence therapy, art therapy, cognitive behavioral therapy (CBT), cognitive remediation therapy (CRT), family interventions, social skills training (SST), psychoeducation, vocational rehabilitation interventions, peer support, self-management interventions, assertive community treatment (ACT)) in the treatment of schizophrenia patients. The last updated version of each following guideline on schizophrenia has been considered: the National Institute for Health and Care Excellence (NICE) guidelines; Scottish Intercollegiate Guidelines Network (SIGN) guidelines; Royal Australian and New Zealand College of Psychiatrists (RANZCP) guidelines; Schizophrenia Patient Outcomes Research Team (PORT) guidelines; American Psychiatric Association (APA) guidelines.

Adherence therapy

It is well described that non-adherence to prescribed treatments is significantly associated with psychotic relapses, hospitalizations in schizophrenia patients with a negative impact on their clinical outcome and quality of life (Lambert et al., 2008). Also, antipsychotic treatments are considered to be effective in treating acute episodes of psychosis in the early stage of illness, with a significant reduction of symptoms in 85% of patients (Lambert et al., 2008), as well as in the long-term treatment, reducing the risk of relapses and suicidal behavior by 60% (Crocq et al., 2010; Leucht et al., 2012). Adherence therapy is a brief and pragmatic intervention, involving techniques and principles of motivational interviewing, psychoeducation and cognitive therapy, aimed to improve adherence to prescribed medications to increase their efficacy in reducing symptoms, improving the outcome with higher quality of life and lower number of relapses (NICE, 2014).

Even if it is internationally recognized that adherence is a crucial aspect of psychopharmacological treatments, evidence regarding those interventions aimed to improve adherence is not conclusive, as reported by the following international guidelines.

NICE guidelines (NICE, 2014): The Guideline Development Group concludes that there is limited evidence (based on a lack of clinical effectiveness) for the use of adherence therapy to support patients affected by schizophrenia and improving their outcome of illness.

SIGN guidelines (SIGN, 2013): Based on a body of evidence including high-quality systematic reviews, guidelines conclude there is no consistent evidence to recommend adherence therapy as an effective intervention for improving clinical outcomes as well as quality of life or relapse prevention in schizophrenia.

PORT guidelines (PORT, 2009): The guidelines do not provide any specific recommendation even if environmental support for improving adherence to treatments is suggested.

APA guidelines (APA, 2019): The guidelines recognize that all strategies aimed to promote adherence are crucial for a patient-centered treatment plan, for improving clinical outcomes and reducing risks of relapse, rehospitalization, suicidal and aggressive behaviors and mortality. They report that, even if adherence-based interventions are clinically considered as important, the evidence on a wide range of approaches is still limited.

RANZCP guidelines (RANZCP, 2019; Galletly et al., 2016): The guidelines recommend to assess and discuss adherence to medications continually (in the acute phase of illness as well as in the long-term treatment), and if non-adherence is identified, clinicians need to address it. Also, the working group recognizes three different clusters of factors associated with poor adherence: (a) *personal*: cultural and family issues, experiences of illness and treatment, support network, personality issues, psychological reactance, intelligence and views of illness; (b) related to the *treatment*: therapeutic alliance, treatment setting, effectiveness, complexity, side effects and stigma; (c) related to the *illness*: delusional beliefs, positive effects of illness experience, depression/anxiety, cognitive impairment and lack of motivation. Discussion between patient and doctor and shared-decision making is the base of any adherence-centered intervention; checking for side

effects and motivation is also useful as well as information and simplification of medication regimens (including long-acting formulations).

Authors' comment: Even if the adherence to medications is a crucial key element for the successful treatment of schizophrenia, the international guidelines conclude the data on effectiveness are still not consistent. This might suggest the lack of specific high-level evidence (e.g. randomized clinical trials (RCTs)) in the international literature, and this would be in contrast with the clinical daily practice, based on a set of practical interventions aimed to improve the level of treatment adherence among patients with psychosis, including the employment of long-acting antipsychotic medications on a full scale. Also, this may suggest that there may be an urgent need to update guidelines according to the recent, emerging clinical and research evidence.

Art therapies

Art therapies are a set of psychological interventions based on psychotherapeutic techniques associated with activities that promote creative expression, communication, insight and ability to socialize. They include art psychotherapy, dance movement therapy, body psychotherapy and drama and music therapy . The intervention is given by ad hoc trained art therapist and may involve groups of schizophrenia patients (NICE, 2014). Specific laboratories and materials are employed in the execution of these rehabilitation activities.

NICE (2014): They recommend the use of art therapies in all patients with schizophrenia or other psychoses, during the acute phase of illness as well as in the long term, especially for the reduction of negative symptoms. Goals of art therapies include allowing patients to experience themselves diversely and to be familiar with new ways of connections with other people, to translate patient's state of mind into a form of creative expression and to support patients in understanding their own feelings through the creative process.

SIGN (2013): After considering high-quality meta-analyses of six RCTs based on art therapies, and a multi-center study named Art Therapy in Schizophrenia–Systematic Evaluation (MATISSE; Crawford et al., 2012), the working group concludes there is insufficient evidence for recommending art therapies routinely in schizophrenia.

APA (2019): not considered. PORT (Dixon et al., 2010): not considered. RANZCP (2016, 2019): not considered.

Authors' comment: Art therapies seem to improve negative symptoms among people with schizophrenia but data on effectiveness are still very limited. Further large-scale studies are needed to test which forms of art therapy are associate with positive clinical outcomes and their cost–benefit ratio. In fact, laboratories and materials (e.g. paints, brushes, canvas, musical instruments and dance materials) for supporting art therapies should be introduced in the routine clinical settings as well as art therapists in the field of psychiatry and psychology should be specifically trained.

CBT

A large number of schizophrenia patients report persistent positive symptoms, hallucinations and delusions that induce high levels of distress and difficulty in social functioning (Kendall et al., 2016; Racenstein et al., 2002). Cognitive Behavioral Therapy for Psychosis (CBT*p*) aims to reduce psychotic symptoms and enhance strategies to reduce delusional beliefs with related distress and interference (Morrison et al., 2004). CBT*p* addresses patient's thoughts, feelings and actions and aims to promote alternative strategies to cope with target symptoms and improve the personal functioning (Morrison et al., 2004; Mueser et al., 2013). The intervention is even used to reduce negative symptoms, depression and anxiety (Morrison et al., 2004).

NICE (2014): CBT is recognized to be effective in reducing the severity of positive symptoms, in particular, hallucinations and depression ratings at the Positive and Negative Symptoms Scale (PANSS; Kay et al., 1987). The efficacy of CBT in improving the insight among patients or in the management of adherence to antipsychotic medication is poor. CBT may improve the clinical outcome, with lower additional costs, reducing rehospitalization rates up to 18 months of follow-up from the end of intervention. Also, CBT is recommended in the first episode of psychosis as well as for promoting recovery among patients with persistent positive or negative symptoms and for those in symptomatic remission.

SIGN (2013): They report on the effectiveness of CBT on specific outcome items such as depression (Peters et al., 2010), aggression and violence (Haddock et al., 2009), trauma (C. Jackson et al., 2009), capacity to work (Lysaker et al., 2009) and personal functioning (Grant et al., 2012). Positive effects on these outcomes may be observed with a minimum of 16 CBT sessions. In addition, it has been described a reduced use of illicit drugs among psychosis patients with comorbid substance abuse at 1-year follow-up (Barrowclough et al., 2010). Individual CBT*p* should be offered to those patients considered to be non-responders to traditional antipsychotic treatments and showing persisting symptoms and depression. CBT*p* can be started during the

first episode of schizophrenia, as well as continued in the recovery phase (guidelines assign to CBT a grade of recommendation 'A').

PORT (Dixon et al., 2010): They recommend to deliver CBT individually or into a therapeutic group for approximately 4–9 months. CBT should be focused on the identification of target issues/symptoms and the development of specific strategies to cope with them. Unlike the NICE and the SIGN, the PORT recognize that the efficacy of CBT for patients at first episode of psychosis needs to be confirmed (H. J. Jackson et al., 2005, 2008; Lewis et al., 2002; Tarrier et al., 2006; Tarrier & Wykes, 2004) and the evidence about the benefits of this intervention for patients experiencing a relapse is poor (Bechdolf et al., 2004; Garety et al., 2008; Startup et al., 2004).

According to NICE and SIGN, RANZCP (2016, 2019; Galletly et al., 2016) suggest the use of CBT during the pre-psychotic or prodromal phase and in the management of the acute phase of schizophrenia. There is a significant body of research examining the efficacy of treatments during the pre-psychotic phase and the CBT reached '1' as the level of evidence. RANZCP (Galletly et al., 2016) also recommend that CBT should be provided to all people with persistent symptoms of psychosis, especially when resistant to any antipsychotic treatment: CBT should always be offered in case of no response to clozapine or, as an adjuntive treatment to pharmacotherapy, to reduce the distress and disability.

The APA (2010, 2019): They include CBT among those recommended psychosocial treatments based on data of effectiveness in decreasing the frequency and severity of positive symptoms and the distress related to persistent lifetime symptoms. These benefits are not confirmed in terms of preventing relapses and rehospitalizations or improving social functioning. The APA (2010) guidelines highlight that treatment dropout rates are high for CBT, probably due to the weekly commitment not easily manageable for patients with severe negative symptoms. Outpatients with treatment-resistant schizophrenia should be treated with CBT as well.

Authors' comment: More than 40 RCTs on CBT*p* have been reviewed in the international guidelines, and it has been reported that CBT*p* is effective in reducing patients' symptoms and improving personal functioning more than other form of psychological interventions (Mueser et al., 2013). In particular, CBT*p* seems to be effective in reducing hallucinations, emotional distress and depression (Jauhar et al., 2014; Jones et al., 2012; Van der Gaag et al., 2014). Further evidence should be collected regarding the efficacy on negative symptoms, personal and social functioning and the effective number of sessions for CBT in different phases of psychosis. Also, competencies required for delivering CBT and resources in the real-world setting (including the need of time for weekly sessions, specific training for the professionals and costs) should be discussed in the studies.

CRT

Cognitive impairment is considered to be the *core* process of schizophrenia with relevant consequences on psychosocial functioning, such as work, independent living and social relationships (Tripathi et al., 2018). Schizophrenia leads to deficits in a large number of cognitive domains (Keefe et al., 2005), such as attention/vigilance, working memory, processing speed, visual and verbal learning, reasoning and problem-solving, abstract thinking, verbal comprehension and social cognition (Heinrichs & Zakzanis, 1998). Psychopharmacological treatments are not specifically effective on cognitive impairment, and a pattern of cognitive trainings have been developed and tested for improving cognition among schizophrenia patients (Bon & Franck, 2018). Cognitive remediation is defined as a rehabilitation treatment based on a combination of interventions and exercises aimed at improving attention, memory, language and/or executive functions in the long term (Vita et al., 2013). Also, some recent meta-analyses have demonstrated that cognitive remediation techniques have a positive impact not only on cognitive performance but also on patients' psychosocial functioning (Wykes et al., 2011). It has been suggested that interventions aimed to improve neurocognition (*cold cognition*) and social cognition (*hot cognition*) may show a synergic efficacy in improving patient's clinical and functional outcome (Bon & Franck, 2018).

NICE (2014): on the basis of recent literature, they conclude there is limited evidence about the long-lasting benefits on cognition and social functioning of cognitive remediation if not combined to other standard interventions. Some studies conducted in United States have demonstrated improvements in psychosocial outcomes among schizophrenia receiving cognitive remediation in combination with vocational training and/or supported employment services.

PORT (2009): They include cognitive remediation among those interventions not reporting treatment recommendations. The working group reviewed 33 RCTs on cognitive remediation and other 11 related studies: even if a large number of studies have shown improvements in neuropsychological domains with cognitive remediation treatment, its impact on psychosocial functioning has been less consistent. More evidence is

needed to recommend cognitive remediation in schizophrenia and confirm its effectiveness in the long term.

APA (2019): They include cognitive remediation among psychosocial treatments with limited evidence of efficacy. These interventions, aimed to address cognitive deficits, employ restorative, compensatory and environmental techniques. Restorative techniques include exercises tailored on patient's cognitive deficits; compensatory techniques help patients with schizophrenia to develop alternative strategies for supplying their cognitive deficits; and environmental interventions may increase environmental support to help patients with cognitive tasks (De Mare et al., 2018). Also, several studies have shown that brief computer-assisted training programs may improve patients' performance on neuropsychological tests (Twamley et al., 2002). However, findings from the studies did not show durability and generalizability (Robinson et al., 1999). The APA guidelines conclude, in line with the PORT and NICE guidelines, that cognitive remediation may be considered an experimental intervention, still not recommended as a part of routine practice.

SIGN (2013): They report there is evidence that cognitive remediation improves patient's cognitive performances, but there is limited evidence it may improve social and functional outcomes. The SIGN guidelines recommend to consider the use of CRT for people affected by schizophrenia with persisting difficulties based on cognitive deficits (grades of Recommendation: B).

RANZCP (2016, 2019): They recommend the use of CRT during all stages of illness including at-risk mental states, early psychosis and in people with established illness reporting cognitive impairment affecting personal functioning. Also, social cognitive therapies and cognitive remediation are considered synergic interventions to optimize functional recovery (Wykes et al., 2011). They recommend programs administered by clinicians specifically trained in CRT and do not suggest web-based trainings which are supported by poor evidence.

Authors' comment: Cognitive remediation may improve patients' functional outcome, especially when provided in addition to vocational training and supported employment services. CRT may also be delivered in combination with supported employment (McGurk et al., 2005), SST (Silverstein et al., 2008) and psychosocial intervention for the early stage of the illness (Hogarty et al., 2004). Also, social cognition remediation should be further considered. More research on the long-term effects of CRT should be conducted to confirm the benefits on cognitive and functional outcomes in schizophrenia. Moreover, issues regarding the availability of resources for the adoption of CRT in the routine settings, trainings for professionals, as well as costs for delivering this intervention in the long-term should be properly assessed in the following research studies and guidelines.

Family interventions

Family interventions aim to integrate patient's family members, caregivers and friends into treatments and rehabilitation during the acute as well as stable phase of schizophrenia. These interventions include cognitive, behavioral and supportive suggestions combined with elements of family therapy (McFarlane, 2016). Multiple approaches have been developed and empirically validated for family psychoeducation (Anderson et al., 1986; Barrowclough & Tarrier, 1992; Falloon et al., 1984; Kuipers et al., 2002; McFarlane, 2002). The aims of family intervention are (a) to improve the ability of family member/s to support patient's coping strategies, (b) to improve family's knowledge about schizophrenia and its treatment, (c) to decrease family's expressed emotion and (d) to improve family's problem-solving and communication to support patient's recovery. It may be delivered to a single family as well as to a group of several families (Lyman et al., 2014).

NICE (2014): They report robust evidence on the efficacy of family intervention. Family psychoeducation leads to a reduction of the risk of relapses within 12 months after the treatment. Furthermore, family intervention is associated with a reduction of hospitalizations and severity of symptoms. It can enhance additional critical outcomes, such as social performance and patient's knowledge about the illness. The NICE guidelines do recommend family intervention in the treatment of schizophrenia with high efficacy in preventing relapses if associated with long-term treatments.

PORT (2009): They include family psychoeducation among treatment recommendations. They point out that patients receiving a long-term family intervention (6–9 months) show a lower rate of relapses and rehospitalizations (Barrowclough et al., 1999; Pfammatter et al., 2006; Pilling et al., 2002). In addition, it has been reported that family psychoeducation improves treatment adherence, reduces levels of perceived stress and may improve vocational outcomes (Falloon et al., 1985; Mueser et al., 2001; Xiong et al., 1994). Secondarily, family psychoeducation has a positive impact on family relationships and reduces the burden and distress among patient's family members (Pharoah et al., 2010; Pilling et al., 2002). It is recommended that a family intervention, shorter than 6 months (but at least four sessions), should be offered to patients with schizophrenia and their family.

The SIGN (2013): Similarly, they recommend that family intervention should be provided to all patients with

schizophrenia who live with their own family members. This treatment is considered to be helpful for those patients with persistent symptoms and high risk of relapses. At least 10 sessions over a period of 3 months are recommended (grades of recommendation: A).

RANZCP (2016, 2019): They recognize that families of patients affected by schizophrenia report great distress, and family relationships have an impact on patient's rate of recovery. Family psychoeducation is effective and should be routinely provided in schizophrenia (level of evidence: I). Different programs (single family vs. family group) have been validated, empirically though (McFarlane, 2002; Pilling et al., 2002). Education about schizophrenia and enhancement of coping strategies are key elements of this intervention (Sin & Norman, 2013). Also, family intervention is highly recommended in the management of first-episode psychosis (level of evidence: I).

APA (2019): They strongly recommend family interventions among other psychosocial treatments. It might be helpful to start family psychoeducation from the early stages of patient's illness.

Authors' comment: All evidence-based guidelines confirm the efficacy of family interventions in reducing patient's relapse and rehospitalization rates as well as family burden. More than 50 RCTs conducted globally confirm that family interventions are highly recommended for treating people with psychosis and schizophrenia (Pharoah et al., 2010). We also believe that prospective, longitudinal, descriptive studies involving patients and families should be conducted and the assessment of patients' outcome and family outcome should be concurrently evaluated. Limitations of these studies may include time (the outcome should be assessed after months/years) and heterogeneity of approaches and responses.

Psychoeducation

Psychoeducation is aimed to provide information to patients with severe and enduring mental illness, including schizophrenia, about their own illness, its treatment, prognosis, appropriate strategies, including coping strategies, and their own rights (Pekkala & Merinder, 2002). This approach is based on the interaction between a well-trained information provider (mental health care professional) and service users, or their caregivers, to improve information about the illness, related support and management strategies (Darzi, 2008). Psychoeducational approaches may involve patients individually or groups of patients, acutely ill as well as in the outpatient settings. Manuals and readings should be suggested and information exchanges among participants should be correctly promoted.

NICE (2014): The Guideline Development Group in 2002 concludes there is any significant difference between psychoeducation and the administration of good-quality information, or between psychoeducation and good-quality family engagement (information is provided to patients in presence of his or her family). In 2014, the working group recommends good-quality information but confirms any specific robust evidence on the use of psychoeducation in the successful treatment of schizophrenia.

SIGN (2013): They report that good-quality standard care should include provision of information, as expected. Psychoeducation is recommended with a 'B' degree (including a body of evidence based on high-quality systematic reviews): 'Psychoeducation should not be offered as a stand-alone treatment intervention to individuals diagnosed with schizophrenia'; also, 'when a diagnosis is made, professionals should ensure that service users and families/carers are informed and that clear information is given about what the diagnosis means and why it has been made'; this statement does not include a specific psychoeducational approach.

APA (2019): They consider psychoeducational strategies useful only in the context of family interventions, especially in reducing relapses (Dixon et al., 2000; Hogarty et al., 1991) and improving patient's personal functioning and family well-being (Pilling et al., 2002; Pitschel-Walz et al., 2001). Key elements of this approach should include illness education, crisis management, emotional support and teaching regarding the coping strategies. Psychoeducation should be structured in high-quality programs with a duration ranging from 9 months to 2–3 years: evidence suggests that shorter family interventions are less effective than long-time trainings (Pitschel-Walz et al., 2001). There is no specific evidence on multi-familiar groups (McFarlane, 1994), or less intensive, once-monthly psychoeducational group meetings (Schooler et al., 1995).

RANZCP (2016, 2019): They strongly recommend psychoeducation as a 'core intervention' to improve adherence to treatments, management of relapses and knowledge on the illness. Psychoeducational intervention should be delivered individually, but also to patients' families, since they cope with chronic difficulties and distress, resulting in significant reduction of family well-being and functioning. Thus, the working group suggests that family psychoeducation is 'effective' and 'should be offered routinely' in the management of schizophrenia patients.

Authors' comment: Beyond the different recommendations, psychoeducation is a key approach in the treatment of patients with schizophrenia. International guidelines do not agree about how it should be

structured: they suggest that a good-quality standard care should include information to patients and families regarding the illness and its course. All educational approaches may contribute to reduce the rate of relapses, to improve adherence to treatments and, overall, outcome in the long term. Further research is needed to assess how the several variants of psychoeducational approach may be successfully integrated in the recommended treatments. Also, long-term studies on the outcome measures of schizophrenia patients (in all phases of illness) and their families should be encouraged.

SST

SST is defined as a structured psychosocial intervention designed to improve social performance and reduce distress in social situations involving psychiatric patients (NICE, 2014). It focusses on both verbal and non-verbal communication and aims to increase patient's abilities to prevent, process relevant social cues and appropriately respond to them (Liberman et al., 1989). Skills training programs may show different approaches but, typically, they all have in common a focus on interpersonal skills and share key elements, including an explanatory demonstration by the therapist; patient's role-playing; positive and corrective feedback from the therapist; and homework assignments. In hospital settings, SST should be supplemented with additional suggestions about the employment of skills in any individual everyday life.

PORT (Dixon et al., 2010), SIGN (2013) and APA (2019) guidelines agree to strongly recommend the SST as an integrated psychosocial intervention in schizophrenia. As reported, there are several systematic reviews concluding with a significant efficacy of SST on the potentiation of different skills in the long term (up to 1 year), although the number of studies with follow-up data is small for suggesting final conclusions (Eckman et al., 1992; Kurtz & Mueser, 2008; Liberman et al., 1998; Mueser et al., 1995; Wallace et al., 1992). It is clearly remarked, though, that SST, even when highly recommended, should be integrated with other treatments to achieve recovery. In particular, PORT guidelines suggest the effective combination with both family interventions and CBT. Also SIGN guidelines suggest combined treatments since SST does not address critical long-term clinical outcomes (Drake & Bellack, 2005; Galderisi et al., 2010) and is not effective on the reduction of positive symptoms or rate of rehospitalizations. It has been reported that SST may contribute to reduce negative symptoms of illness, as well as to improve cognitive and social skills related to them: all guidelines specifically suggest the intervention for patients reporting 'persisting problems related to social skills'. APA guidelines point out that SST should also be focused on teaching patients how to manage pharmacological treatment, identify side effects and recognize first signs of relapse.

NICE guidelines report no recommendation for routine delivery of SST among schizophrenia patients. In fact, NICE guidelines focus their research on clinical critical outcomes and SST is considered to be not effective, neither in short nor in long term, on some critical domains (positive symptoms, relapses and rehospitalizations), especially if administered without an integrated approach.

Authors' comment: SST is a strongly recommended intervention for patients with schizophrenia, and it can be focused on teaching patients on how to manage treatments and everyday tasks, and it aims to improve a variety of interpersonal abilities, chronically impaired. SST should be tailored on patient's impaired domains to achieve personal recovery. The combination with other treatments, such as pharmacotherapy and CBT, is highly recommended for increasing the effectiveness of this intervention. Long-term studies should be encouraged in this area of research as well.

Vocational rehabilitation interventions

The vocational rehabilitation interventions include a number of different approaches such as standard and modified supported employment, and prevocational training. Prevocational training is defined as any approach that aims to prepare the individual to seek a job opportunity through working in sheltered settings or with transitional employment (NICE, 2014). Supported employment in schizophrenia patients ranges from 12% to 39% (Evensen et al., 2016; Knapp et al., 2004; Kozma et al., 2011). Moreover, supported employment is defined as an approach to place users in competitive employment after a short period (less than 1 month) of preparation and without using any prevocational strategy like sheltered settings or transitional employment (NICE, 2014). Psychological interventions are also provided.

In literature, there is a shared consensus on the importance of reintroducing schizophrenia patients into the employment circuit through vocational rehabilitation interventions.

NICE (2014): They support vocational rehabilitation as an effective intervention for obtaining competitive employment, even though evidence about earnings and being able to maintain the job is inconclusive (Hoffmann et al., 2012; Lehman et al., 2002). Furthermore, as the APA (2019) guidelines confirm, there is no evidence about secondary effects of employment such as increasing levels of stress, symptoms or other negative outcomes (Lehman, 1995). It is also recommended that 'any person with schizophrenia who expresses interest in work should be offered supported employment'. A strong level of evidence for the 'individual placement

and support' approach is provided by the RANZCP guidelines as well. Thus, clinicians should always facilitate and encourage patients seeking a meaningful occupation, delivering the appropriate information and addressing them to specific vocational rehabilitation services. Prevocational training was not found to be effective in achieving competitive employment, but it was beneficial for occupation, especially when modified through the addition of a payment or a psychological intervention (NICE, 2014).

Authors' comment: Since unemployment is a significant area of disability for schizophrenia patients, rating 60%–80% worldwide, vocational rehabilitation interventions are strongly recommended by all the guidelines reviewed and always encouraged by clinicians. In particular, supported employment appears to be an effective approach to obtain competitive employment, even though further research is needed to establish if results are confirmed in the long term. There is no evidence on secondary negative effects of employment such as increased levels of stress, symptoms or other negative outcomes. Also, resources and costs should be evaluated for supporting these interventions in the routine practice.

ACT

ACT is a highly integrated approach based on a specific model of community-based care targeted for patients at high risk for rehospitalization. The Program for Assertive Community Treatment (PACT) aims to treat every patient addressing his personal deficits and disabilities with teams intervening on the territory, at patients' homes, neighborhoods and working places. The patient is assisted in dealing with daily life tasks, finding a job, resolving crisis and managing symptoms (Stein et al., 1990).

PACT is an extensive approach that requires many resources. When applicable, it is strongly recommended for reducing symptoms of psychosis (Bond et al., 2001) and rate of hospitalizations and improving quality of life (Rosenheck & Dennis, 2001), as reported by APA guidelines. The SIGN guidelines agree in recommending this approach for patients with residual psychotic symptoms and a history of poor adherence to treatments.

According to PORT guidelines, the ACT can be effective upon several outcomes (Bush et al., 1990; Stein & Test, 1980), including a decrease in homelessness (Boden et al., 2010), and improvement in housing stability (Nelson et al., 2007). Furthermore, it is suggested that it may be extended to specific subpopulations, such as drug users and forensic populations (Drake et al., 2006). In addition, NICE guidelines focus on minority ethnic groups as the main target for this community-based treatment, leading to the recommendation that mental health services should work together with local voluntary minorities to ensure that 'appropriate psychological and psychosocial treatment [. . .] is provided'.

Authors' comment: There is high-quality evidence supporting the ACT effectiveness in reducing symptoms, rates of rehospitalization and overall quality of life, improving adherence to treatments and mental health services. Nonetheless, ACT is a community-based intervention that requires many resources, not easily applicable in many countries. Further studies are needed to test feasibility and the cost–benefit ratio in the long term.

Peer support

Peer support is defined as a 'social, emotional support mutually offered or provided by persons having mental health conditions to other sharing a similar condition' (Solomon, 2004). It includes a range of approaches that allow consumers to share their lived experiences and to serve as a model for other patients. Since there is evidence that schizophrenia patients tend to avoid contact with mental health services (Repper & Watson, 2012), the presence of peer support may offer their experience and knowledge to help them, reduce the stigma and increase adherence (Salzer & Shear, 2002).

NICE guidelines propose three support interventions: (a) mutual support groups, or self-help groups, in which the users, reciprocally, share their own experiences; (b) peer support services, in which support is in one direction, from the more experienced users to the program participants; and (c) peer mental health service providers, in which users are employed in the public mental health service and integrated in the standard care. The body of evidence from studies regarding peer support is small, with several limitations and lack of homogeneity in the approaches. Thus, the PORT guidelines encourage further research to test which kind of consumer-based supports are effective. APA guidelines identify self-help groups (Davidson et al., 1999) as one of the oldest and widely available interventions, effective in improving symptoms and overall quality of life, even the rate of hospitalizations, treatment adherence, coping strategies and acceptance of illness (Raiff, 1984; Rappaport, 1993). Similar recommendations are provided by RANZCP guidelines.

Authors' comment: Peer support appears to be a promising approach in the treatment of patients with schizophrenia, since peers can easily share their own experience with the illness, hopefully reducing stigma, improving patients' adherence to medications, and participation to community programs. There are many different approaches with different structure and objectives, and the body of evidence about this intervention is still small, needing further research to

evaluate whether peer support can be routinely recommended for patients with schizophrenia.

Self-management interventions

Self-management is defined as the ability of patients to manage their own symptoms, treatment and changes in quality of life as a consequence of the illness (Barlow et al., 2002). The aim of self-management interventions is to improve knowledge and self-monitoring of the illness as well as coping strategies (Mueser et al., 2002). Training may come from peer supporters, mental coaches or mental health professionals.

NICE guidelines identify the following key programs in self-management interventions: (a) psychoeducation about the course of the illness and available treatment strategies, (b) self-monitoring of early predictors of relapse, (c) medication management, (d) symptoms management and (e) development of skills to improve overall quality of life and achieve recovery. Also, NICE guidelines suggest that manualized, face-to-face interventions carried out by service users may be recommended in the integrated treatment of patients with schizophrenia. Specific programs, like the Wellness Recovery Action Planning (WRAP; Copeland & Mead, 2004) and the Illness Management and Recovery (IMR; Gingerich & Tornvall, 2005), are recommended by the RANZCP guidelines, as self-management skills should always be considered to achieve recovery.

Authors' comment: Developing self-management skills should be an important focus for the public mental health services, although further research is needed to establish what kind of approach could be more effective in the process of recovery.

Table 1 summarizes recommendations from NICE, RANZCP, APA, SIGN and PORT, regarding the psychosocial interventions in schizophrenia.

Conclusion

The review of guidelines suggests that psychosocial interventions in schizophrenia may be helpful in combination with psychopharmacotherapy and psychotherapy in the treatment of people with severe mental illness, including schizophrenia. All these interventions may address unmet needs in the treatment of psychosis and, in particular, improve the psychosocial functioning of patients to promote their recovery from the illness in the long term. Specifically, negative symptoms, as well as personal functioning (including social, work and cognitive one), are addressed. More research should be conducted on the effectiveness of these interventions, and more resources should be allocated to deliver psychosocial rehabilitation on full scale. Also, an update of

Table 1. Psychosocial interventions in schizophrenia: a review of guidelines.

Intervention	NICE (2014)	RANZCP (2016, 2019)	APA (2019)	SIGN (2013)	PORT (2009)
Adherence therapy	No recommendation	–	–	No recommendation	No recommendation
Art therapies	High-quality evidence	–	–	No recommendation	–
Cognitive behavioral therapy	High-quality evidence	High-quality evidence	High-quality evidence	High-quality evidence	High-quality evidence
Cognitive remediation therapy	Limited evidence	High-quality evidence	Limited evidence	Limited evidence	Limited evidence
Family intervention	High-quality evidence	High-quality evidence	High-quality evidence	High-quality evidence	High-quality evidence
Psychoeducation	No recommendation	High-quality evidence	Limited evidence	No recommendation	–
Social skills training	No recommendation	–	High-quality evidence	High-quality evidence	High-quality evidence
Vocational rehabilitation interventions	High-quality evidence	High-quality evidence	High-quality evidence	–	High-quality evidence
Assertive community treatment	High-quality evidence	–	High-quality evidence	High-quality evidence	High-quality evidence
Peer support	No recommendation	Limited evidence	Limited evidence	–	Limited evidence
Self-management interventions	Limited evidence	Limited evidence	Limited evidence	–	Limited evidence

NICE: National Institute for Health and Care Excellence; RANZCP: Royal Australian and New Zealand College of Psychiatrists; APA: American Psychiatric Association; SIGN: Scottish Intercollegiate Guidelines Network; PORT: Schizophrenia Patient Outcomes Research Team.

international guidelines according to recent evidence of literature should be promoted.

Conflict of interest

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