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The monographic section about "Psychosocial Rehabilitation in Severe and Enduring Mental Disorders" exposed in this volume 7, has been possible to the excellent coordination of Professors Manuel Muñoz Lopez and Sonia Panadero Herrero from the University Complutense of Madrid.
The topic of the 7th edition of this magazine is Psychosocial Rehabilitation for Severe Mental Disorders. For me, being asked to write the introduction for this edition by the publishing committee was truly a challenge because the topic has been such a critical part of the psychiatric-psychological, social and cultural controversies in the history of the evaluation, treatment and social reinsertion of those with severe mental illnesses. It could be argued that the scientific literature on the topic has always involved ideological biases, with articles championing either progressive or more conservative visions. However, after several decades of progress in the field of healthcare, we can now say that the time is right for considering the rehabilitation of mental health patients within the community.

This edition starts with ten outstanding references in psychosocial rehabilitation presented by López Álvarez, a selection that reveals how relevant this topic has become over the past few decades. In the words of the author, “The controversies and debates all have practical implications. They aim to interpret the different views on the problems facing people with severe mental disorders, the different roles of the diverse interventions and the type and administrative location of teams and care facilities”... “With respect to the first aspect, we have consistently defended (López and Laviña, 2007) the use of a single term ("rehabilitation") to refer to five different things: a philosophy, a strategy, a level of care, a series of programs and a group of care facilities.” We agree that the process of social rehabilitation for those with severe mental illness requires a philosophical and ideological stance as well as the construction of a network of socially multifaceted care facilities. For this reason, the biggest challenge of this volume has been to gather research data on this topic and combine them with practical experiences from our field that help us to continue making progress. In this regard, in spite of the great number of facets of this topic and the space constraints of this volume, the articles included here have unquestionably fulfilled this objective.

The history of the viewpoints and social constructions of mental illness and the developments in pharmacology and psychotherapies (Liberman, 2008) have brought significant changes to the treatment and social rehabilitation of those with severe mental illness. From obscurantism and social exclusion to the integration of chronic mental patients, we have traveled a long way down a road that has been a difficult one for the professionals, the family members and most especially, for the patients themselves. As the articles in this edition reveal, we can now celebrate the fact that mental illness is viewed as a treatable illness whose patients merit respect. I say “treatable” because it is now considered an illness, one with its own aspects and needs, while its patients merit respect because the population at large has become sensitive to their needs. The social stigmas suffered by the mentally ill for centuries have been reduced as specific resources have been developed to help people with special mental difficulties. In the Autonomous Community of Andalusia and in other communities across Spain, as shown in the articles of this edition, mental healthcare services have undergone significant changes in the past three decades, and in spite of the persisting limitations and deficiencies of these services, the lives of patients have improved. The Local Rehabilitation Units (URA, their Spanish acronym) and the Therapeutic Communities have joined together resources that were poorly organized in the past.

In my opinion, the extensive network of Mental Health Care Centers and hospital facilities has provided those with severe mental illness with a more organized network of services for the past four decades. So much progress has been made that, as we can see in the articles included in this edition, most of today’s efforts are centered on two critical issues for patients: early detection and psychopharmacological treatment on the one hand, and rehabilitation and social integration on the other. Work is done to avoid the stigmatization and the deterioration of the state of people with severe mental illness. Governments have directed many efforts to creating a network of resources with the power to address social integration. In spite of the controversies and diverse opinions on the topic, we can say that there is a clear consensus that has been beneficial for patients, as shown in the studies described in this edition. Such consensus can help us avoid redundant controversies and minimize arguments that often overlook the actual needs of the people with the illness and their family members.

The study of the variables associated with the psychosocial needs of people with severe mental illness who use community resources and their family caregivers is presented by Guillén Andrés and Muñoz López, professors at the Universidad Complutense de Madrid. This study shows how important it is for patients with severe mental illnesses to have the support of family caregivers for social rehabilitation. In turn, the support for family members of people with special difficulties has been a growing topic across Spain in the past few decades. The recent Law of Dependence has been a turning point in the need for direct support among the family members of people with severe illnesses. As this study shows, the most frequent needs among people with mental illness are in the field of symptomology, needs for information, support for daily activities and company. All of...
these needs were related to variables such as the age of the patients, their professional activity and educational level, whether or not they lived with family members, the availability of resources and the individual’s global functioning. The most frequent needs among caregivers included individualized support, economic assistance, family associations and respite services; meanwhile, the number of needs was associated with the coping style and the level of use of support resources, as well as the individual needs and disability of the person with the mental illness.

The people with mental illness and their family caregivers present diverse needs in spite of the support provided by formal and informal networks. The straightforward conclusions of this first study are an important sign of the change in the areas emphasized within this field over the past few decades. Mental illness and the mental healthcare patient used to be the exclusive target of the vast majority of interventions. The family had to be advised and in many cases, the patients were isolated from their families and confined to macro-institutions that favored depersonalization and stigma. Today the main focus of the social rehabilitation of the chronic outpatient lies in services for families and social support, as well as the social reinsertion of the patient him/herself. Psychiatric and psychological theories have contributed to constructing or destroying resources to a great extent based on their points of view. Fortunately, we can now say that instead of identifying those “guilty or responsible for the illness,” the search is more aimed at finding resources and support for the members of the systems who suffer from the illnesses. The biological, psychological and social theories of mental illness have been integrated and as a result, the General Systems Theory and the entire community vision of healthcare sciences now focus on resources and services for the patient, the family and the professionals who are entrusted with caring for this group instead of focusing on theories and/or institutional powers. This progress is also owed to the contributions of many therapeutic models—from the dynamic theories, especially with the development of group psychotherapies, to the cognitive-behavioral models, and the systemic models. Although it has taken several decades, it appears that the image of the professionals looking for causes of the illness and that of families defending themselves from these professionals has given way to the image of many professionals and social actors trying to help the families of sons and daughters with severe mental illness protect their children.

This 7th edition includes an important article on Psychosocial Interventions in Early Psychosis. The work by Miriam Fornells-Ambrojo and Tom Craig from the Research Dept of Clinical, Educational and Health Psychology, University College London clearly reveals the importance of early detection, evaluation and treatment of psychosis. As the authors themselves state, there are two main arguments that justify early intervention. The first is delays in treatment and the second is insufficient attention to relapse prevention, which are associated with the worst clinical prognoses and poorer social functioning in the long term. At the same time, the authors point out the important repercussions for the education, development, employment and relationships of people who begin to have problems in this area of severe mental illness. The authors present the most effective interventions in this area (family intervention, cognitive-behavior therapy for the patients and supported employment for social integration), which are contributing to improve the quality of life of these patients and their family members. It is useful to note the optimism and hope of the care facilities that provide assistance for these people are a very critical factor for rehabilitation. Until recently, the work with families was left aside, at least in terms of direct work, and little attention was paid to the emotions of the therapists themselves or of the other people involved in psychosocial rehabilitation. All of the responsibility was placed with the person with the severe illness and on many occasions, family members were blamed for the “damage they had done to the patient.” The tradition of working with emotions expressed by the patient (Vaughn, C. & Leff, J. 1976; Espina A. et al., 2003) has contributed to a solid assembly of resources from different systems with the aim of helping families to be capable of dealing with the anguish suffered by patients and to be available for them.

It is essential to combine the resources of family therapies with cognitive-behavior techniques, psychoeducation and employment support to increase the efficacy of treatments of these patients. This seems to be a focal point that is facilitating a new language, one more focused on doing and caring than on old stereotypes or struggles among the proponents of different theoretical models. Finally, another important step forward has been the recognition that pharmacological treatments are a key way to increase the adaptation of patients with severe mental illness.

In the third article of this edition, “The State of Knowledge about Internalized Stigma on the Basis of the Socio-Cognitive-Behavioral Model,” authors Manuel Muñoz, María Sanz and Eloisa Pérez-Santos analyze the current use of the concept of “internalized stigma” for those with mental illness. A focus on the ideas and feelings that these people have about their situation has become highly relevant for psychological assistance. These studies are reviewed in order to increase the use of services among the patients. Internalized stigma differs from structural and social stigmas in that it touches on more subjective, personal aspects of the individual. In this regard, psychological intervention is more critical, since the other stigmas require interventions of a more political and psychosocial nature, though all three types of intervention must come into play in order to offer truly integral assistance to these people. It seems that internalized stigma is related to variables such as hope, self-esteem, empowerment, self-efficacy, quality of...
life and social variables like social support and integration. In addition to other variables, the results of this study are highly relevant, since they show that internalized stigma is associated with the underuse of services, a greater number of unmet needs, greater emotional unease, a lower level of social adjustments, more severe depression symptoms and a lower level of adherence to medication. The review of the models on this concept and a proposal based on a previous study by the same authors make this article a critical reference on this topic in our country and in other Spanish-speaking countries. Finally, it is important to note that this article makes valuable practical recommendations based on the study results and proposes a model for studying this.

Finally, Sonia Panadero and Abelardo Rodríguez, professors at the Universidad Complutense de Madrid, present a study on the “Quality of Life and Psychosocial Functioning in People with Severe and Chronic Mental Diseases.” The term “quality of life” has been increasingly used in studies on most severe and chronic illnesses. In many cases, efforts are no longer wasted in the causes and those responsible, and the focus has moved towards finding ways to improve the quality of life of the people who suffer from the illnesses as well as those who care for them. The authors present a study on a large population in the Autonomous Community of Madrid to find out more about the quality of life of outpatients at care facilities for those with severe mental illness. As the authors themselves note, the studies by Valiente, Vázquez and Simón (2010) show that one of the fundamental objectives of these resources—created within the context of psychosocial rehabilitation—is an improved quality of life among people with severe and chronic mental illness and that of their family members. This is achieved through changes in the living conditions of these people as well as improvements to internal aspects (affect, self-esteem, acceptance of their illness, etc.) (Touriño, 2010).

Based on this main idea, the authors of the article construct a course of action which is based on the value of existing community resources and the search for new ones that can improve the quality of life of patients and their families. The authors return to and expand on a line of inquiry developed a decade ago by Professor Giner Ubago (2001) at the Department of Psychiatry of the Universidad de Sevilla. The extensive sample and the instruments used make this study a valuable resource for analyzing programs for community intervention among severely ill patients. This work is commendable in that it focuses on how patients see and experience the use of services. On many occasions, this population is so marginalized and stigmatized that its opinions are not taken into account by either professionals or program administrators. I believe that it is essential to study the quality of life experienced by people with severe mental illness and to recover the dignity and the leading role of all those who suffer the consequences of the illness. Satisfaction with material aspects (such as one’s place of residence, neighborhood, services, local resources, clothing and food) is high, and this was one of the focuses of the study. In all cases, the average satisfaction was above five points on a seven-point scale. This also occurred with other aspects related to the social relations of users—specifically, the average satisfaction scores in terms of the people with whom they live and their relationship to their family, in addition to their recreational activities.

On the other hand, the author found lower levels of satisfaction (under four) for aspects related to one’s sex life, lack of friends, not having a partner and not having any professional activity. Taking the desires and needs of this population into account when planning services could be a way to increase their integration. For this reason, it is necessary to adjust the expectations of patients, their families, professionals and the administrators of mental healthcare in order to increase the satisfaction with services.

A careful reading of the articles included in this edition reveals that the main goal in the field is to increase the resources of people with severe mental illness and to assist their families in the difficult day-to-day tasks in order to make their lives easier. At the same time, it is critical to “care for the caregiver,” that is, to protect and support the people who are responsible for caring for ill family members through programs, legislation and changes in attitudes. Finally, we must address the topic of caring for the professionals who work with the patients and their family members. As the studies have shown, it is highly important to address the emotions expressed by family members, but we could also say that it is important to work with the “emotions not expressed by the professionals.” Services for the teams that work with chronic mental illness must include increased educational resources, spaces for reviewing and improving the way cases are dealt with and activities aimed at recharging the “batteries” of team members while facilitating team work. Due to the stress experienced by the professionals who work with patients with severe mental illness, it is essential for administrators to dedicate resources to the ongoing training of professionals and mutual care through group techniques. In the end, the process of stigma and social exclusion of the mentally ill and their family members has been reversed through the closeness, empathy and compassion provided by professionals who have ennobled their work in spite of the personal risks it involves.

Finally, I would like to congratulate the editorial staff for this edition and express my sincere hope that these articles will allow us all to reflect on the countless professionals who spend their days working to improve the quality of life of these individuals. The commendable work of mental health professionals often goes unnoticed by society, and these studies clearly reveal that these professionals continue to be hopeful and seek new resources even in times of crisis.
Introduction

There is no question as to the importance of psychosocial rehabilitation, but selecting ten key references in such a complex field is clearly a challenge. In the context of deinstitutionalization and community mental health movements, there is a growing consensus among those of us who work with people with severe mental disorders of the importance of what we refer to as “rehabilitation” to facilitate the recovery process and help patients develop an active life in their communities.

One important but controversial issue involves clarifying what we mean when we refer to rehabilitation, which continues to be the subject of debate and is addressed from a wide range of theoretical and technical approaches. Another significant topic—though it falls outside the scope of this article—is the extent to which the actual care given to this population is based on the theoretical importance of rehabilitation, a term that is often used in different ways.

The controversies and debates all have practical implications. They aim to interpret the different views on the problems facing people with severe mental disorders, the different roles of the diverse interventions and the type and administrative location of teams and care facilities. Thus, we can discuss whether rehabilitation should be separate from treatment or integrated, whether it is a question of public health or a social issue, and the level of specialization required to deal with it. These debates are made more difficult by the polysemous nature of the term “rehabilitation” but also due to the dynamics by which real models for psychosocial rehabilitation are developed in our country.

With respect to the first aspect, we consider (López and Laviana, 2007) that our use of a single term ("rehabilitation") refers to five different things: a philosophy, a strategy, a level of care, a series of programs and a group of care facilities. In fact, rehabilitation may be seen as a philosophy and a strategy that must be common to those of us who work with people with severe mental disorders; a specific level of care (from prevention, treatment, rehabilitation and social insertion) but with not such precise limits as those applied in other sectors of healthcare; a differentiation between a set of specific programs, and a type of care facilities that may vary at specific institutions and in different geographic areas.

In terms of administrative status or dependence (in the healthcare or the social sectors), something similar occurs: the philosophy and strategy must be common; there are programs that can be applied preferably by health professionals with different areas of specialization, but there are other programs that may be developed by other care systems. The same occurs with the care facilities.

In Spain, the diverse structures in the different autonomous communities—the result of different historic movements—further complicate matters. Thus, one of the most developed and repeated models is that of the Community of Madrid, which is generally considered the reference model, although not all of its procedures can necessarily be replicated and there are (and have been) alternative models (López and Laviana, 2007).

In fact, the basic aspects of the model reveal that the “classic” U.S. approaches were imported to Spain. These approaches emphasized rehabilitation as a global alternative to traditional psychiatric assistance in a context without public healthcare or social structures. Here a specific network was created, one that integrated rehabilitation units, residential programs and employment programs in social services with teams comprised of a great number of psychology professionals. This allowed for consistent, consolidated development, but there is no doubt that other models are in fact possible. In fact, this may not be the best model in terms of encouraging multidisciplinary involvement and integral healthcare or in terms of overcoming biological approaches in mental healthcare services.

Finally, beyond the issues that exceed the scope of this article, it is important to mention how challenging it is to select ten key references. An attempt was thus made to include both historic and current texts by both Spanish and foreign authors, positions that can be considered “classic” along with other more “contemporary” ones, and texts addressing topics that range from basic knowledge to organizational models and models for intervention. The fact that other references are also included in the description of each of the ten references allows us to extend the horizon in this complex and relatively controversial field.

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This classic article presents an initial approach to a basic model for the rehabilitation of people with severe mental disorders, one specifically aimed at the most common of these ailments (schizophrenia).

Although there have been more recent complex versions of this model (Nuechterlein and Dawson, 1984; Ciompi, 1989), this is the most cited reference. In contrast to more limited views of schizophrenia (biological or psychological), Zubin and Spring presented a new model, organizing the available information on risk factors and helping to create a set of interventions designed to increase people’s capacity to handle stressful situations and to reduce the repercussions of stress on people vulnerable to schizophrenia.

Nuechterlein’s model introduces new factors, especially those related to deficits in cognitive functioning (a topic of growing interest and increasing consensus), thus providing more fluid articulation between vulnerability, stress, competence and coping skills. On the other hand, Ciompi’s version attempts to explain, besides the acute episodes, subsequent decompensations and the evolution of the disorder. Connections are made with follow-up studies, including Ciompi’s own, that show a more favorable and socially contextualized evolution of people with a diagnosis of schizophrenia in the long term (Calabrese and Corrigan, 2005).

Overall, this article continues to be a basic reference that is difficult to prove empirically (“We can inquire whether the facts are true, but we cannot inquire whether the concepts are true—we can only ask if they are useful,” state the authors). However, the article is compatible with the growing volume of biological, psychological and social knowledge (Tandom, Keshavan and Nasrallah, 2008; Van Os, 2009) that question the unilateral visions of etiology and the inevitably chronic nature of the disease (Harding, Zubin and Strauss, 1987 and 1992). It thus makes an important contribution to rehabilitation, which is understood as a philosophy or strategy as well as the common base of intervention programs.


There are many works about the concept of recovery, including one by Bellack (2006) and the classic text by Anthony (1993), in addition to those written by the people directly affected. This article presents an integrating viewpoint of two alternative or complementary perspectives: the professional approach, which is understood as recovery “from” the illness or recovery as a measurable “outcome”, and that of those affected by the disease, in which recovery is understood as more of a “process” or a personal journey (recovery “in” the disease) that provides new personal meaning to life beyond one’s symptoms and disability. In addition, it discusses both familiar aspects as well as those which have yet to be addressed by researchers or have only been empirically assessed.

This relatively new concept incorporates the basic aspects of rehabilitation in a broad sense (philosophy and strategy), setting objectives for our interventions: to favor personal recovery processes and civic participation. It has clear implications both for individual care as well as for the organization and operations of the network of services, and takes into account the guidelines for psychosocial rehabilitation and community care.


One of the guidelines of rehabilitation is connected to the concepts of functioning and disability, which were redefined by the new classification of the WHO (WHO, 2001). This book offers a clear and articulate description of the concept of social functioning and its interpretations in different areas with diverse approaches. It is a useful point of departure, in spite of the years that have passed since its publication, for organizing knowledge and interventions.

The book gathers significant contributions in different chapters related to social functioning—contributions that are essential for the philosophy and strategy of rehabilitation—as well as others on different types of interventions and specific programs. Although some of the information needs to be updated and more details are needed on certain aspects, the overall vision it provides continues to be an adequate framework for integration.

Module 2. Basic Models


Although Liberman’s group (University of California, Los Angeles) and the group of Anthony and Farkas (Boston University) have different focuses, it is worthwhile to consider them together as the most well-known proponents of what we could refer to as the “classic” U.S. approach to rehabilitation. It is an approach that has had a decisive influence on the development of psychosocial models of rehabilitation in different countries, including Spain.
Although there are subtle differences between the two, within the psychological paradigm of social abilities, both works are based on directing rehabilitation interventions to improve one’s functioning and compensate for deficits through environmental support (Farkas and Anthony, 2010). However, it does so in the context of the United States, which does not have a highly developed structure of public health or social services. Thus, like other American programs with empirical evidence based on a local context, rehabilitation is usually separated from other types of services.

The two groups have published many articles and interesting manuals (Liberman, 2008; Anthony, Cohen, Farkas and Gagne, 2002; Corrigan, Muesser, Bond, Drake and Solomon, 2007), and for many years, the Spanish translation of one of Liberman’s first versions was an obligatory reference among those in the field in Spain.

The article, published in a special edition of the *Schizophrenia Bulletin*, presents the common issues addressed as part of this approach. It is essential reading, a historic reference and a source of a great part of the knowledge and interventions related to the field of rehabilitation, in spite of the contextual limitations referred to above.

Other models that can also be considered classic have things in common with these works but also important differences. These include the work by Spivak (1987), which is not as well-known in Spain, and the work by the Swiss researchers Roeder and Brenner (1996), whose approach is more focused on cognitive rehabilitation.


There is a Spanish translation of an earlier version that outlined a more integrated model of community mental healthcare services in which rehabilitation was presented as a common philosophy and strategy throughout the healthcare system. It integrated specific programs in the British context, which is quite different from that of the USA.

The book corresponds to a European and more integrated focus like that proposed by others such as Ciompi (1998) or the Finnish authors Antinnen and Alanen (1997). Its proposal led to a question in a recent article by the Dutchman Wiersma (2008), whose interest mainly resides in its title, which asks whether rehabilitation is a new name or a development in what has been referred to as “Social Psychiatry.” Some of us consider this to be an integrable development in community care, one that takes a less medical viewpoint of the illness (López and Laviana, 2007).

With connections to Wing’s group, the authors who contributed to this book—including Geoff Shephered, who wrote the interesting introduction—also draw on important biopsychosocial knowledge while questioning the concept of chronic illness, the supposedly inevitable and sole outcome of severe mental disorders.


Saraceno is better known as the director (recently retired) of the Department of Mental Health at the World Health Organisation during one of its most productive periods. However, this text has been widely overlooked in Spain, perhaps because it questions classic visions of rehabilitation, in spite of the fact that—as the author himself acknowledges—this is not a manual for rehabilitation but an essay that encourages reflection. It thus seems especially useful for considering community care with a strong component of rehabilitation, a position which would take us beyond the unquestioning imitation of classic models.

Saraceno first provides a critical overview of the models by Liberman, Anthony, Spivak and Ciompi, as well as models for family psychoeducation—which are generally considered rehabilitation programs even though their main objective is to prevent relapses (Aproa, Mari, Rathbone and Wong, 2010). He then brings up the fact that researchers frequently overlook references to the context where the rehabilitation takes place—be it the psychiatric hospital or the community where the patients live.

To offer a comparison and summarize the references (some of which are questionable sources) on both anti-psychiatry and the epidemiological perspectives in public health, Saraceno returns to the concept of deinstitutionalization in its broadest sense (Rotelli, De Leonardis and Mauri, 1987). He makes reference to specific movements in Italy and other countries which have developed and continue to develop less systematic procedures but involve the transformation of institutional environments and provide active support for the social lives of people with severe mental disorders. These are “practices in search of a theory” that are richer than the “laboratory” versions of traditional models, where rehabilitation experiences are inseparable from the set of healthcare and social services, approaches that break with traditional ones in psychiatry. It thus guides the field of rehabilitation not towards teaching patients how to become “normal,” i.e. increasing their competence and abilities, but toward facilitating their recognition as actors with effective capacity for negotiation and exchange in civic life. These are indispensable guidelines for any process of recovery and citizenship that are used in conjunction with more or less structured rehabilitation techniques.

Module 3. Spanish Contributions

In spite of the time that has passed and the criticism that could be made of some of the approaches—which are sometimes erratic—this continues to be a key reference. It is the first Spanish manual of rehabilitation, one based on a practical model that is both reasonable and consistent although, as we have said, some professionals do not always agree with certain aspects of the approach or the way it is organized and articulated.

As a global overview of the specific guidelines and procedures of rehabilitation, it has nonetheless been the source of knowledge for many professionals and a reference model for developing services and specific programs. For this reason, in spite of the criticism that could now be made of certain chapters (it was clearly a groundbreaking work when it was published), this continues to be a text that merits respect and has made a decisive contribution in terms of introducing theoretical approaches and techniques for rehabilitation in Spain.


Published fifteen years ago, this book provides a consistent summary of basic information about rehabilitation programs and makes them available to Spanish professionals who are not able to read texts in English.

It provides a diverse range of topics, from cognitive disorders to specific programs, incorporating different visions from Spain and abroad in order to offer an extensive panorama of the guidelines for rehabilitation and some of the most important models. As we mentioned when summarizing the book by Mueesser and Tarrier—and in spite of the distances between the two works—we believe that this Spanish language book provides a clear framework for articulating basic knowledge on guidance and interventions in rehabilitation.


When discussing Spanish language references, this is a key text that provides some of the most recent proposals in the field of psychosocial rehabilitation. At the same time, it reveals the level of development and consolidation of this field in Spain.

This book allows us to see the evolution that has occurred in this field since Abelardo Rodríguez published his manual, manifesting the growing level of consensus among health and social programs as well as the increased awareness on the part of Spanish professionals of theoretical and practical works from other countries.

In addition to general interventions, which provide summaries of different aspects of this subject, the text covers the main areas of work in rehabilitation, including both basic intervention programs as well as development programs for social support resources in areas such as employment, residence and the struggle against stigma and discrimination. Naturally, this last area has been a topic of growing interest in both theoretical terms and in practice (Muñoz, Perez, Crespo and Guillén, 2009) since it constitutes a basic aspect to improve the citizenship of people with severe mental disorders (López, Laviana, Fernandez, López, Rodriguez and Aparicio, 2009).


The same can be said of this book, another recent work with contributions by several authors that focuses on procedures, techniques and instruments of evaluation. It also shows that at least in terms of theory, progress is being made, although in terms of day-to-day practice, this field is still lacking in many ways.

Published as a special edition of the magazine Rehabilitación Psicosocial, the different articles included here summarize specific techniques and instruments that can be used in the evaluation of people with severe mental disorders as well as the available rehabilitation programs. In this regard, like the last reference reviewed, this is evidence that the professionals who have joined the field of rehabilitation in healthcare and in social services are staying abreast of the latest theoretical advances and increasing their level of consensus.

Conclusions

In summary, we have provided a selection of references that could allow for a comprehensive vision of the main aspects to be considered by clearly establishing the role of rehabilitation (understood as philosophy, strategy, an inventory of specific programs and a typology of services) in the community services for people with severe mental disorders.

Overall, the aim is to contextualize the role of rehabilitation in the public systems, which consist of both healthcare and social services, with a view towards recovery and citizenship among people suffering from severe mental disorders. In addition, the goal is to emphasize specific programs with a certain degree of empirical evidence to help these individuals in this personal process.

Finally, this selection is aimed at the progressive introduction of these approaches—which are not free from inconsistencies—in our country, with well-defined systems that provide for the progressive extension of services and greater
consonance among a growing number of committed, well-trained professionals.

References


Abstract

Objectives: To assess the needs of people with severe mental illness who live in the community and the needs of their informal caregivers, and to identify the variables associated with needs.

Method: Two relates samples were evaluated: outpatients with mental illness (N=95) ant their informal caregivers (N=53).

Results: The most frequently needs perceived by with people with mental illness involved symptoms, information, companionship and daytime activities; the quantity of needs were related to age, educational level, professional activity, not living with family, living in community residences, global functioning, disability, and health. The most frequently needs perceived by informal caregivers involved individual counseling and support for family, economical assistance, family associations, and respite care; the quantity of needs were related to coping and utilization of services, as well as the quantity of needs and disabilities of the relative with mental illness.

Conclusions: People with mental illness and their informal caregivers have various types of needs, despite the support provided by their formal and informal networks.

Keywords: Needs assessment - Mental illness - Caregivers

Introduction and Description of this Study

It is evident that the care for people with severe and prolonged mental disorders has experienced profound transformations over the past few decades. The community mental healthcare model aims to help these people with their psychiatric and psychosocial problems within their own social and community environment in order to strengthen their maintenance and integration in the family and social context in the most normal way possible (Desviat, 2010; Gisbert, 2002; Guinea, 2007). Within this model, family members represent one of the main pillars for support and care (Cañamares et al., 2001; De la Hoz et al., 1997; Touriño, Inglott, Baena and Fernández, 2010). Awareness of the needs of people with mental illness and those of their family members is critical when planning and providing adequate community care (Bebbington and Rees, 2001; Jones, 2009; Sobrino and Rodríguez, 2007).

In the field of mental health, the question of need usually arises when there is a health deficiency and, more precisely, when there is a deficit that can be addressed because a remedy for it exists (Torres, Rosales, Moreno and Jiménez, 2000). Some authors define need as the presence of a problem that interferes in a person’s evolution, rehabilitation or social integration, thus necessitating a specific type of response, care or solution (Brewin, Wing, Mangen, Brugha and MacCarthy, 1987). In relation to community healthcare, needs have been defined as the conditions that allow individuals to uphold, maintain or recover an acceptable level of social independence or quality of life (Department of Health Social Services Inspectorate, 1991).

The needs have been broadly evaluated through the use of different instruments such as the Needs for Care Assessment (NCA) (Brewin et al., 1987) and the Camberwell Assessment of Need (CAN) (Phelan et al., 1995), the latter of which has been widely used over the last few years. A review of the studies that have utilized the CAN indicates that the most frequent needs are related to everyday activities, company, psychiatric symptoms and anguish (e.g., Kulhara et al., 2010; Lasalvia, Ruggeri, Mazzi and Dall’Agnola, 2000; McCrone et al., 2001; Ochoa et al., 2003; Ochoa et al., 2005; Popescu and Micutlia, 2009; Rosales, Torres, Luna, Baca and Martínez, 2002; Slade, Phelan and Thornicroft, 1998; Thornicroft et al., 2002). The total number of needs described in the different studies is heterogeneous, ranging from 3.34 needs obtained in the study by Lasalvia et al. (2000), in which 247 users of mental healthcare community services in Verona were evaluated, and 8.64 needs obtained in the study by Phelan et al. (1995), who analyzed a sample of 60 people receiving mental healthcare services in London.

In terms of needs of the informal caregivers, there are some differences, given that these individuals do not have an illness or disability for which there is no treatment. Some authors use the term “need” to describe the lack of well-being among informal caregivers (Brewin, 1992). More recent definitions allude to circumstances in which the family members would like to receive assistance from service
professionals (Osse, Vernooij-Dassen, de Vree, Schadé and Grol, 2000). In the sociocultural context of Spain, the consensus document coordinated by Guinea (2007) points out the principal needs perceived by the family members of those with mental illness: information, material and economic assistance, periods of rest or respite, emotional support, technical support, and being considered when decisions are made that could have repercussions on the family.

The number of studies which assess the needs of the informal caregivers is much lower than the quantity of those focused on people with mental illness. Nonetheless, there are many studies that have used standardized and validated tools for assessment, such as the Cardinal Needs Schedule (RCNS) (Barrowclough, Marshall, Lockwood, Quinn and Sellwood, 1998), the Involvement Evaluation Questionnaire (Schene and van Wijngaarden, 1992) and the Caregivers’ Need for Support Scale (Stengard, 2002). Along with the traditional objective of identifying the educational and informational needs of family members (Marshall and Solomon, 2000; Mueser, Bellack, Wade, Sayers and Rosenthal, 1992; Stengard and Salokangas, 1997), there has been growing interest in evaluating additional areas of need as well as the degree of importance of each of these areas for family members and the degree to which these needs are met. In this regard, several studies have been done to evaluate how useful family members perceive the resources designed for them, the availability of these resources and their use (Graap et al., 2008; Pearce, McGovern and Barrowclough, 2006; Samele and Manning, 2000; Yeh, Liu and Hwu, 2010).

Based on the data found in literature on the needs of people with mental illness and their family members, this study was designed to provide updated data that are representative of Spain’s social and cultural context.

Objectives

This study has the following objectives: 1) To describe the needs of people with severe and prolonged mental illness, along with the needs of their informal caregivers; 2) To analyze how the total number of needs experienced by people with mental illness is related to potentially associated variables: sociodemographic characteristics, global functioning, disability and the type of facility (centers for psychosocial rehabilitation, job rehabilitation centers, day centers or small residences); 3) To analyze how the total number of needs experienced by their informal caregivers is related to potential associated variables of both the caregiver (sociodemographic characteristics, health, family burden of the caregiving tasks and coping) as well as those of the person with the mental illness (sociodemographic characteristics, global functioning, disability and the type of facility point of origin).

Method

Participants

The sample of people with mental illness was comprised of 95 people selected at random from the 12 centers of the Network of Social Services for people with severe and prolonged mental illness in the Community of Madrid: centers for psychosocial rehabilitation (n=37), job rehabilitation centers (n=32), day centers (n=8) and small residences (n=18). All the participants were receiving care at mental healthcare centers. The average age was 39 (DT=10.02); 57% were age 18-40 and 43% were between the ages of 41 and 65. Most of the participants were men (73.7%), single (83.2%) and had completed high school (75.8%); they did not have any professional activity (56.8%) and lived with family members (66.2%). A total of 55.2% of the participants had been diagnosed with schizophrenia, 11.5% with depression, 8.3% with bipolar disorder and 7.3% with personality disorders, while 3.1% had received other diagnoses. A total of 14.6% did not know their diagnosis or did not respond to the question.

The sample of informal caregivers was comprised of 53 people. The average age of caregivers was 60 (DT=12.65) and 19.2% were over the age of 70. The majority of the caregivers were women (77%), married (69.8%) and did not work outside the home (75.5%). In terms of their relationship with those they were caring for, in 61.5% of the cases, they were the mothers of the person with mental illness; 13.5% were the fathers and another 13.5% were the sisters. Other family relations appeared, though to a less extent: brothers (5.8%), wives (3.8%) and daughters (1.9%). Approximately 70% of those interviewed stated that they had been caring for their family member for more than ten years.

All the people participated in the study voluntarily after being informed of the study’s objectives and giving their written consent.

Design

For this study, a cross-sectional survey design was used with two samples of related peers (the sample of people with mental illness and the sample of their informal caregivers). Two independent evaluators were responsible for gathering the data in each sample. The evaluation of each participant was done during a single meeting by applying a series of standardized instruments during an interview with the participant.

Instruments

People with mental illness

Sociodemographic questionnaire (designed by the authors)
Camberwell Assessment of Need questionnaire (CAN) (Phelan et al., 1995), Spanish language version by Jiménez, Moreno, Rodríguez and Torres (1995). The CAN assessed whether need was present in 22 areas. For each identified need, the degree of assistance that the person receives from friends and family members was assessed, along with the degree of assistance received from public services and the degree of assistance the person needs (interrater reliability=0.99; test-retest reliability=0.78; Kappa = 0.18).

The Short Disability Assessment Schedule of the World Health Organisation (WHO-DAS-II) (Üstün, 1999), Spanish language version by Vázquez-Barquero et al. (2000). This instrument has 12 items which allows the researcher to gauge the severity and duration of the disability which is assessed based on an individual’s state of health (intraclass correlation coefficient=0.40-0.74).

Global Assessment of Functioning (GAF) (American Association of Psychiatry, 2007). The GAF is an instrument employed in Axis V of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) for the evaluation of general activity. It consists of a 100 point scale in which the professional must evaluate both the severity of the symptoms the person is experiencing as well as the degree of deterioration in one’s school, job or social activities (intraclass correlation coefficient=0.57).

Informal caregivers

Sociodemographic questionnaire (designed by the authors)

Questionnaire of the needs of the informal caregiver (designed by the authors). Based on the Caregivers’ Need for Support Scale developed by Stengard (2002), family members are read a list of the different services for the informal caregivers of people with mental illness. For each of the services, the family member must indicate: a) to what degree he/she considers each of these services necessary for the family on a scale of 0 (not necessary) to 10 (highly necessary); and b) if during the last year, he/she has received any of these services. The Cronbach’s alpha has been calculated for this scale at 0.80. The questionnaire also includes an item taken from the European Study on the Needs of Family Members of People with Mental Illness (Spanish Federation of People with Mental Illness and their Families, 1994), which asks the family member whether he/she needs more guidance or information on different subjects of interest.

Caregiver Burden Interview (CBI) (Zarit, Reever and Bach-Peterson, 1980), Spanish adaptation by Martin et al. (1996). This assesses the main caregiver’s subjective experience of burden. It includes 22 items on a scale of 1 (never) to 5 (almost always). The Cronbach's alpha obtained in this study was 0.91.

Questionnaire on coping styles (COPE) (Carver, Scheier and Weintraub, 1989), Spanish language adaptation by Crespo and Cruzado (1997). The short version was employed for this study and includes 28 items that describe different ways of coping. The scale goes from 1 (I have not been doing this at all) to 4 (I’ve been doing this a lot). The Cronbach’s alpha obtained in this study was 0.85.

Procedure

A multicenter-multiservice sampling was done at the facilities of the network of social services for people with mental illness in the Community of Madrid. At each of the participating centers, users were randomly selected and data was then gathered among the sample of people with mental illness. After identifying the main informal caregivers and requesting authorization to contact them, the next step involved gathering data among the sample of caregivers. Eleven of the caregivers refused to participate in the study. Other circumstances that led the caregiver not to participate included the following: the person with the illness indicated that he/she had no family (7 people); the person did not grant authorization for the researchers to contact their family member (15 people), or the caregiver could not be located (9 people). The only difference between the people with mental illness whose informal caregiver participated in the study and those who did not was that the latter group included a greater percentage of people without any professional activity ($\chi^2(2,95) = 9.532, p<0.01$).

The statistical analyses consisted in descriptive analyses for each of the samples and in an analysis of correlations to determine the relation and degree of association in terms of the quantity of needs and possible variables (Pearson correlation coefficients for the quantitative variables with Gaussian distribution; Spearman correlation coefficients for the quantitative variables with non-Gaussian distribution and the Pearson chi-squared test for categorical variables). All the statistical analyses were done using the Statistical Package for the Social Sciences Version 12.0 (SPSS 12.0S for Windows, 2003).

Results

People with mental illness

The average number of needs was 7.65 needs per person (DT±2.72). Specifically, the mean of met needs was 6.21 (DT±2.42) and the mean of unmet needs was 1.44 (DT±1.51). Table I shows that the most frequent needs (that is, the sum of the met and unmet needs) corresponded to the areas of psychiatric symptoms (present in 94.5% of the sample), information on illness and treatment (87.1%), company (68.4%) and daily activities (66.3%).
As can be seen on Table I, most of the needs were met. However, in some cases, the need was unmet and the problem persisted, especially in the areas of relationships with a partner (33.0%), company (26.3%), information (23.7%) and sexuality (16.9%).

Table 2 shows the percentage of people with met needs who were receiving assistance, be it informal (that is, help from family members, friends, etc.) or formal (from professionals, public services, institutions, etc.) On average, 55% of the people with met needs were receiving informal assistance while 60% received formal assistance.

The results of the analysis of correlations between the number of needs in the total sample of people with mental illness (N=95) and the different variables of interest shows that a greater quantity of needs is associated with:
- Increased age (r= .234, p<0.05).
- Higher disability (r= .326, p<0.01).
- Lower level of global functioning (r= -.440, p<0.01).
- A worse assessment of their general state of health (r= .265, p<0.01) and higher interference of these health issues (r=.214, p<0.05).
- Only finishing elementary school ($\chi^2(3.95)=9.263, p<0.05$).
- Not having any professional or preprofessional activity ($\chi^2(2.93)=6.107, p<0.05$).
- Not living with family members ($\chi^2(3.95)= 10.368, p<0.05$).

Informal Caregivers

A total of 58.5% of the caregivers experienced burden associated with the care of their family member and in 41.5% of the cases, this burden was intense. The majority of the caretakers considered the different services available for family members of people with mental illness as highly necessary (see Table 3), especially the support and individualized advisory services for the family (94.2%); economic assistance (87.5%); family school programs (80.8%), and substitute caregiver services (80.4%). However, the use of services during the past year had only been limited, with percentages ranging from 40.5% in the case of family schools to 14.6% for information hotlines.

With respect to the principle needs for information, 94.3% of the caregivers expressed a need for more information and guidance on the future of their family member; 77.4% wanted more social, economic and job information, and 75.5% desired more information on available services. Other subjects
Variables related to psychosocial needs among people with severe mental illness using community services and their informal caregivers

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of interest for the caregivers included information on tutelary foundations (67.9%), legal information (67.9%), information on their rights as family members (64.2%), information about the genetic/hereditary aspect of the illness (62.3%) and information about how to care for the person (60.4%).

A greater quantity of needs among caregivers was associated with the following variables of the caregiver and the person with mental illness:

A greater use of certain coping strategies by the caregiver, specifically, the use of alcohol and other substances (r = .356, p<0.01) and a reduced use of humor as a coping strategy (r = -.324, p<0.05)

Not receiving or utilizing diverse services for family members during the past year: individualized support (χ²(1.52)=17.093, p<0.0001), economic assistance (χ²(1.51)=10.218, p<0.001), substitute caregiver services (χ²(1.52)=9.329, p<0.01), telephone hotlines (χ²(1.53)=6.675, p<0.01), family member associations (χ²(1.50)=7.232, p<0.05), family schools (χ²(1.53)=7.715, p<0.05).

Greater disability of the person with mental illness in everyday activities (r = .95, p<0.01).

A lower quantity of needs of the person with the mental illness (r = -.399, p<0.01).

Table 2: People with mental illness with met needs who receive formal and informal assistance.

<table>
<thead>
<tr>
<th>People with met need (n)</th>
<th>People who receive informal assistance % (n)</th>
<th>People who receive formal assistance % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodations 55</td>
<td>67.3 (37)</td>
<td>47.3 (26)</td>
</tr>
<tr>
<td>Food 52</td>
<td>61.5 (32)</td>
<td>65.4 (34)</td>
</tr>
<tr>
<td>Daily activities 57</td>
<td>52.6 (30)</td>
<td>100 (57)</td>
</tr>
<tr>
<td>Home care 29</td>
<td>37.9 (11)</td>
<td>48.3 (14)</td>
</tr>
<tr>
<td>Personal care 14</td>
<td>42.9 (6)</td>
<td>50.0 (7)</td>
</tr>
<tr>
<td>Childcare 4</td>
<td>100 (4)</td>
<td>25.0 (1)</td>
</tr>
<tr>
<td>Basic education 26</td>
<td>65.4 (17)</td>
<td>53.8 (14)</td>
</tr>
<tr>
<td>Money 49</td>
<td>79.6 (39)</td>
<td>35.4 (17)</td>
</tr>
<tr>
<td>Company 40</td>
<td>87.5 (35)</td>
<td>85.0 (34)</td>
</tr>
<tr>
<td>Relationship with a partner 4</td>
<td>100 (4)</td>
<td>50.0 (2)</td>
</tr>
<tr>
<td>Sexuality 3</td>
<td>33.3 (1)</td>
<td>33.3 (1)</td>
</tr>
<tr>
<td>Psychiatric symptoms 85</td>
<td>48.2 (41)</td>
<td>96.5 (83)</td>
</tr>
<tr>
<td>Physical health 30</td>
<td>40.0 (12)</td>
<td>93.3 (28)</td>
</tr>
<tr>
<td>Anguish (Distress) 29</td>
<td>69.0 (20)</td>
<td>100 (29)</td>
</tr>
<tr>
<td>Risk to oneself 9</td>
<td>55.6 (5)</td>
<td>66.7 (6)</td>
</tr>
<tr>
<td>Risk to others 1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alcohol 3</td>
<td>66.7 (2)</td>
<td>66.7 (2)</td>
</tr>
<tr>
<td>Drugs 0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Information on one’s state and treatment 59</td>
<td>23.7 (14)</td>
<td>89.8 (53)</td>
</tr>
<tr>
<td>Transportation 33</td>
<td>27.3 (9)</td>
<td>75.8 (25)</td>
</tr>
<tr>
<td>Telephone 0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Social benefits 5</td>
<td>40.0 (2)</td>
<td>20.0 (1)</td>
</tr>
</tbody>
</table>

Table 3: Degree of need for different types of services on the part of caregivers and the use of these services over the past year (N=53).

<table>
<thead>
<tr>
<th>Services</th>
<th>Not necessary % (n)</th>
<th>Moderately necessary % (n)</th>
<th>Highly necessary % (n)</th>
<th>Use % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools for families</td>
<td>7.7 (4)</td>
<td>11.5 (6)</td>
<td>80.8 (42)</td>
<td>40.5 (17)</td>
</tr>
<tr>
<td>Individualized support and assistance</td>
<td>1.9 (1)</td>
<td>3.8 (2)</td>
<td>94.2 (49)</td>
<td>38.8 (19)</td>
</tr>
<tr>
<td>Information and help hotlines</td>
<td>7.7 (4)</td>
<td>13.5 (7)</td>
<td>78.8 (41)</td>
<td>14.6 (6)</td>
</tr>
<tr>
<td>Family associations</td>
<td>0</td>
<td>20.8 (10)</td>
<td>79.2 (38)</td>
<td>23.7 (9)</td>
</tr>
<tr>
<td>Economic assistance</td>
<td>6.3 (3)</td>
<td>6.3 (3)</td>
<td>87.5 (42)</td>
<td>21.4 (9)</td>
</tr>
<tr>
<td>Caregiver substitute services</td>
<td>11.8 (6)</td>
<td>7.8 (4)</td>
<td>80.4 (41)</td>
<td>19.5 (8)</td>
</tr>
</tbody>
</table>
No significant correlations were found between the quantity of needs and the other variables related to the caregiver or the person with the illness.

**Discussion**

The mean of needs of people with mental illness in this study was 7.65, which is similar to the findings of previous studies though somewhat higher than the average of 6.42 needs calculated in the studies that have applied the CAN among the Spanish population (McCrone et al., 2001; Ochoa et al., 2005; Rosales et al., 2002). This minor difference does not seem to be owed to a higher presence of needs that are unmet (whose mean was 1.44 in our study, which was lower than the mean of 2.11 needs calculated for the aforementioned studies), but to a higher number of met needs (the mean in this study is 6.21, which is quite higher than the mean of 4.28 needs calculated based on those studies). The results suggest that participants experience needs in diverse areas of functioning, but that these needs are met thanks to assistance provided by the family and/or services. In this regard, it is important to consider the type of participants, that is, whether they are people who use the public network of services for people with mental illness and are thus receiving support from the services, albeit to varying degrees.

The main areas of need detected are those of psychiatric symptoms, information about the illness and the treatment, daily activities, company, relationship with a partner and sexuality. These results are similar to the data obtained from other studies, especially in terms of the frequent presence of needs in the areas of company, psychiatric assistance and daily activities (e.g., Foldemo, Ek and Bogren, 2004; Hansson et al., 2001; Kovess et al., 2000; Moreno, Jiménez, Godoy and Torres, 2003; Rosales et al., 2002)

Certain authors such as McCrone et al. (2001) recommend being precautious about interpreting needs, as the provision of services can “create” needs that are met. In other words, the person can assume that if he/she is receiving a specific service, it has a corresponding need. In contrast, if the specific services are not provided, then it can lead the person to assume that no need exists in this area, thus leading actual unmet needs to be concealed.

The results indicate that the increase in the quantity of needs of people with mental illness is associated with certain healthcare and functioning variables (lower global functioning, higher disability and poorer state of perceived health) and sociodemographic (older, not have any professional or preprofessional activity, lower level of education, not living with family members and residential facilities as the point of origin). In this respect, the decisive influence of psychosocial functioning on the quantity of needs concurs with the results of previous studies. In the work by Middelboe et al. (2001), the level of functioning was a significant predictor of the total quantity of needs, and in the study by McCrone et al. (2001), it was the best predictive variable of the quantity of unmet needs. The influence of the level of disability also reflects studies that have included measurements of this variable (Issakidis and Teesson, 1999). Given that our study focused on variables associated with the total quantity of needs, it would be interesting to specifically analyze the different types of needs and their relation to diverse variables in future studies.

In terms of the study of the informal caregivers, it is important to note that caregiving tasks are generally handled by women, who represent 77% of the sample. The predominant profile is that of a woman around the age of 60, married, generally the mother of the person with the mental illness and someone who does not work outside the home.

When interpreting the results of the needs of caregivers, it is important to bear in mind that our study is limited to the evaluation of the needs for resources and services for caretakers, but not other types of personal needs related to coping with the illness. Caregivers consider that the diverse services which target the family members of people with mental illness are essential, but the percentage of use during the past year was only moderate. This study offers a general panorama of the needs perceived by family members, but its objectives and the design of the research do not allow us to determine which factors explain the limited use of the services. Authors such as Inglett, Touriño, Baena and Fernández (2004) have suggested that even though the family members of people with mental illness frequently express a need for support, they do not always have the availability or opportunity—and are not always willing—to utilize the services. According to González-Blanch and Carra (2001), this phenomenon could be related to the physical, psychological and economic costs of the intervention for families, but was also associated with variables related to the services themselves.

The results show that a great quantity of the needs of the informal caregivers are associated with some of their psychological and social characteristics, and more specifically, with the use of certain coping strategies and a lower use of support resources. This concurs, at least partially, with a study by Stengard (2002), which classified the informal caregivers in five conglomerates based on the style of coping and the different dimensions of care. The conglomerate referred to as “coping” grouped caregivers who handled the situation effectively, with low levels of psychological discomfort, a low level of burden and minimal needs for support and information. Unlike Stengard, however, we found no relation between burden and the needs of the caregiver.

The results also revealed that a greater quantity of caregiver needs is associated with certain variables related to the person with the mental illness: a higher level of disability and a lower quantity of needs. This final result is interesting, but in
the literature on the needs of caregivers, we have not found any study which examines the relationship between these variables in order to help explain this finding. One possible interpretation is that the support provided by the family contributes to reducing the needs of the person with the mental illness but at the same time can lead to a greater number of support needs among family members who provide this coverage in a prolonged way over time. In this regard, the literature on the informal care of people with mental illness reveals that caregivers frequently give themselves over to the task of caregiving while their needs take second place (Aznar and Berlanga, 2006; De la Huerta, Corona and Méndez, 2006; Losada, Montorio, Izal and Márquez, 2006; Navaie-Waliser et al., 2002).

Conclusions

The needs of the people with mental illness and their informal caregivers are complex, multidimensional phenomena. The correlations with other studies by Spanish researchers show that the psychosocial needs of these people are quite similar in different locations within our sociocultural context, which suggests that the results of this work could be generalized and applied to other autonomous communities with comparable healthcare and social services. Given that there are unmet needs among people with mental illness and their family members in spite of the assistance received from support networks, it would be interesting to investigate the main obstacles to receiving assistance and meeting needs on the part of the people with mental illness, their family members, and the services themselves.

References


**Acknowledgements**

We would like to thank the Complutense University of Madrid, since this study has mainly been financed by a graduate research grant.

In addition, we would like to thank the Department of Family and Social Affairs of the Community of Madrid, the centers that comprise the Network of Social Services, and the people with severe and prolonged mental illness who participated in this study.
Abstract:

Objectives: To describe the development of early intervention services for psychosis and the evidence for psychosocial interventions in a first episode of psychosis.

Method: A descriptive review

Results: Early intervention services (EIS) for psychosis have spread widely around the globe since their early beginnings in Australia, England and North America. The rationale for these services is twofold. First that worse clinical and social functioning outcomes are associated with delays in treatment and insufficient attention to relapse prevention and second that many psychoses occur at a critical period in a young person's life causing disruptions to education, employment and relationships from which he or she may never recover. Psychosocial interventions, focused on managing distress, developing coping strategies to reduce the risk of relapse and on returning to work and education have at least as important a role in recovery as does medication. Evidence for the effectiveness of family interventions, cognitive behaviour therapy for psychosis and supported employment is reviewed. Beyond these interventions, the optimism and enthusiasm of a typical EIS play an essential part in promoting recovery.

Keywords: Early intervention in psychosis, schizophrenia, psychosocial interventions, functional recovery.

INTRODUCTION

According to the World Health Organization (WHO, 2001) schizophrenia is the ninth leading cause of disability among all diseases worldwide. The total yearly cost of schizophrenia-spectrum psychoses in England is approximately £6.7 billion (Mangalore & Knapp, 2007). The highest percentage of these costs was due to lost productivity due to unemployment, absence from work and premature mortality (£3.4 billion). The cost of treatment to the National Health Service and local authorities was £2 billion and annual costs of welfare benefits were £570 million. The costs to families of informal care and private expenditure amounted to £615 million. However, the human cost, namely, the suffering by individuals and their carers, that could be estimated in terms of adverse impact in Quality-Adjusted Life Years (QALY) and quantified in monetary terms, has been proposed to exceed the health, social care and output losses added together (Sainsbury Centre for Mental Health, 2003).

The belief that better outcomes and hence reduced financial and societal burden might be achieved by intervening earlier in the course of disorder goes back to the turn of the last century even before the introduction of neuroleptic medication (e.g. Sullivan 1927) but it was not until the 1990s that services began to emerge explicitly targeting young people in a first episode of psychosis (e.g. McGorry et al. 1998).

Perhaps the best known service model is the Early Psychosis Prevention and Intervention Centre (EPPIC) in Melbourne Australia (McGorry et al. 1996) which has provided a valuable resource in terms of treatment manuals, guidelines and scientific evaluation disseminated around the world. In England, one of the earliest of these services was in Birmingham (Jackson and Farmer 1998) which under the direction of Max Birchwood and colleagues spearheaded the development of Early Intervention Services (EIS) nationally. The 1999 UK Government’s decision to ensure that all young people with a first episode of psychosis would receive prompt treatment from a dedicated EIS (The National Health Services (NHS) Plan, Department of Health (DoH), 1999) was followed by the Department of Health in its Mental Health Policy Implementation Guide (DoH, 2001) which promulgated the establishment of 50 EIS teams that would see around 150 new cases of psychosis per year in young people aged 14-35 and provide specialised treatment for the first 3 years of illness. The teams were therefore expected to have case load ratios of 1:15 (staff: patient) and provide a combination of best practice pharmacological, psychological and social interventions within an assertive community treatment framework. Their philosophy is captured in ‘The Early Psychosis Declaration’, jointly presented by the World Health Organisation and the International Early Psychosis Association (Bertolotto & McGorry, 2005) that proposes 5 key objectives for action: improving access, engagement and treatment, raising community awareness, promoting recovery, family engagement and support and practitioner training.

In the remainder of this article we turn to an examination of the essential components of an EIS service with a special emphasis on psychological and social interventions.
Rationale for a Psychosocial Approach in Early Psychosis

Epidemiological studies show that the onset of schizophrenia is age-related, with onset of illness typically occurring throughout adolescence and peaking in the twenties (Hafner et al. 1993; Kirkbride, et al. 2006). Thus the majority of occurrences occur at a critical developmental life stage in terms of personality, social role, educational and vocational achievement (Birchwood, McGorry & Jackson, 1997; Rinaldi et al. 2010) and so it comes as no surprise that the first episode of psychosis (FEP) has been found to be associated with a decline in education and employment (Harris et al. 2005; Goulding, Chien & Compton, 2010; Jones et al. 1993; Kessler et al. 1995; Mueser, Salyers & Mueser, 2010). Often this decline will already be apparent by the time the young person comes to the attention of the health service. These young people are more likely to be single, unemployed, to have reduced family contact and to be homelessness than their healthy contemporaries with adverse social circumstances consistently worsened on second presentation through a downward spiral of negative social outcomes in the early years of psychosis (Garety & Rigg, 2001). Thus a key rationale for early intervention in psychosis is to limit these disruptions to social and role functioning as well as reducing unnecessary suffering by achieving prompt resolution of symptoms and distress (Jackson, McGorry, & Allott, 2009).

Singh (2010) highlights two main strands of evidence in support of early intervention in psychosis: the ‘critical period’ hypothesis’ and ‘the duration of untreated hypothesis’. The ‘critical period’ hypothesis is based on the disruptive impact of illness on key developmental attainments such as completing education or holding down employment but also on evidence that onsets earlier in life have worse long-term symptom and disability outcomes (Harrison et al., 2001; Wiersma et al., 1998) and on the notion of a “plateau effect” whereby the most aggressive deterioration following the onset of illness happens in the first 2-3 years of illness, suggesting greater neuronal and psychosocial plasticity at an early stage (Birchwood, Todd & Jackson, 1998; McGlashan, 1984). There is strong evidence that a longer duration of untreated psychosis (DUP) is associated with poorer outcomes (Marshall et al., 2005) and decreased response to antipsychotic medication (Perkins et al. 2005). In a recent systematic review of 27 follow up studies, Marshall, Harrigan and Lewis (2009) concluded that the association between longer DUP and poorer outcome held after controlling for premorbid adjustment. Importantly, the need for specialised pathways to care in early psychosis became apparent after research from Canada and the UK revealed that most of the treatment delay occurs after help-seeking (by the individual or their families) and within generic health services (Brunet et al. 2007; Norman et al. 2004).

Intervention Strategies in Early Psychosis

These notions of the importance of starting treatment early and attempting to prevent subsequent relapse and deterioration link to the three main intervention strategies in early intervention in psychosis each targeting different stages of illness (Singh, 2010). These are, the prevention of the onset of psychosis in people thought to be at particularly high risk of developing a psychotic illness, the promotion of early detection to identify cases and reduce the duration of untreated psychosis, and the improvement of outcomes in people who have experienced a first episode of psychosis by facilitating and maintaining their social and clinical recovery.

Preventing Transition to Psychosis

Services working with people with an ‘At-Risk Mental State’ (ARMS)² aim to prevent the transition to psychosis, but should transition occur, contact with services can also help to reduce the duration of untreated psychosis. Some studies have shown that antipsychotic medication alone (McGlashan et al. 2006) or in combination with psychological interventions (McGorry et al. 2002) reduce the likelihood in transition. However, some commentators (e.g. Warner et al. 2005) have highlighted the ethical dilemmas involved in intervening before the onset of psychosis, namely, the potential harm caused to ‘false-positives’ or people who are incorrectly screened as to be at risk of developing psychosis but who never develop the illness. Of particular concern are the risks of taking antipsychotic medication and erroneously adjusting one’s life goals because of the perceived stigma of being labelled at-risk of developing psychosis (Goode, 1999). Therefore the international agreement (International Early Psychosis Association Writing Group, 2005) is that clients attending services for at high risk of psychosis must be help-seeking and that psychosocial interventions should be prioritized in this group. For instance, Lemos-Giráldez, Vallina-Fernández, Fernández-Iglesias et al. (2009) describe how in their prevention program for psychosis set in the Spanish region of Cantabria all clients identified to be at ultra high risk for psychosis are offered CBT, and only those with severe attenuated symptoms of psychosis who additionally present with acute clinical or functional impairment are offered low dose antipsychotic medication.

Early Detection

People with FEP in generic mental health services have poor outcome (Singh et al., 2000), with data suggesting that

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² An individual can meet ARMS criteria in one or more of three ways: (1) a recent decline in functioning coupled with either schizotypal personality disorder or a first-degree relative with psychosis; (2) ‘attenuated’ positive psychotic symptoms; and (3) a brief psychotic episode of less than 1 week’s duration that resolves without antipsychotic medication (Yung et al. 1998).

³ Website: www.p3-info.es
there are long delays in the start of treatment of people with early psychosis in routine mental health services in a range of countries (Norman & Malla, 2001; Farooq et al. 2009). Some of these delays are due to a lack of general public awareness of the symptoms of psychosis and the importance of early treatment. The Scandinavian Treatment and Intervention in Psychosis (TIPS) study has specifically looked at the benefits of an early detection strategy, which included rapid access to specialist early detection teams and a massive public information campaign targeting teachers, general practitioners and young people with information about the early signs of psychosis and the importance of prompt treatment. This early detection programme was associated with shorter DUP, reduced suicidal ideation, milder symptoms at baseline as well as a lower likelihood of experiencing negative symptoms and a trend towards improved functional and social outcomes over the two year follow up (Larsen et al. 2006; Melle et al. 2004; Melle et al. 2008).

Interestingly, the ongoing massive information campaign aimed to raise awareness about recognising the symptoms of psychosis seems to be a necessary concurrent component of early detection as Joa et al. (2008), in a study using a historical cohort design pre and post the TIPS programme, found that once the campaign stopped, help seeking reduced, with DUP and symptom severity at presentation regressing to the pre campaign stage.

There have been some attempts to increase early detection of psychosis by training primary care physicians but such approaches have achieved only a modest impact, partly because of the relative rarity of incident psychosis in relation to common mental disorders in these settings but also because further even longer delays to confirmed diagnosis occur in the specialist mental health services (Power et al. 2007).

**Promoting and maintaining recovery**

Although the great majority of people with FEP (up to 96%) achieve complete clinical remission within 12 months (Robinson et al. 1999; Robinson et al. 2005; Rummel et al. 2003), relapse among those managed by generic mental health services occurs in 20-35% at 1 year, 50-65% at 2 years and 80% at 5 years (Robinson et al. 1999). Two large randomised controlled trials – the Lambeth Early Onset (LEO) in the UK (Craig et al., 2004; Garety et al. 2006) and the early detection and assertive community treatment in Denmark (OPUS; Petersen et al. 2005), confirmed earlier impressions of superior clinical, social and vocational outcomes as well as reduced readmissions to hospital. Recent meta-analyses concluded that EI services significantly reduce the risk of a relapse, with the number needed to treat of 8 to prevent one relapse (Alvarez-Jimenez et al., 2009). These studies share common features of employing a multidisciplinary team sufficiently skilled to deliver a number of evidence-based interventions, a ‘youth focus’ and an assertive outreach model of engagement and monitoring across the critical period of 2 to 3 years post-onset.

Key to these successful outcomes is the ability of EI teams to develop and maintain therapeutic alliances with the people they treat and studies convincingly demonstrate better engagement with EI services than with generic mental health teams (Craig et al. 2004; Lester et al., 2009) reflected in an increased number of appointments offered by the EI service and attended by the service user, a higher likelihood of being offered psychological interventions and having greater adherence to prescribed medication (Craig et al. 2004; Garety et al. 2006) and overall higher satisfaction with the care provided (e.g. Garety et al., 2006; Lester et al., 2009).

**Psychosocial interventions**

There is clear evidence in favor of beneficial effects of medication in terms of suppressing positive symptoms of psychosis and in preventing a relapse (Robinson et al., 1999) but medication is on the whole, less effective in terms of impact on the cognitive deficits and negative symptoms of psychosis (Keefe et al. 2007; Swartz et al. 2007) that tend to be more closely linked to poor social functioning (Wykes, 2010). Furthermore, the subjective impact of medication is often reported to be unpleasant, in part due to adverse side effects. Not surprisingly, non-concordance with medication is high, with approximately 50% of clients with first episode psychosis discontinuing treatment within a year from discharge from hospital (Mojtabai et al. 2003; Verdoux et al. 2000).

While pharmacological interventions remain the first line treatment it is clear that psychological and social interventions are needed at the very least to help the sufferer get their life back on track – to complete education, develop a career and establish meaningful relationships. These non-pharmacological approaches also have a direct role to play in improving outcome and preventing relapse given that the social environment plays a key role in triggering onset and relapse as shown by the increased likelihood of relapse of psychotic illness in people with psychosis who live in family environments characterised by high levels expressed emotion (high criticism, hostility and over-involvement) (Butzlaff & Hooley, 1998; Kavanagh, 1992; Pourmand, Kavanagh & Vaughan, 2005; Vaughan & Leff, 1976) and reports of increased reactivity to daily stressors reported in studies using experience sampling methods (Myin-Germeij et al. 2003).

What is the evidence for the use of psychosocial intervention in EP?

**Family Intervention**

Families tend to be the main source of social support for service users given their reduced social networks (Berry et
al. 2007; Stanghellini & Ballerini, 2007). In early psychosis, they often play a crucial role in accessing mental health services (Morgan, et al. 2006) and in improving treatment adherence (Ramirez- Garcia et al. 2006).

Caregivers of people experiencing a first episode of illness face unique challenges and therefore have different needs from families who have been in the caring role for a long time (Fadden & Smith, 2009). High levels of distress have been reported in first episode families (Kuipers & Bebbington, 2005; Martens & Addington, 2001) as the onset of mental health difficulties is often experienced as a traumatic event, with at least 30% of carers meeting criteria for post traumatic stress disorder (Bartolin & Jackson, 2008; Loughland et al. 2009). The ‘unexpected’ extension of the parental role is associated with burden of care, feelings of shame, guilt, and loss (Addington et al. 2005; Sin et al. 2007), with families having to cope with diagnostic uncertainty and unclear prognosis (Gleeson et al. 1999).

There is a substantial literature on the efficacy of family interventions (FI) in psychosis, largely but not exclusively derived from studies of patients with long established disorders. A Cochrane literature review and various meta-analyses (Pharoah, Mari & Streiner, 2003; Pharoah et al. 2006; Pilling et al., 2002; Pitschel-Wals et al. 2001) have concluded that FI reduces relapse rates (up to 40% compared to control groups) and hospital readmission rates. It appears that families who benefit from FI show improvements in the patient’s medication adherence and a reduction in the level of expressed emotion (EE) (Bustillo et al. 2001; Dixon et al. 2000; Haddock & Lewis, 2005; Pilling et al. 2002).

The evidence for efficacy of FI at a first episode is rather less well established (Askey, Gamble & Gray, 2007; Gleeson et al. 1999; Pilling et al. 2002; Bird et al. 2010; Álvarez-Jiménez et al. 2009). Studies in FEP populations show that the approach is effective in enhancing knowledge using psycho-educational approaches about the condition but rather more equivocal than in more chronic populations in terms of an impact on relapse and readmission to hospital (Linszen et al. 1996). Although a recent meta-analysis of family intervention in early psychosis by Bird et al. (2010) concluded that FI including both psycho-education and problem-solving reduced the likelihood of relapse and hospital admission rates combined, it is of note that only three methodologically robust trials (n=288) were included by the authors (Goldstein et al. 1978; Leavey et al. 2004; Zhang et al. 1994) and their method of delivery varied between trials (e.g. individual FI or multi-family intervention). Moreover, iatrogenic harm had been reported in two trials in which families with low EE became worse after the FI intervention (Jeppesen et al. 2005; Linszen et al. 1996).

However, targeting high EE families is not the straightforward solution as research shows that high EE in families during the first two years of illness is not necessarily a strong predictor or relapse (Bachmann et al. 2002; Heikkila et al. 2002; Huguelet et al. 1995; Patterson, Birchwood & Cochrane, 2000). A hierarchy of needs and interventions offered to families has accordingly been proposed (Mottaghipour & Hickerton, 2005; Pearson et al. 2007) with only a minority of families requiring formal family intervention. Additionally, family interventions for first episode psychosis should be guided by a stage model (Addington et al. 2005; Gleeson et al. 2010; Linszen et al. 1996) with a focus on both the impact of the family environment in the course of psychosis and on the impact of psychosis on caregiver wellbeing (Burbach, Fadden & Smith, 2010). Practical and emotional support provided to enable carers’ coping ability to manage crisis, facilitate and sustain recovery (Addington et al. 2005).

Caregiving process in early psychosis need to be further understood, with caregiver criticism and carers’ attributions of blame and responsibility to patients appearing to be constructs requiring further attention in the development of testable hypotheses about mechanisms of change in family interventions (Álvarez-Jiménez et al. 2010; Barrowclough & Hoolea 2003; Bentsen et al. 1998; Kuipers, Onwumere & Bebbington, 2010; Lobban et al. 2005).

**COGNITIVE BEHAVIOUR THERAPY (CBT)**

CBT for psychosis primarily aims to reduce distress associated with psychotic experiences and improve functioning. The intervention focuses on re-evaluating perceptions, beliefs, thinking styles and unhelpful behaviours related to distressing psychotic experiences and emotional problems (Chadwick, Birchwood & Trower, 1996; Fowler, Garety & Kuipers, 1995; Morrison et al., 2004).

The recently updated National Institute for Health and Clinical Excellence (NICE; 2009) clinical guideline for schizophrenia for England and Wales recommends offering CBT to all people with this disorder and FI to all families of people with schizophrenia living with or in close contact with the service user. As is the case with FI, although it well established that CBT is effective in reducing the severity of positive and negative symptoms of psychosis in people with more chronic or treatment resistant presentations (Gould et al., 2001; Pilling et al., 2002; Wykes et al., 2008), the evidence base for CBT in early psychosis is still in its infancy. Overall, the picture emerging is that CBT is effective in ameliorating positive and negative symptoms of psychosis in FEP but not in reducing relapse (Álvarez-Jiménez et al., 2009; Bird et al., 2010; Haddock & Lewis, 2005).

CBT significantly reduces the likelihood of making progression to psychosis in people with ultra-high risk of developing psychosis when compared to monitoring alone (Morrison et al. 2002), accelerates remission from acute symptoms in
Emotional dysfunction in psychosis (Birchwood, 2003) and more recently the processes of emotional recovery have been highlighted as potential targets for CBT (Gumley & Schwannauer, 2007). Appraisals of loss, entrapment and feelings of shame are common following an episode of psychosis (Birchwood et al. 2006; Roorke & Birchwood, 1998). Indeed individuals in the early phase of psychosis report social anxiety (Birchwood et al. 2007; Michail & Birchwood, 2009), post-traumatic stress disorder (PTSD) (Jackson et al. 2004; Morrison et al. 2003), depression and suicidal thinking (Birchwood et al. 2000; Iqbal et al. 2000; Westemeyer, Harrow & Marengo, 1991). CBT interventions targeting these problems are starting to be investigated in the context of early psychosis, with encouraging results in relation to PTSD (Jackson et al. 2009; Mueser & Rosenberg, 2003), reductions of hopelessness, and suicidal ideation (Power et al. 2003). Lastly, in line with the current trend for third wave CBT approaches, the potential value of Acceptance Commitment Therapy (ACT) in helping people with early psychosis to connect with their values when making daily life choices and to develop mindfulness and acceptance skills to deal with distressing symptoms of psychosis is currently being investigated (Morris & Oliver, 2009).

An area that requires further attention is substance misuse, particularly of cannabis, as it has been identified as a risk factor for developing psychosis (Arsenault et al. 2004; Henquet et al., 2005) and an increased likelihood of relapse (Linszen et al. 1994). Psychological interventions specifically targeting substance misuse have mainly used motivational intervention (MI) techniques, brief psycho-education and CBT techniques (e.g. setting clearly defined behavioural goals, identifying triggers, challenging cognitions). Although there is little evidence that MI and CBT for people with chronic psychosis and substance misuse reduce relapse of psychotic symptoms (Barrowclough, Haddock, Wykes, et al. 2011), there is some evidence of reductions in substance use and improved functioning (Baker et al. 2006; Barrowclough, Haddock, Tarrier et al. 2001; Barrowclough et al. 2011; Drake et al. 2004; Haddock, Barrowclough, Tarrier et al. 2003). In FEP, there is some promising evidence that MI plus CBT might be useful in reducing cannabis use (Edwards et al. 2006).

### Vocational Interventions

When asked, young people experiencing a first episode of psychosis, like their healthy peers say their ambition is to lead an ordinary life in which they have a meaningful job to do, to live in a nice house with a partner and to have a family (Parker, 2001). And yet almost half of those presenting in a first episode will have already dropped out of college or employment (Fisher et al. 2008), and as a result will have a much narrower circle of acquaintances, less disposable income and a less structure to their day. Many young people after an onset of psychosis also lose the active support of their family that is so key to finding and holding on to employment. There may even be active discouragement, including from mental health professionals who fear that the stress of work may precipitate a relapse. In practice such fears are largely unfounded. Diagnosis, severity of symptoms, poverty of social skills and even overall disability have repeatedly been shown to have only a modest impact on rates of employment and can be mitigated by appropriate ongoing support (Bond & Drake, 2008; Bond et al. 2001; Burke-Miller et al. 2006; Catty et al. 2008; Tsang, Lam, Ng, & Leung, 2000; Wewiorski & Fabian, 2004). Two features of psychosis do, however play a more significant role. First is depression which is associated with poorer quality of life, greater unemployment, suicidality, relapse and rehospitalisation (e.g. Sim et al. 2004). Second are cognitive impairments that while they may not affect the chances of job finding, do impair work performance and job retention (Dickerson et al. 2008). There have been recent attempts to address the cognitive impairments in FEP through cognitive remediation therapy (CRT) (Wykes et al. 2010), with some suggestions that CRT can result in improvements in cognitive flexibility and social functioning, mimicking CRT research with people with longstanding schizophrenia that report benefits in a range of cognitive domains, including problem-solving ability and everyday tasks (McGurk et al. 2007; Wykes, 2010).

However the strongest overall predictors of occupational outcome are a good employment history and a current motivation to work (Bond et al. 2001; MacDonald-Wilson et al. 2001). External influences including the state of the wider economy and so availability of work opportunities, ‘benefit traps’ whereby a young person is better off financially on a long-term health benefit than he would be in an entry level job and the pervasive problems of stigma also clearly play an important part in limiting employment (Warner, 1994).

The vocational intervention with the strongest evidence base is Individual Placement and Support (IPS). There are now over 16 randomised controlled showing IPS is more effective in terms of employment rate and job retention than traditional approaches based on lengthy pre-vocational training (see Crowther et al. 2001; Twamley et al. 2003 and Rinaldi et al. 2010 for recent reviews). The IPS approach has competitive open employment as the goal, provides rapid job search according to the patient’s preference for type of work and provides ongoing support according to the patient’s needs. Job finding is direct, immediate and individualised, with no pre vocational screening to determine ‘work readiness’ and does not exclude people because of diagnosis or a history of substance abuse. IPS appears to be equally effective following a first episode of psychosis. For example, Killacky et al. (2008) randomised 41 people with a FEP to either IPS or a
treatment as usual condition (comprising employment advice including giving the address of a local employment agency) and found the intervention group to have significantly better outcomes in terms of obtaining open (i.e. competitive) employment, working more weeks over the 6 month follow up period and earned more money than did participants in the TAU condition.

Conclusions and future challenges

Early Intervention services have been developed worldwide. Many, such as the models in Australia, the UK, Canada and Denmark reviewed by Harris et al. (2009), offer evidence based interventions and have developed their services on the basis of effectiveness research. Nevertheless there are still challenges to be addressed.

Are we delivering early intervention to the right people?

There is a tension between delivering unnecessary treatments or even possibly causing iatrogenic harm by offering interventions to people who do not need them (e.g. false positives when preventing transition to psychosis; EI with families with low EE) and not reaching out to people who have a need for a psychosocial approach. In a paper presented in the Third International Early Psychosis Conference in Copenhagen in 2005, Richard Warner challenged the evidence for the association between reductions in DUP and improved outcomes and instead argued that that these apparent gains ought to be interpreted as possibly resulting from selection bias, whereby samples with shorter DUP identified by early detection programs were more likely to be characterized by people with benign forms of illness, who might have recovered naturally from their psychotic symptoms (25-50% according to the World Health Organization, 1975).

On the other hand, Green et al. (2011) recently called for a more assertive approach to assessing people who are at risk of developing psychosis after finding that 70% of 430 people referred to an ‘at risk service’ who did not engage went on to present to mental health services during the follow up period of up to 7 years, a quarter of whom developed psychosis.

Sustaining gains in the long term

Two recent studies suggest that the early advantages of EI services may not be sustained in the longer term (Bertelsen et al. 2008; Gafoor et al. 2010). However in both studies the EI service was only provided for the first 2 years following onset, after which future care was transferred to generic mental health services. It remains an open question therefore, how long intensive early intervention should be provided for and whether all clients should be provided the same fixed input (Harris et al. 2009; Singh, 2010). In particular, the length to which clients who have achieved full recovery should be followed up.

However, as there is yet no clear evidence to the optimal duration of treatment it is not possible to develop best practice protocols that could be instrumental in negotiating funding to extend early psychosis care beyond the ‘critical period’ (Harris et al. 2009)

Further long term prospective research is needed to investigate the pathways post discharge from EI services.

Understanding the mechanisms of effectiveness

Sustaining gains achieved by early intervention requires the identification of active ingredients that can be successfully extended to continuing care (Singh, 2010). Hypothesised mediating factors in the biological (e.g. medication adherence, cannabis use), psychological (hope, positive sense of self), cognitive (e.g. problem solving, flexibility) and social (meaningful vocational and affiliative roles, low EE and family warm) domains could be investigated.

Adherence and competency in the delivery of psychosocial interventions are also crucial if we are to develop and understand how effective treatments work. Challenges for implementation such interventions (e.g. family intervention) include the need for managers to understand the current evidence base to provide managerial and professional support; commission training and support ongoing supervision, develop expertise within early intervention services (Smith & Velleman, 2002).

Funding by national health services: the economic argument

The current economic climate, with predicted cuts in funding to the national health services is likely to result in tensions between meeting funding linked targets (e.g. caseload) and maintaining adherence to EI principles, resulting in challenges to the sustainability of a quality service (Lester et al., 2009). This can only but revive the longstanding debate about the potentially wasteful allocation of scarce public resources to early intervention in psychosis (Bosanac, Patton & Castle, 2009; Pelosi & Birchwood, 2009; Singh, 2010). It is therefore encouraging that newly published research has shown that EI is cost-effective in the short term (McCrone, Craig, Power & Garety, 2010; Valmaggia et al. 2009).

The increased community care costs of EI services are offset by the reduction in inpatient cost and in some cases results in cost savings (Dodgson et al. 2008; Goldberg et al. 2006; McCrone et al. 2010; Mihalopoulos, McGorry & Carter, 1999) with the data suggesting that cost savings might be more ap-
parent in the longer term (Phillips et al. 2009), particularly in the case of EI intervention for people with an at risk mental state (Valmaggia et al. 2009) and when vocational functioning and quality of life outcomes are taken into account (Graig et al. 2004; Garety et al. 2006; McCrone et al. 2010).

Further economic research on EI should include cost-utility analyses (Huda, 2010; McCrone et al. 2010). In England, the National Institute of Clinical Excellence (NICE, 2008) recommends the use of quality-of-life adjusted years (QALYS) and there is ongoing research evaluating if measures used to calculate QALYS (e.g. EQ-5D) are sensitive enough to capture change in mental wellbeing in people with psychosis (Barton et al. 2009; Knapp et al. 2008).

**Defining recovery, challenging stigma**

Communicating hope and countering pessimistic views of the outcome of psychosis is essential. It is a truism that has emerged most powerfully in the ‘recovery’ paradigm, championed by service users many of whom had suffered for many years before finding new purpose and meaning in life. For them, recovery is not a narrow medical construct defined in terms of reductions in symptoms but rather one of having regained one’s life through work, in personal relationships or even through political action or advocacy on behalf of others. Linked to this is a growing interest in becoming more involved in decision making and contributing to defining the outcomes and measures of these for future research.

EI services on the whole embrace this philosophy, involving young people and their families as active participants on steering groups, as peer support workers, advocates and as part of wider educational programmes outreaching to schools and colleges.

To conclude, the gold standard EI service delivers evidence-based interventions in a service structure aimed at timely and sustained delivery across onset and during initial recovery in order to minimise relapse, wrapping the whole in a recovery-orientated, hopeful and collaborative approach.

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Abstract:

Introduction: The main objective of this paper is to offer an overview of the state of current knowledge about internalized stigma in people with severe mental illness.

Variables related to internalized stigma: This section highlights the primary socio-demographic, psychosocial and psychiatric variables related to internalized stigma.

Integrating models of internalized stigma: This section summarizes the most important integrating models proposed to explain the interplay of relationships in the field of internalized stigma.

Proposal of an empirical social-cognitive-behavioral model of internalized stigma: This section presents the results of a study conducted with a sample of 108 people with mental illness to propose a structural-equation model that encompasses social content (experiences of discrimination), as well as cognitive (stigma, internalized stigma and expectations of recovery) and behavioral (social functioning and personal autonomy) variables to explain the relationships between these variables in people with severe mental illness.

Implications for intervention: Overview of the effectiveness of psychological interventions in cases of internalized stigma and some guidance for future interventions and research.

Keywords: internalized stigma, schizophrenia, psychosocial rehabilitation, structural-equation models, discrimination.

I. INTRODUCTION

Stigma has been defined as a deep sense of worthlessness that demeans and diminishes those who experience it (Goffman, 1963). Different social groups have been and continue to be stigmatized due to race, sexual orientation, religion, and physical or mental illness (Manzo, 2004). In this paper, we will focus on the stigma experienced by individuals with mental illness.

Although the word stigma is used a great deal, it is not easy to define. Indeed, there are many often divergent definitions, and the term is frequently used in a broad and imprecise manner (Prior, Wood, Lewis and Pill, 2003; Manzo, 2004). Stigma on the basis of mental illness, as well as the understanding and analysis thereof, is complex (Corrigan, 2004; Muñoz, Pérez-Santos, Crespo and Guillén, 2009; Thornicroft, 2006; Vault, 2007). Three different yet interrelated levels of stigma associated with mental illness have been identified: structural, social, and internalized stigma (Corrigan, 2000; Corrigan and Watson, 2004; Link, 1987; Livingston and Boyd, 2010; Ritsher and Phelan, 2004). Structural or institutional stigma refers to actual discrimination at a structural level in laws and institutions. This is often the focus of political parties and activists (Corrigan, Roe and Tsang, 2011). Social or public stigma refers to the stigmatization of different groups or characteristics on the part of the general population. The effects of social stigma on different groups and in different situations have been studied in relation to relatives of individuals with mental illness (Angell et al., 2005; Corrigan and Miller, 2004), mental health professionals (Gray, 2002; Lauber et al., 2004; Page, 1980; Sartorius, 1998), in the work environment (Marwaha and Johnson, 2004), in the mass media (Angermeyer and Matschinger, 2003; Dietrich, Matschinger and Angermeyer, 2006) and in the general population (Link, Phelan and Bresnahan, 1999; Crisp, Gelder, Rix, Meltzer and Rowlands, 2000; Crespo, Muñoz, Pérez-Santos and Guillén, 2007). Lastly, internalized stigma refers to the stigma that each person feels. Livingston and Boyd define it as “a subjective process, embedded in a socio-cultural context, characterized by negative feelings (about the self), maladapted behavior, the transformation of identity or the application of stereotypes resulting from an individual’s experiences, perceptions or anticipation of negative social reaction on the basis of their mental illness.” The term perceived stigma (knowledge of stereotypes about mental illness) has been used to refer to the stigma felt by a person with mental illness (Ertugrul and Ulug, 2004; Link, 1987; Link, Struening, Rahav, Phelan and Nuttbrock, 1997; Link et al., 2001; Markowitz, 1998, 2001; Perlisk et al., 2001; Ritsher and Phelan, 2004; Rosenfield, 1997; Sirey et al., 2001; Wright, Gronfein and Owens, 2000), and the term experienced stigma to refer...
to direct experiences of discrimination or social exclusion (Depla, de Graaf, van Weeghel and Heeren, 2005; Dickerson, Sommerville, Origoni, Ringel and Parente, 2002; Link et al., 1997; Link, Struening, Neese-Todd, Asmussen and Phelan, 2001; Markowitz, 1998, 2001; Wahl, 1999).

2. Variables related to internalized stigma

One crucial point of reference in research on internalized stigma in mental illness is the work of Livingston and Boyd (2010), who undertook the most thorough overview to date. They carry out a meta-analysis of the research into socio-demographic, psycho-social and psychiatric variables related to internalized stigma in mental illness. In their review of the scientific literature published until the year 2010, they found 127 articles related to the issue, of which only forty-five met their criteria for inclusion in the meta-analysis. The results provide very important information about the state of knowledge in this area. The most striking thing is how recent much of the research into internalized stigma is (97.8% of the works were published after 2000), how much of it has been carried out in the United States (44.4%) and Europe (33.3%), and the lack of research into intervention strategies; only two studies (4.4%) test out intervention programs geared toward internalized stigma (these studies are discussed in the last section of this work, which deals with intervention). In terms of variables with significant relations to self-stigma, the authors construct three categories:

Socio-demographic variables: None of the studied variables of this order (sex, age, education level, employment status, marital status, income level and ethnic group) has been demonstrated to have a significant relationship to internalized stigma in the group of persons with mental illness.

Psycho-social variables: The studies reviewed do find significant relationships between internalized stigma and variables like hope, self-esteem, empowerment, self-efficacy, quality of life, and social variables like social support and integration. In most studies, the coefficients are negative for all variables, with values ranging from -0.58 to -0.28. This group of studies reveals that there is a negative correlation between experienced stigma and quality of life and self-esteem (Depla et al., 2005; Link et al., 2001; Markowitz, 1998; Rosenfield, 1997); experienced stigma reduces a sense of personal mastery and this, in turn, increases self-loathing on the part of the individual with mental illness (Wright et al., 2000).

Psychiatric variables: there is a positive correlation between the severity of symptoms (R=0.41) and internalized stigma, and a negative correlation between the severity of symptoms and adherence to treatment (R=-0.38). Startlingly, none of the other clinical variables studied — diagnosis, length of illness, hospitalizations, awareness of illness, functionality, or type of treatment — has been shown to have a significant relationship to self-stigma. In terms of symptomatology, the results are discordant. While some works report a positive correlation between self-stigma and symptoms of depression, psychosis and anxiety (Ertugrul and Ulug, 2004; Link et al., 1997; Markowitz, 1998), others indicate that there is no correlation with psychotic symptoms or overall symptomatology (Dickerson et al., 2002; Markowitz, 1998).

In terms of the methodology used, most of the studies are cross-sectional; only 13.3% of them include follow-up. Nonetheless, the results of those that do include follow-up are very significant as they evidence that internalized stigma is related to underuse of services, a greater number of unmet needs, greater emotional unease, a lower level of social adjustment, more severe depressive symptoms, and a lower level of adherence to medication.

Beyond the results of the aforementioned meta-analysis, the literature reveals some positive strategies used frequently by persons with mental illness to cope with stigma. Such strategies include looking for social support and getting involved in organizations and activities geared towards educating society about mental illness (Corrigan and Watson, 2005; Wahl, 1999). There are also maladaptive strategies, however, such as keeping illness a secret, withdrawing socially or seeking isolation as a way to avoid being rejected (Link et al., 1997; Muñoz, et al. 2009; Perlick et al., 2001; Vauth, 2007). The results would seem to demonstrate that individuals with larger and more effective social support networks are more likely to recover (Corrigan Giffort, Rashid, Leary and Okeke, 1999; Corrigan and Phelan, 2004; Liberman et al., 2002; Smith, 2000). Further, perception of stigma has been associated with a tendency towards social isolation and as an obstacle to recovery (Landeen, 2007). Empowerment seems to play an important role. Indeed, empowerment is one of the most widely studied variables in terms of the impact of internalized stigma on persons with mental illness (Corrigan and Garman, 1997; Rogers, Chamberlin, Ellison and Crean 1997). But the relationship between empowerment and self-stigma is not linear; the term “the paradox of self-stigma and mental illness” has been used to describe the observation that some individuals develop low self-esteem in the face of experiences of devaluation and discrimination, whereas others are relatively indifferent to the stigma or react to it with empowerment and anger (Corrigan, 2004; Deegan, 1990; Corrigan and Watson, 2002).

From a European perspective, one important study was carried out by GAMIAN-Europa (Global Alliance of Mental Illness Advocacy Networks, Broham, Elgie, Sartorius, Thornicroft and the GAMIAN Group, 2010), which investigated self-stigma, perceived discrimination, empowerment, and resistance to stigma in individuals with schizophrenia in fourteen European countries. The study was performed by means of a mail survey in those countries (which included Spain) (N=1229). Internalized stigma (ISMI, Ritsher and...
Phelan, 2004), empowerment (BUS, Rogers et al., 1997) and perceived discrimination (PDD, Link, 1987) were measured, and socio-demographic and clinical information collected. The results demonstrate that 41.7% of those interviewed experience self-stigma, 69.4% perceived discrimination, and 49.2% resistance to stigma at moderate or high levels. According to this study, the most predictive variables of internalized stigma were self-esteem/self-efficacy, empowerment, perceived discrimination, awareness of and agreement with diagnosis, and a large number of social contacts.

3. Integrating models of internalized stigma

A further step in the conception of internalized stigma entails the formulation of theoretical models that contemplate the interplay of variables that the research has revealed.

The group led by Patrick Corrigan is the one that has made the greatest contribution to research into stigma. Its many publications have formulated a model of the functioning of internalized stigma. The Social-Cognitive Model of Self-Stigma (Corrigan, Larson, and Kuwabara, 2008) maintains that, just like public stigma, internalized stigma consists of stereotypes, prejudices and discrimination. Individuals suffering from mental illness have prejudices against themselves and tend to agree with common stereotypes of mental illness. This prejudice, in turn, leads to negative emotional reactions, especially low self-esteem and self-efficacy (Wright et al., 2000). These self-prejudices can cause individuals with mental difficulties to quit their jobs and fail to lead independent lives (Link, Cullen, Struening, Shrout, and Dohrenwend 1989).

Corrigan and Watson (2002; 2007) emphasize the importance of identifying with the stigmatized group. It is likely that those individuals who do not identify with the stigmatized group are indifferent to stigmatization as they do not feel that the prejudice and discrimination are addressed at them. Those who do identify with the group of persons with mental illness, on the other hand, apply the stigma to themselves (Jetten, Spears and Manstead, 1996). When they consider the stigmatizing attitudes legitimate, their self-esteem and self-efficacy are likely to be diminished (Link, 1987; Markowitz, 1998; Rüschi, Matthias, Angermeyer and Corrigan, 2005). If, on the other hand, they consider those attitudes illegitimate and unfair, they are likely to respond with anger (Frable, Wortman, and Joseph, 1997), which in many cases gives rise to greater empowerment. This also suggests that individuals reduce the size of their social networks and miss opportunities in anticipation of rejection due to stigmatization even before they have ever been hospitalized. This, in turn, leads to isolation, unemployment and, as a result, reduced income (Agerbo, Byrne, Eaton, and Mortensen, 2004; Mueller et al., 2006). The perception of stigma can also mean that individuals are less inclined to seek treatment (Wrigley et al., 2005).

Vauth (2007) formulated an empirical model of internalized stigma. That study aims to demonstrate how a diminished self-concept (self-efficacy and empowerment) mediates the psychological effects of self-stigmatization; he asserts that it plays a role in coping with stigmatization. The study involved 172 out-patients diagnosed with schizophrenia. Their levels of internalized stigma and perceived devaluation were measured, along with their ability to cope with stigmatization, their self-efficacy, empowerment, quality of life, and depression. Vauth’s primary hypothesis (2007) was that coping with stigmatization with strategies of social isolation and secrecy means an increase in levels of anticipatory anxiety. This, in turn, increases the levels of perceived discrimination and devaluation that then have negative effects on self-efficacy and empowerment. The decrease in empowerment has an effect on depression and eventually reduces quality of life. The results seem to support Vauth’s hypothesis, which was tested by means of a model of structural equations, as 46% of the reduction in depression and 58% of the improvement in the quality of life could be explained by empowerment. At the same time, 51% of the reduction in empowerment is due to a reduction in self-efficacy, higher levels of dysfunctional coping and of anticipated stigma. Together, these data suggest that an avoidance approach is a risk factor in stigma as it erodes self-efficacy and empowerment.

The third model is the one formulated by the Yanos, Roe and Lysaker group (Yanos, Roe, Markus and Lysaker, 2008; Lysaker, Roe and Yanos, 2007). Their model deepens the connections between internalized stigma, recovery and the results of interventions, studying internalized stigma, awareness of illness, symptomatology, self-esteem, hopelessness and coping in a sample of 102 individuals with schizophrenia. Their model is based on the hypothesis that internalized stigma increases avoidance behavior (avoidance coping and social avoidance) and depressive symptoms. These results are related to both hope and self-esteem. Thus, internalized stigma would have negative effects on employment insertion and symptomatology because it reduces hope and self-esteem, which in turn can trigger the beginning or worsening of depressive symptoms, social avoidance and an avoidance coping style. In this model, involvement in rehabilitation and expectations of recovery play an important role in the process of recovery of individuals with serious mental illness.

4. Empirical social-cognitive-behavioral model of internalized stigma

Though the articles reviewed have provided a major advance in knowledge of the variables at play in internalized stigma, they have not, in our view, fully established the role that each

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1 This model has been published by Muñoz, M., Sanz, M., Pérez-Santos, E. and Quiroga, M.A. (2010) in Psychiatry Research, 186, 402–408. It is discussed in considerable detail to help all readers, but especially Spanish-speaking readers, to understand it.
of these variables plays in the origin and the consequences of self-stigma in individuals with serious mental illness. In order to empirically identify the relationships between these variables, a study was designed that would consider the main social, cognitive and behavioral variables involved in internalized stigma. A social-cognitive-behavioral model of structural equations was formulated to facilitate understanding of the role that social stigma and experiences of discrimination play in the genesis of internalized stigma. The model would provide insight into how internalized stigma interacts with expectations of recovery to then influence the outcomes of psycho-social rehabilitation at a number of levels (Muñoz, Pérez-Santos and Quiroga, 2011).

Procedure

The study was carried out at the Network of Social Services for individuals with serious and persistent mental illness in the Autonomous Community of Madrid. All the users of the network have been diagnosed with serious and persistent mental illness by the Office of Mental Health; they all receive psychiatric treatment and psycho-social rehabilitation. One hundred and eight individuals between the ages of eighteen and sixty-five with serious and persistent mental illness were interviewed. (For a detailed description of the methodology used, see Muñoz, Pérez-Santos, Crespo and Guillén, 2009 and Muñoz, Sanz, Pérez Santos and Quiroga, 2011).

Instruments

The following instruments were used:

Socio-demographic variables: The questionnaire included questions on general socio-demographic information.

Clinical variables: This information was taken from the clinical histories of participants; it included issues like diagnosis, symptomatology, and date of the beginning of the illness.

Stigma: The definition in the Spanish translation of Attribution Questionnaire was employed (AQ-27) (Corrigan, Markowitz, Watson, Rowan and Kubik, 2003; Muñoz et al., 2009).

Internalized stigma: The definition in the Spanish translation of Internalized Stigma of Mental Illness (ISMI) was employed (Muñoz et al., 2009; Ritsher, Ottingham and Grajales, 2003).

Psycho-social functioning: Information on psycho-social functioning was obtained through the Social Functioning Scale (SFS) (Birchwood, Smith, Cochrane and Wetton, 1990) as adapted by Vázquez-Morejón and Jiménez García-Bóveda (2000).

Expectation of Recovery: The Spanish version of Recovery Assessment Scale (RAS) (Corrigan, Giffort, Rashid, Leary and Okeke, 1999; Muñoz et al., 2009) was employed. That scale assesses empowerment, coping skills and quality of life.

Experiences of direct discrimination: The evaluation of this variable was carried out through the assessment of subjectively perceived discrimination in eleven different situations in which individuals with mental illness might have felt discriminated against on the basis of their illness.

Analysis of the Data

A descriptive analysis of the socio-demographic and clinical variables was performed. Individuals were then assigned an internalized stigma score (ISMI, Ritsher et al., 2003). All the variables were analyzed in order to identify those with the greatest degree of variation; an analysis was then performed to establish a correlation between those variables and the overall ISMI score. Those variables that were found to be significant were selected for inclusion in the model of structural equations. The model was put into effect using the SPSS 16.0 and AMOS 7.0 programs. (SPSS, 2007; Arbuckle, 2006) (for a detailed description of the analysis and results, see Muñoz et al., 2011).

Results

In terms of socio-demographic characteristics (sex, age, educational level, etc.), the sample studied is similar to the overall population of people with mental illness who receive care at the Madrid network of social services (Rodríguez, Muñoz and Panadero, 2007), which supports its representativeness. Significantly, the importance of clinical variables is minor. This supports the findings of Markowitz (1998) and Vauth (2007) that there are no significant differences in the clinical characteristics found in the clinical history, such as diagnosis, duration of psychosis or the evolution of the disorder.

In function of the relationships found, we attempted to find a model of structural equations that would evidence the relationships between the different variables. After a number of trials, a highly explicative model (CMIN / DF = 1.429; p = .066; TLI = .944; CFI = .971; RMSEA = .063 (.000 to .105)) with suitable adjustment indexes ($\chi^2=40.0, df = 28$) was formulated.

INCLUDE FIGURE 1

Figure 1 shows that stigma and experiences of discrimination are two latent variables statistically dependent on the data of their associated subscales, based on the regression analysis. Analysis of the data found these to be significant (fear, avoidance, family/partner relationships, friends). The content of the latent-stigma construct is quantifiable in the
subscores of fear and avoidance, and avoidance is a great factor (0.60) than fear (0.53). The latent construct of experiences of discrimination is created by means of subscales of discrimination in the area of family and partner relationships (0.58), and discrimination in the area of friends (0.65).

Though not statistically significant, the covariance relationship between the variables of stigma and experiences of discrimination is necessary for the model to adequately fit the data. At the same time, stigma exercises an influence on the latent construct of the expectation of recovery in individuals with mental illness (with two split-half subscales with coefficients of .97 and .91), through a highly significant negative regression, and positively on internalized stigma. Expectations of recovery (split-half with .95 and .91) follow the opposite course: a positive relationship with internalized stigma and a negative relation with expectations of recovery. Finally, expectations of recovery and internalized stigma modulate behavioral results both in social functioning (.83) and in personal autonomy (.57).

Discussion

Given the above, this model combines social variables (experiences of discrimination), with cognitive (stigma, internalized stigma, expectations of recovery) and behavioral (psycho-social functioning, personal autonomy) variables that can be manifested in three discrete instances. Experiences of discrimination are considered clearly social in nature and stigma is considered cognitive-social. The first of these –experiences of discrimination– is directly related to experiences in the most immediate social environment (partner relationships/family and friends), and the second –stigma– depends mainly on fear and avoidance. According to some authors (Agerbo, Byrne, Eaton and Mortensen, 2004; Mueller et al., 2006), the social networks of individuals with mental illness tend to be small and to mediate the internalization of stigma. This might explain the great importance of partnership relationships/family and close friends in public stigma perceived by individuals with mental illness. At the same time, there is a positive relationship between public stigma and the number of experiences of discrimination. Likewise, the positive relationship found here between stigma and internalized stigma seems to be in keeping with previous studies (Jetten et al., 1996). It also furthers Hayward and Bright’s finding (1997) that many individuals with mental illness are familiar with the stereotypes about their group like, for instance, the belief that the mentally ill are incompetent, and hence individuals are likely to internalize those stereotypes. At the same time, the research seems to indicate that public stigma perceived by an individual can reduce self-esteem and self-efficacy, and limit the likelihood of recovery (Link, 2001; Rüsch et al., 2005; Wright, 2000). In this model, this hypothesis is evidenced by the influence that mostly social factors seem to exercise on mostly cognitive factors, like internalized stigma and expectations of recovery. Unlike Corrigan’s model (Corrigan and Watson, 2002; Corrigan, Watson and Barr, 2006), this model does not contemplate the differential factor that is identification or lack of identification with the stigmatized group, though that does not mean that it is not considered important in terms of cognitive-social processing. In keeping with Corrigan et al. (2008), here public stigma seems to have a negative relationship to expectations of recovery and a positive relationship to internalized stigma, whereas experiences of discrimination seem to invert this tendency, with a positive relationship to internalized stigma and a negative relationship to expectations of recovery.

Figure 1. Proposed Structural Equation Model.

Note. The structural equation model: the rectangles represent observed variables. The ovals represent unobserved latent variables. The number next to each connector is the value of the standardized regression weights, and their significance is represented with asterisks: *p < .05, ** p < .01, ***p < .001.
In the third instance, in keeping with Link’s observations (1987) it is likely that the internalization of public stigma yield diminished cognitive and behavioral functioning on the part of the person with mental illness. It is also known that stigma can become a hindrance to access to health care, treatment, social resources, social inclusion and opportunities for recovery (Kadri and Sartorius, 2005; Wahl, 1999; Wrigley, Jackson, Judd and Komiti, 2005). Previous studies that have employed the same instrument to measure expectations of recovery (RAS, Corrigan et al., 1999) suggest that the overall result of the scale is associated with psycho-social functioning and symptomatology (Corrigan et al., 1999). Similarly, some studies indicate that stigma exercises a negative influence on the breadth and quality of social networks and, hence, social functioning (Angell, Cooke and Kovac, 2005; Link et al., 1989; Yanos, Rosenfield and Horwitz, 2001). Along these lines, it is known that widespread perception of stigma can affect a person’s social functioning (Lysaker, Roe and Yanos, 2006). In the model formulated in this study, this set of data is tackled at the third stage, which means that the aforementioned processes influence the observable results in psycho-social functioning in terms of two questions: social functioning and personal autonomy. Both questions bear an inverse relationship with internalized stigma and a direct relationship with expectations of recovery. Vauth (2007) indicates how the relationship between internalized stigma and the results in psycho-social functioning and depressive symptomatology are mediated by self-efficacy and empowerment. Although repeated attempts were made to include empowerment in this model, it was not possible to isolate it from internalized stigma, and hence it was excluded. Similarly, we have not included explicit measures of self-efficacy. It has been stated above that in the sample studied symptomatology (mainly psychotic, and not exclusively depressive, in nature) seems to be unrelated to internalized stigma. We believe that a model where the relationship between internalized stigma and behavioral results is more explicit might include the variables formulated by Vauth (2007) – coping, self-efficacy and empowerment – and the ones identified by Corrigan and Watson (2002; 2006) that address the different ways of internalizing public stigma insofar as there is greater or lesser identification with the stigmatized group.

5. Implications for intervention

In reviewing the literature on efficacious interventions to alleviate or remedy the effects of internalized stigma, one encounters a large number of recommendations based on the underlying theoretical models and research involving different variables and factors deemed relevant. Empowerment of individuals with mental illness and/or their families seems to play a key role in the struggle against the internalization of stigma (Corrigan et al., 2008). Further, a positive correlation has been observed between resistance to stigma (Sibitz, Unger, Woppmann, Zidek and Amering, 2011), self-esteem, empowerment and quality of life, and a negative correlation between stigma and depression. Similarly, an adequate social network, being married or single (not separated) and receiving out-patient treatment bear a positive relationship to resistance to stigma. Likewise, and in keeping with this model, Tsang, Fung and Chung (2010) have found that in individuals with schizophrenia, the relationship between self-stigma (low levels), state of change (preparedness for taking action), and overall functioning (good functioning) are predictors of adherence to intervention. That is, intervention on internalized stigma should be geared towards helping individuals to further states of change until they are prepared to take action and to stick with proper psychiatric and psycho-social treatments. It appears that psycho-social rehabilitation should focus on the recovery and/or improvement of the individual’s social network and on empowering the individual with mental illness and his or her family to improve self-esteem, self-efficacy and quality of life.

Nonetheless, there is little empirical data on the efficacy of the interventions proposed. Indeed, in the aforementioned review of the literature Livingston and Boyd (2010) found only twenty-two studies that included longitudinal measures of self-stigma, of which only six met the criteria for inclusion. More significantly still, only two of those studies discuss changes that occur over time due to intervention. Griffiths, Christensen, Jorn, Evans and Groves (2004) found that interventions yielded moderate but significant effects on individuals with depression. MacInnes and Lewis (2008), on the other hand, found that brief (six-week) cognitive group intervention was somewhat effective in individuals with serious and persistent mental illness who were also using psycho-social rehabilitation services. Such intervention was able to effect a significant reduction in internalized-stigma variables, but there was no correlation between that change and levels of self-esteem, self-acceptance and/or overall psychological wellbeing.

Recently, Roe, Hasson-Ohayon, Derhi, Yanos and Lysaker (2010) have compared the efficacy of narrative techniques and cognitive therapy for improvement of internalized stigma with positive results. A number of different positive effects are yielded, such as: qualitative improvements in experiential learning, positive changes in the experience of the self, the acquisition of new cognitive skills, greater levels of hope, improved coping and emotional changes. These results seem to be reinforced by factors such as therapeutic alliance and the active role played by participants in the intervention.

Most certainly, the state of research on internalized stigma and, more specifically, the model formulated here help to create a framework for reflection and research into the emergence, continuance and effects of internalized stigma.
They also offer certain keys in the struggle against stigma, which should be geared towards structural and social actions that reduce public stigma and the social barriers that it means for the groups involved. This can mean the recognition and defense of rights (in, for instance, the United Nations Convention on the Rights of Persons with Disabilities or The Green Book on Mental Health in Europe), as well as individual legal and judicial actions, ongoing and mass-scale awareness and defense campaigns in schools and the media (for example, the Changing Minds campaign in England). The struggle against stigma can also mean working with families and individuals close to persons with serious mental illness (friends, educators, employers, and so forth.) to help lessen the impact of discrimination against individuals with mental illness in their most immediate and frequent social environments. In closing, we would like to emphasize the need to strengthen areas of research that enable professionals who work directly with users of mental health services to implement programs and lines of intervention geared towards enabling the person with mental illness to increase personal autonomy, lead an independent life, make the most of his or her skills, and shift identification with and personal and social action in relation to stigma in order to facilitate social integration.

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Acknowledgements

This work was co-funded by the Cajamadrid Social Foundation and the Autonomous Community of Madrid. The authors would like to thank María Crespo, Ana Isabel Guillén and María de los Ángeles Quiroga for their help during different phases of the initial study.
Abstract:
People with chronic and severe mental diseases suffer from severe problems in their daily functioning and other issues that affect their quality of life. Many resources have been dedicated to help them address these problems. In the Autonomous Community of Madrid, there are services for people with chronic and severe mental diseases. In this study, we assess the quality of life and the functioning of 970 users of different social services of this network. The relationship among the instruments and the role of gender in terms of a person’s quality of life and functioning are presented.

Key words: chronic and severe mental diseases, quality of life, psychosocial functioning, gender.

INTRODUCTION

In his now classic definition, Liberman (1993) has pointed out three aspects that should be considered when defining severe and chronic mental diseases: diagnosis, functioning and duration. Focusing on the second of these two aspects, we can see that severe and chronic mental diseases often involve a deterioration that becomes evident in a range of disabilities mainly related to one’s loss of the ability to adequately perform social roles (Casas, Escandell, Ribas and Ochoa, 2010).

In general, in spite of the lack of consensus on the meaning of the concept of psychosocial functioning, this concept often includes aspect such as self-care, autonomy, self-control, interpersonal relations, leisure and free time and cognitive functioning (Casas et al., 2010). This concept focuses on what the person can do, the quality of daily activities and his/her need for assistance (Bacon, Collis and Plake, 2002).

In general, then, this concept refers to the different activities of an individual’s day-to-day life and the level of support and care that he or she needs. However, although the importance of this domain has now been acknowledged, it is still difficult to assess since functioning is an abstract concept and to date, there has been little consensus on the specific components of this concept. For example, the role that subjective components play in this type of concepts has yet to be defined (Brekke and Long, 2000).

The way in which severe and chronic mental disease relates to the problems or limitations in global psychosocial functioning has become increasingly clear (Brekke, Lee and Green, 2005), and this has made the measurement of global functioning indispensable when studying severe and chronic mental diseases, and very useful for mental healthcare professionals when evaluating results (Thornicroft and Tansella, 1996; Vázquez, Muñoz, Muñiz et al., 2000). This is because global functioning is an important predictor of the use of services and thus provides essential information for the planning of such services (Phelan, Wykes and Goldman, 1996).

Bearing this in mind, over the past few decades, the care of people with severe and chronic mental disease has undergone important transformations, moving progressively from the symptomatic treatment of the illness to integral care of the person’s needs within his/her own community, regardless of his/her symptomology. This has been captured in the models for psychosocial rehabilitation and accompanied by a rise in new types of resources and services for this population (APA, 2005; González and Rodríguez, 2002; Liberman, 1993; Prat, Gill, Barrett and Roberts, 2007).

One of the fundamental objectives of these resources—created within the framework of psychosocial rehabilitation—is to improve the quality of life of people with severe and chronic mental diseases and that of their families (Valiente, Vázquez and Simon, 2010). This has been achieved by changing the living conditions of those suffering from the illness and by improving internal aspects (affect, self-esteem, acceptance of the illness, etc.) (Touriño, 2010).

The concept of “quality of life” refers to the global wellbeing of the individual and is determined by objective living conditions as well as the his/her subjective wellbeing (Lehman, 1993; Muñoz, Pérez, López and Panadero, 1999). In this regard, the studies done on conceptualization have been particularly significant. In Spain, one important study was done by Giner and Cols (2001), a study which yielded the Seville Quality of Life Questionnaire. This questionnaire incorporates a psychological conceptual model that is based on the quality of an individual’s life and his/her subjective assessment of all of the aspects that influence his/her degree of satisfaction with life, including psychopathological aspects, ultimate fulfillment of needs, etc.

Severe and chronic mental disease have a major impact on people’s lives, so the quality of life of those who suffer from this type of illness has been a constant theme when developing care programs for this group (Bobes, González and Bousoño, 1995; Hasanah and Razali, 2002). In fact, the im-
The results presented are part of a study which the Ministry of Family and Social Affairs of the Autonomous Community of Madrid requested from the Universidad Complutense de Madrid. Specifically, Dr. Manuel Muñoz was asked to do a study aimed at making more information on care available along with the results of the network of social services for people with severe and chronic mental disease.

**Method**

**Participants**

The data included in this article correspond to 970 users of the social services network for people with severe and chronic mental disease during 2009. Specifically, these are users of the Day Centers and Social Support (294), Centers of Psychosocial Rehabilitation (357) and the Social Community Support Teams (319).

Some of the sociodemographic features of the participants are shown on Table 1. As can be seen on this table, the majority of users (62.5%) are men with a mean average age of 44.52, \( DT=9.62 \). Specifically, 64.6% of the users are age 31-50 and more than 25% are age 51-65 (27.1%).

Information is also available on the number of months the individuals have been taking advantage of these resources. On average, the participants had spent more than two and a half years (Average = 32.04 months; \( DT = 27.18 \)) in the facilities, although the variability was significant. Less than one in every five users had spent a year or less (17.8%) utilizing the facilities in which he/she was evaluated and approximately 10% had been receiving care for at least five years.

**Instruments**

As we have already mentioned, the data presented here correspond to a broader assessment that has already been described in previous articles (Muñoz, Panadero and Rodríguez, 2009; Muñoz, Panadero and Rodríguez, 2010). One of the

Although the significance of this aspect has been acknowledged, it is not always easy to take it into account due to major issues related to how quality of life is assessed: there is imprecision, conceptual confusion, a lack of consensus on the measurements used and on the indicators, a lack of empirical evidence in the models, and other methodological issues (Bobes et al., 1995; Muñoz et al., 1999).

As we have already mentioned, an important number of resources have been developed over the past few years for the care of people with severe and chronic mental diseases. Specifically, the Autonomous Community of Madrid currently has a network of social services for people with a severe and chronic mental illness. The type of care it provides is based on the philosophy of psychosocial rehabilitation and the support for social and job integration as the guiding principle of the intervention (González and Rodríguez, 2002) and has been described in publications from this field (Rodríguez, Muñoz and Panadero, 2007). Although these resources began to be developed at the end of the 1980s, a major advance came with the Social Services Plan for People with Severe and Chronic Mental Illness 2003-2007 by the Ministry of Family and Social Affairs of the Autonomous Community of Madrid. The plan revealed the growth and consolidation of a network directed towards the different psychosocial and social needs of people with chronic mental illness. The objectives of the network were to increase autonomy, improve their quality of life and promote social integration among the mentally ill while supporting their families. Within this network, different types of resources are currently available: Centers for Psychosocial Rehabilitation, Job Rehabilitation Centers, Social and Community Support Teams, Day Centers and Social Support, Accommodations (small residences, supervised flats and supervised rooms in boarding houses) and Specific Rehabilitation Resources for homeless people with severe and chronic mental diseases.

This network of centers and resources within the plan works closely with the Network of Mental Healthcare Services of the Ministry of Health and Consumption, which is responsible for the psychiatric care, rehabilitation and follow-up of people with chronic mental illnesses. They represent the channel for referrals of users to the resources of the social services network.

The results presented are part of a study which the Ministry of Family and Social Affairs of the Autonomous Community of Madrid requested from the Universidad Complutense de Madrid. Specifically, Dr. Manuel Muñoz was asked to do a study aimed at making more information on care available along with the results of the network of social services for people with severe and chronic mental disease.

**Goals**

The goals of this article are the following:

To describe the functioning and the quality of life of people with severe and chronic mental diseases who use the social services network reserved for this group in the Autonomous Community of Madrid, and to analyze the relationship between the two.

To analyze how the functioning and quality of life of the users is related to the gender of the participants.

To analyze the relationship between the two measurements of psychosocial functions utilized in this study, as well as how they relate to quality of life.
objectives consisted in increasing the information available on care and the results of the network of social services for people with severe and chronic mental disease. To achieve this objective, a proposal was made in terms of the domains to be considered and the most adequate instruments for as-

To achieve these objectives, professionals pointed out several problems with the SLDS in terms of assessing quality of life. Since no instru-

ments included: previous use of the instruments in studies assessing the results of programs that target this group, adequate psychometric criteria, the brevity and ease of application and the existence of a Spanish-language version.

The proposal for domains and instruments that was presented and discussed with those responsible for the network of resources and the directors at the centers (who represented the professionals working with people with mental illness, since it was impossible to include all of the professionals from the centers in the process). The selection of domains and instruments included:

**Psychosocial functioning:**

For the evaluation of psychosocial functioning, a decision was made to apply the Global Assessment of Functioning (GAF; American Psychiatric Association, 2002) and the WHO Short Disability Assessment Schedule (WHO DAS-I; World Health Organisation, 2000), two of the questionnaires and scales more commonly used in psychosocial rehabilita-

The GAF is an instrument employed in Axis 5 of DSM-IV for the evaluation of general activity. It consists of a 100 point scale in which the professional must evaluate both the severity of the symptoms the person is experiencing as well as the degree of deterioration in one’s school, job or social activities. The final assessment is determined by whichever of the two assessments is lower. Although the final assessment is a single score that reflects an individual’s global level of activity as accurately as possible, the scale is divided into ten activity levels.

This scale is one of those most frequently used in both clinical practice and research. It was created to predict the response to treatment and to support treatment planning (Moos, McCoy and Moos 2000) and shows a significant correlation with other assessments of functionality, high inter-

rater reliability and test-retest reliability (Gaite, Vázquez- Barquero, Herrán et al., 2005; Greenberg and Rosenheck, 2005).

A decision was also made to use the WHO DAS-I, proposed by the ICD-10, an instrument designed to provide a clinical assessment of disabilities. In this case, the clinical physician is responsible for determining a patient’s score based on information obtained from families, informants, medical records and his/her own observations. The evaluator must rate dis-

abilities on a scale of 0 (“no disability”) to 5 (“maximum dis-

ability”) for each of the specific areas of functioning, that is: Self-Care, Job Functioning, Family Functioning and Social Functioning. When a person can only do an activity if he/she is helped by someone else, this is indicated as “functioning with assistance.”

In terms of the procedure for application, professionals from the facilities were in charge of completing these two instru-

ments. At the end of 2009, the professionals completed these two instruments based on the users who were receiving care at that time.

**Quality of life:**

Although a proposal was initially made to use the Satisfaction with Life Domains Scale (SLDS; Baker and Intagliata, 1982), professionals pointed out several problems with the SLDS in terms of assessing quality of life. Since no instru-

ment was found that better reflected the needs of the professionals, a decision was made to create a new assessment instrument based on the SLDS while respecting its question formulation outline and its response scale, both of which were considered adequate. Thus, different modifications were made using the SLDS and a participative process in which the opinions of the professionals at the centers were taken into account. Specifically, items were added on satisfaction with one’s health (physical state, mental health), sex life, partner and life in general.

The result was an instrument comprised of 26 items in which the user is asked about his/her satisfaction with dif-

Table 1: Sociodemographic data of the participants and amount of time at the facility.

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>606</td>
<td>62.5%</td>
</tr>
<tr>
<td>Female</td>
<td>364</td>
<td>37.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (DT)</td>
<td>968</td>
<td>44.52 (9.62)</td>
</tr>
<tr>
<td>18-30</td>
<td>68</td>
<td>7.0%</td>
</tr>
<tr>
<td>31-50</td>
<td>627</td>
<td>64.6%</td>
</tr>
<tr>
<td>51-65</td>
<td>263</td>
<td>27.1%</td>
</tr>
<tr>
<td>&gt; 65</td>
<td>7</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Months at the center</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (DT)</td>
<td>879</td>
<td>32.04 (27.18)</td>
</tr>
<tr>
<td>0-6 months</td>
<td>47</td>
<td>4.8%</td>
</tr>
<tr>
<td>6-12 months</td>
<td>126</td>
<td>13.0%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>232</td>
<td>23.9%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>258</td>
<td>26.6%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>83</td>
<td>8.6%</td>
</tr>
<tr>
<td>4-5 years</td>
<td>33</td>
<td>3.4%</td>
</tr>
<tr>
<td>5 years or more</td>
<td>100</td>
<td>10.1%</td>
</tr>
</tbody>
</table>
different aspects of life. For the analog score, a seven-point visual analog scale was used with faces that go from one (maximum dissatisfaction) to seven (maximum satisfaction).

The resulting alpha coefficient of the tool is 0.955.

In addition, information is gathered on certain sociodemographic data (gender and age) and care (type of resources and number of months receiving care).

The definitive version of the tools and the application procedure were distributed to all the centers along with the database designed for coding the information of the instruments.

In this case, the instrument was completed by users at the request of the professionals from the different facilities which helped participants through the process in cases where it was deemed necessary.

As we have already mentioned, the data included here correspond to 2009.

**Statistical Analyses**

The statistical analysis consisted in a descriptive analysis of the different aspects considered and in the analysis of correlations (Pearson) to determine the relationship between the two measurements of functioning and between the two measurements and the quality of life. In addition, to analyze how gender related to the functioning and quality of life of the participants, the t test was used for independent samples. For the data analysis process, a system of statistical analysis and SPSS data management (Version 15 for Windows) was used.

**Results**

**Description of psychosocial functioning and quality of life**

In terms of user satisfaction with the different aspects considered, the average scores (scores ranged from a minimum of one to a maximum of seven) are presented on Table 2. The highest average scores refer to material aspects such as place of residence, neighborhood where the user resides, services and resources in the area, food and clothing. In all of these cases, the average satisfaction score was over five. This also occurred with other aspects related to the social relationships of users, specifically, the average satisfaction scores in terms of the people with whom they live (Average = 5.20; DT = 1.61), their relationship with their family (Average = 5.11; DT = 1.70), and their leisure activities (Average = 5.8; DT = 1.59).

On the other hand, lower satisfaction (under four) was found in aspects related to one’s sex life (Average = 3.91; DT = 1.96), lack of friends (Average = 3.52; DT = 1.90), not having a partner (Average = 3.70; DT = 1.91) and not having a job (Average = 3.42; DT = 1.86).

In terms of psychosocial functioning evaluated through the GAF, the results are shown on Table 3. The GAF considers psychological, social and job activity along a hypothetical continuum of health-illness and a single value is selected that reflects the global level of an individual’s activity as accurately as possible. As can be seen on the table, the average score of users was 50.03 (DT = 14.38). Although a single value is assigned to a person’s functioning, the GAF scale is divided into ten activity levels. In the best cases, the scores of the participants were found in intervals 41-50 (25.8%; Severe symptoms (i.e., thoughts of suicide, severe obsessive rituals, in-store theft) or any severe alteration of social, job or school activity (i.e. no friends, unable to keep a job) and 51-60 (28.5%; Moderate symptoms (i.e. flat affect and circumstantial language, occasional bouts of anguish) or moderate difficulties in social, job or school activity (i.e. few friends, conflicts with co-workers or classmates)).

To continue with the psychosocial functioning, this time assessed using the DAS-I, Table 4 shows the average scores of each of the scales considered as part of this instrument (Personal Care, Occupation, Family and Home, and Social Context) and the percentage of users with assisted functioning in each of these areas. The evaluator scores disabilities on a scale of zero (“no disability”) to five (“maximum disability”) for each of the specific areas of functioning. On the four scales, the average score was between two and three, which corresponds to a clear disability, i.e. there is a notable deviation from the norm that interferes with social adaptation: the user is slightly disabled for a long period or moderately disabled for a short period (40%). However, in spite of the fact that the same interval is used, it is important to note that the average score, which indicates a lower degree of clinical presentation, is that referring to personal care (Average = 2.02; DT = 1.42) while a higher score, that is, one which indicates a higher level of disability, is found for Occupation (Average = 2.92; DT = 1.40), which refers to functions such as a paid worker, student, housewife or husband, etc.

In terms of the number of users with assisted functioning, 16.1% of the people evaluated in the area of Personal Care needed support in this area, which is somewhat higher than those found in the area of Occupation (14.5%). In the areas of functioning in the family and home and in the social context, the percentages were 11.9% and 12.4% (respectively).

Relationship between the measurements of psychosocial functioning and quality of life and the other variables considered.

After the description of the quality of life and the psychosocial functioning of the users, the way both variables related to the gender of participants was evaluated.

With respect to the gender of users and its relation to psychosocial functioning, there were no significant differences
Table 2: Average quality of life score of the participants

<table>
<thead>
<tr>
<th>Question</th>
<th>n</th>
<th>Average (DT)(1-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which face is closest to how you feel with respect to...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>your life in general?</td>
<td>586</td>
<td>4.52 (1.77)</td>
</tr>
<tr>
<td>your home/apartment/pace of residence?</td>
<td>585</td>
<td>5.28 (1.58)</td>
</tr>
<tr>
<td>your neighborhood as a place to live?</td>
<td>585</td>
<td>5.09 (1.70)</td>
</tr>
<tr>
<td>the food you eat?</td>
<td>580</td>
<td>5.54 (1.48)</td>
</tr>
<tr>
<td>the clothes you wear?</td>
<td>577</td>
<td>5.33 (1.42)</td>
</tr>
<tr>
<td>your overall health?</td>
<td>582</td>
<td>4.52 (1.74)</td>
</tr>
<tr>
<td>your physical state?</td>
<td>583</td>
<td>4.36 (1.75)</td>
</tr>
<tr>
<td>your moods?</td>
<td>580</td>
<td>4.49 (1.78)</td>
</tr>
<tr>
<td>the calmness of your life?</td>
<td>585</td>
<td>4.71 (1.80)</td>
</tr>
<tr>
<td>your problem/mental health illness?</td>
<td>584</td>
<td>4.00 (1.81)</td>
</tr>
<tr>
<td>the people with whom you live?</td>
<td>558</td>
<td>5.20 (1.61)</td>
</tr>
<tr>
<td>your friends?</td>
<td>522</td>
<td>4.87 (1.71)</td>
</tr>
<tr>
<td>If you don’t have any friends, which face is closest to how you feel about not having any friends?</td>
<td>355</td>
<td>3.52 (1.90)</td>
</tr>
<tr>
<td>your relationship with your family?</td>
<td>557</td>
<td>5.11 (1.70)</td>
</tr>
<tr>
<td>Your relationship with your partner?</td>
<td>255</td>
<td>4.20 (2.07)</td>
</tr>
<tr>
<td>If you don’t have a partner, which face is closest to how you feel about not having a partner?</td>
<td>484</td>
<td>3.70 (1.91)</td>
</tr>
<tr>
<td>your sex life?</td>
<td>508</td>
<td>3.91 (1.96)</td>
</tr>
<tr>
<td>your relationship with other people?</td>
<td>566</td>
<td>4.87 (1.55)</td>
</tr>
<tr>
<td>your job or other work?</td>
<td>285</td>
<td>4.26 (1.97)</td>
</tr>
<tr>
<td>If you don’t have a job, which face is closest to how this makes you feel?</td>
<td>541</td>
<td>3.42 (1.86)</td>
</tr>
<tr>
<td>your education or other classes you are taking?</td>
<td>388</td>
<td>4.60 (1.81)</td>
</tr>
<tr>
<td>your recreational activities?</td>
<td>571</td>
<td>5.08 (1.59)</td>
</tr>
<tr>
<td>the services and facilities in your area?</td>
<td>568</td>
<td>5.29 (1.51)</td>
</tr>
<tr>
<td>your economic situation?</td>
<td>575</td>
<td>4.34 (1.79)</td>
</tr>
<tr>
<td>how you feel about yourself?</td>
<td>577</td>
<td>4.68 (1.81)</td>
</tr>
<tr>
<td>your life in general?</td>
<td>578</td>
<td>4.64 (1.77)</td>
</tr>
</tbody>
</table>

Table 3: Scores in psychosocial functioning evaluated with the GAF.

<table>
<thead>
<tr>
<th>GAF</th>
<th>n</th>
<th>Average (DT)(1-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (DT)</td>
<td>943</td>
<td>50.03 (14.38)</td>
</tr>
<tr>
<td>1-10</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>11-20</td>
<td>18</td>
<td>1.9%</td>
</tr>
<tr>
<td>21-30</td>
<td>82</td>
<td>8.5%</td>
</tr>
<tr>
<td>31-40</td>
<td>120</td>
<td>12.4%</td>
</tr>
<tr>
<td>41-50</td>
<td>250</td>
<td>25.8%</td>
</tr>
<tr>
<td>51-60</td>
<td>276</td>
<td>28.5%</td>
</tr>
<tr>
<td>61-70</td>
<td>146</td>
<td>15.1%</td>
</tr>
<tr>
<td>71-80</td>
<td>36</td>
<td>3.7%</td>
</tr>
<tr>
<td>81-90</td>
<td>13</td>
<td>1.3%</td>
</tr>
<tr>
<td>91-100</td>
<td>1</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Context of the DAS-I. The statistical differences between men and women were only significant on the Occupation scale of the DAS-I. Specifically, in the case of the men, the average score on this scale was 3.01 (DT = 1.38) compared to 2.77 (DT = 1.42) in the case of women, which indicates significantly less disability among women than men (t(888) = 2.50; p<0.05).

In addition, significant differences were found in some of the aspects considered in the quality of life assessment:

General satisfaction with health. In this case, the average score of men was 4.64 (DT = 1.60) while that of women was 4.28 (DT = 1.99) (t(303.71) = 2.18; p<0.05).

Satisfaction with their relationships with the people with whom they live. The satisfaction of men was significantly higher in this aspect than that of women (t(1.97) = 284.95; p<0.05); while the average score for men in this area was 5.29 (DT = 1.47), the score for women users was 4.98 (DT = 1.85).
Table 4: Scores in psychosocial functioning evaluated with the DAS-I.

<table>
<thead>
<tr>
<th>Functioning</th>
<th>n</th>
<th>Average (DT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care</td>
<td>938</td>
<td>2.02 (1.42)</td>
</tr>
<tr>
<td>Assisted Functioning</td>
<td>156</td>
<td>16.1%</td>
</tr>
<tr>
<td>Occupation (Average (DT))</td>
<td>890</td>
<td>2.92 (1.40)</td>
</tr>
<tr>
<td>Assisted Functioning</td>
<td>141</td>
<td>14.5%</td>
</tr>
<tr>
<td>Family and Home (Average (DT))</td>
<td>933</td>
<td>2.57 (1.25)</td>
</tr>
<tr>
<td>Assisted Functioning</td>
<td>115</td>
<td>11.9%</td>
</tr>
<tr>
<td>Social Context (Average (DT))</td>
<td>938</td>
<td>2.69 (1.34)</td>
</tr>
<tr>
<td>Assisted Functioning</td>
<td>120</td>
<td>12.4%</td>
</tr>
</tbody>
</table>

Satisfaction among those who do not have a partner. In this case, the score of the women was significantly higher than that of men (t(230.01) = -2.59; p<0.05): the women’s average was 4.07 (DT = 2.08) compared to 3.55 (DT = 1.82) in the case of the men.

Satisfaction with their sex life. In this case, the average score among women (Average = 4.18; DT = 2.13) was higher (t(269.86) = -2.00; p<0.05) than that of the men in the sample (Average = 3.79; DT = 1.87), that is, the female users were more satisfied with their sex life than the male users.

Satisfaction among users who are not employed. The satisfaction in this case was higher (t(300.05) = 2.00; p<0.05) among men (Average = 3.53; DT = 1.77) than among women (Average = 3.17; DT = 2.02).

Relationship between the measurements of psychosocial functioning and the quality of life

The relationship between the two measurements of functioning was also analyzed along with the way these measurements related to the subjective quality of life of the participants.

In this regard, the correlation between the measurements of psychosocial functioning (the GAF and the DAS-I) was calculated. The results indicated a statistically significant correlation between the score of the GAF and all of the scales of the DAS-I, specifically in terms of Personal Care (r=-0.505; p<0.01), Occupation (r=-0.590; p<0.01), Family and Home (r=-0.550; p<0.01) and functioning in the Social Context (r=-0.589; p<0.01).

On the other hand, with respect to the correlation of psychosocial functioning (as assessed by the professionals) and the different aspects of the quality of life considered by the users themselves, there were statistically significant correlations found between:

The GAF global score and satisfaction with food (r=0.94; p<0.05) and with not having a partner (r=-0.101; p<0.05).

The Personal Care scale of the DAS-I and satisfaction with one’s place of residence (r=-0.101; p<0.05), food (r=-0.93; p<0.05) and clothing (r=-0.117; p<0.05).

The Occupation scale of the DAS-I with place of residence (r=-0.088; p<0.05) and one’s neighborhood as a place to live (r=-0.103; p<0.05).

The Family and Home scale of the DAS-I and one’s accommodations (r=-0.092; p<0.05) and relationship with the family (r=-0.151; p<0.01).

The Social Context scale of the DAS-I and place of residence (r=-0.107; p<0.05) and leisure activities (r=-0.097; p<0.05).

Conclusions and Discussion

This work presents the results obtained in quality of life and psychosocial functioning in a sample of users of social attention resources for people with severe and chronic mental disease in the Autonomous Community of Madrid. Taking into account the population targeted by these resources, the results of the psychosocial functioning of the participants were to be expected, to a certain extent, since they show significant disability. The Global Assessment of Functioning (GAF) reveals significant problems in this regard, pointing out moderate to severe difficulties among the participants, with average scores quite close to those noted by other authors in samples with similar characteristics (Hansson, Middelboe, Sørgaard et al., 2002). The DAS-I helps to specify which areas of psychosocial functioning are particularly affected among this population. However, all of the scales considered for this instrument reveal a clear problem, which is especially accentuated in the case of the area “Occupation,” which tells us about people’s performance in their job, studies, housework, etc.

This article has also addressed the coherence between the two measurements of functioning utilized. This mainly arises from the limitations that some authors have noted in terms of the GAF, especially the fact that it groups symptoms and functioning in a single score (Bacon et al., 2002; Moos et al., 2000). Some authors have pointed out that the scope of this instrument is more closely related to the scales of symptoms than with other measurements of functioning, which means that it is fundamentally influenced by the symptoms users experience. In this case, the results obtained are in line with those of other authors who have noted the correlation between this measurement of global functioning and other measurements of functioning (Gaite et al., 2005; Greenberg and Rosenheck, 2005) since significant correlations have been found between the two instruments utilized for measurements.

Over the past two decades, different works have attempted to clarify the relationship between quality of life and functioning in the case of people with severe and chronic mental diseases.
Quality of life and psychosocial functioning in people with severe and chronic mental diseases

Panadero Herrero

References


Acknowledgments

Abelardo Rodríguez, Tecnical Coordinator of the Public Network of Social Services for people with severe and chronic mental illness (Ministry of Family and Social Affairs, Autonomous Community de Madrid) and to the professionals of the network of services who gathered the data used for this article.
Abstract:
This instrumental study aimed to replicate the exploratory factor analysis of the Referential Thinking Scale (REF) which has been carried out in other research studies. The REF consists of 34 items which assess the frequency of referential thinking on a dichotomic scale (True/False). The analyzed data come from a sample of 193 participants (67.36% women, mean age 28.36 years, SD = 10.35), 131 of whom were patients. By means of the Principal Component Analysis method and varimax rotation, five factors were identified that account for 37.35% of the variance of rotated factor solution. The five factors were labelled as: Laughing, Commenting (which accounted for 8.92% of variance); Guilt, Shame (which accounted for 8.77% of variance); Causal Explanations (which accounted for 7.17% of variance); Songs, Newspapers, Books (which accounted for 6.44% of variance); and Attention, Appearance (which accounted for 6.04% of variance). These results confirm the multidimensionality of the REF scale since the same five factors as in previous studies were isolated.

Keywords: Exploratory Factor Analysis, referential thinking, REF scale, instrumental study.

INTRODUCTION

Referential thinking consists in self-attributions, to a greater or lesser degree of overimportance, that are deduced from events, objects or other people’s behaviour, which have a negative meaning for the person (Lenzenweger, Bennett, & Lilienfeld, 1997). For example, in face of other people’s glance or laughter, the person can interpret being criticised or made fun of, respectively.

Self-referential ideas are framed within schizotypy, which has been confirmed as a vulnerability dimension for schizophrenia spectrum disorders (Gooding, Tallent, & Matts, 2005). Thus, and following the trisyndromic structure of schizotypy proposed by Gruzelier (1994; Gruzelier, Burgess, Stygall, Irving, & Raine, 1995), referential thinking, as well as magical ideation and alterations in perception (Lenzenweger, 1999), can be restricted to the irreality factor (analogous to the psychotic dimension in schizophrenia); associability and affection constraints in the isolation factor (related to the schizophrenic negative dimension); and eccentric behaviour and formal language alterations can be framed within the active factor (disorganized dimension).

In addition to this, beyond the schizo spectrum, referential thinking has also been observed to be high in other disorders of distinct psychopathological spectra (anxiety, depressive, somatoform and personality disorders) (Meyer & Lenzenweger, 2009). In consequence, referential thinking could be seen as both a comprehensive psychopathologic indicator and as a possible state indicator, as it diminishes in patients in the remission phase (Fernández-Jiménez et al., 2010; Rodríguez-Testal et al., 2001).

Furthermore, various studies point out that the psychotic spectrum exists as a continuum of experiences which also occur in the general population (van Os, Linscott, Myin-Germeyns, Delespaul, & Krabbendam, 2008). In the same way, referential thinking manifests itself in this population, it being an entity immersed in a psychopathological process when we consider its frequency and intensity as parameters (Senín-Calderón et al., 2010a).

Nevertheless, in spite of the relevance given to referential thinking as an ultra high risk indicator for the development of psychosis (Schultze-Lutter, Klosterkötter, & Ruhrmann, 2005), few instruments assessing schizotypical traits have addressed referentiality. Those which do acknowledge it do not collect the whole array of manifestations, which is the case of the Schizotypal Personality Questionnaire (SPQ) by Raine (1991), the Personality Disorder Examination (PDE) by Loranger (1988), and the Structured Interview for Schizotypy (SIS) by Kendler, Lieberman and Walsh (1989). Given the fact that the PDE and the SIS are interviews requiring highly qualified assessors, and given the explicitly pathological character of the phenomenon, their sensitivity can decrease since the individuals assessed could react with high rates of social desirability in face of the interviewer (Lenzenweger et al., 1997).

Due to this situation, Lenzenweger et al. (1997) developed the Referential Thinking Scale (REF) in order to assess the different manifestations of referentiality. To do that, they collected all the contents dealt with in the former instruments (“they are looking at me,” “they are talking about me”) and they also included those referential ideas pervaded by feelings of guilt and shame which had already been set out by Wing, Cooper and Sartorius (1974), as well as those thoughts according to which one is being the target of mockery and
laughter. In this sense, the relevance of the REF scale lies in being the first self-report measure specifically devoted to assessing referential thinking in the whole range of its manifestations.

Thus once the coverage given to referentiality by the instruments available has been shown to be insufficient, it is fair to argue that the multidimensionality of this construct has been scarcely addressed. Then, it is the original REF study (Lenzenweger et al., 1997) that first analyses the factor structure of the test and, so, the multidimensionality of referentiality, which point to five independent factors in which simple self-references of the kind "I am being criticised," or "I am being laughed at" together with the feeling of guilt play a big part. Along these same lines, Rodríguez-Testal et al. (2001) renewed the validation of the factor structure of the REF scale by obtaining the same orthogonal elements.

Objectives and hypotheses

This is an instrumental study. In this sense, the main objective is to analyze the multidimensionality of the REF scale by contrasting a sample different from the one participating in the study by Rodríguez-Testal et al. (2001) and by incorporating a group with various psychopathological disorders, differently from that in the original study by Lenzenweger et al. (1997), in which the participants were exclusively from the general population. Centered on this question, it is hypothesized that factors similar to those obtained by previous studies will be found.

Method

Participants

A total 193 people participated in this study, 62 of whom did not show any psychopathological condition. The remaining 131 were patients, who were going to a hospital unit and to a private clinical psychology office for consultation; they showed clinical disorders of all the psychopathological spectra on the basis of the diagnostic categories in the DSM-IV-TR (see Table 1). The strategy used for establishing the control group was by means of "the snowball" technique. 67.30% of the total sample were women and the mean age of the participants was 28.36 (SD = 10.35), the youngest one was 12 years old and the oldest participant was 58.

Instrument

The instrument used was the Referential Thinking Scale (REF) by Lenzenweger et al. (1997), which consists of 34 items measuring the frequency of referential thinking by means of a dichotomic scale (True/False). The scale shows appropriate psychometrical characteristics (Senín-Calderón et al., 2010b) (see Table 2). At the same time, following the recommendations by Lenzenweger et al., nine more items which belong to the sincerity scale of the Eysenck Personality Inventory (EPI) were masked among the former in order to assess the answers’ degree of truthfulness; as the openly psychopathological content of the questions could bring about the participants’ defensive reactions or their social desirability.

Analysis

The descriptive statistic data were calculated for each one of the items that make up the REF scale. An Exploratory Factor Analysis (EFA) was carried out by means of version 15.0 of the SPSS programme for Windows by using the Principal Component Analysis extraction technique and the orthogonal (varimax) and oblique (direct oblimin) rotation methods.
First of all, descriptive statistics for univariate data (i.e., means and standard deviations; see Table 3) and bivariate data (i.e., Pearson’s correlations; see Table 4) are shown for the different REF scale items.

As stated above, the REF questionnaire scale is dichotomic (True/False). The codification is 1 for true and 2 for false.

Given the fact that measures of sampling adequacy, such as the Kaiser-Meyer-Olkin (KMO) index are meritorious (0.807), the REF scale was submitted to factor analysis.

Starting from the Principal Component Analysis extraction technique, five factors have been retained, as the following factors are made up of items that refer to the same contents as the previous factors (see Table 5).

After having compared the results of both of the rotation methods implemented, namely varimax and oblimin, and given the fact that the inter-factor correlations are low (see Table 6), the REF scale multidimensionality will next be interpreted in terms of orthogonality. In this sense, the five factors account for 37.35% of variability in the set of items, considering the rotated factor solution.

### Table 2. Reliability and content validity indicators in the REF scale

| Indicator                        | Value  
|----------------------------------|--------
| Cronbach’s Alpha                 | 0.90   
| Cronbach’s split half Alpha      | Side 1: 0.83  
|                                  | Side 2: 0.82  
| Guttman’s split half Alpha       | 0.89   
| Spearman-Brown’s coefficient     | 0.89   
| Guttman’s Lambda 1               | 0.90   
| Test-Retest (mean of 44 days)    | 0.76   
| Spearman’s Rho: REF scale item-global correlation |

Note: The indicators have been calculated for n = 120, except for test-retest reliability, which was done over n = 34. All of the indicators were significant for p < 0.05 except for the items 16 and 20 correlation, which came out to be statistically non-significant.

### Results

First of all, descriptive statistics for univariate data (i.e., means and standard deviations; see Table 3) and bivariate data (i.e., Pearson’s correlations; see Table 4) are shown for the different REF scale items.

### Table 3. Univariate descriptive statistics

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref. 1</td>
<td>1.61</td>
<td>0.49</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 2</td>
<td>1.78</td>
<td>0.41</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 3</td>
<td>1.73</td>
<td>0.44</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 4</td>
<td>1.87</td>
<td>0.34</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 5</td>
<td>1.90</td>
<td>0.31</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 6</td>
<td>1.91</td>
<td>0.28</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 7</td>
<td>1.90</td>
<td>0.30</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 8</td>
<td>1.70</td>
<td>0.46</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 9</td>
<td>1.48</td>
<td>0.51</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 10</td>
<td>1.76</td>
<td>0.43</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 11</td>
<td>1.76</td>
<td>0.43</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 12</td>
<td>1.77</td>
<td>0.42</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 13</td>
<td>1.91</td>
<td>0.29</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 14</td>
<td>1.86</td>
<td>0.34</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 15</td>
<td>1.97</td>
<td>0.19</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 16</td>
<td>1.80</td>
<td>0.40</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 17</td>
<td>1.92</td>
<td>0.27</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 18</td>
<td>1.79</td>
<td>0.41</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 19</td>
<td>1.83</td>
<td>0.37</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 20</td>
<td>1.96</td>
<td>0.20</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 21</td>
<td>1.94</td>
<td>0.23</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 22</td>
<td>1.92</td>
<td>0.27</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 23</td>
<td>1.95</td>
<td>0.21</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 24</td>
<td>1.74</td>
<td>0.44</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 25</td>
<td>1.91</td>
<td>0.29</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 26</td>
<td>1.91</td>
<td>0.28</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 27</td>
<td>1.95</td>
<td>0.21</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 28</td>
<td>1.60</td>
<td>0.49</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 29</td>
<td>1.70</td>
<td>0.46</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 30</td>
<td>1.72</td>
<td>0.45</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 31</td>
<td>1.62</td>
<td>0.49</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 32</td>
<td>1.78</td>
<td>0.41</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 33</td>
<td>1.72</td>
<td>0.45</td>
<td>193</td>
</tr>
<tr>
<td>Ref. 34</td>
<td>1.93</td>
<td>0.26</td>
<td>193</td>
</tr>
</tbody>
</table>
Table 4. Bivariate descriptive statistics: Pearson’s correlations (p < 0.05 in bold characters)

| ref1 | ref2 | ref3 | ref4 | ref5 | ref6 | ref7 | ref8 | ref9 | ref10 | ref11 | ref12 | ref13 | ref14 | ref15 | ref16 | ref17 | ref18 | ref19 | ref20 | ref21 | ref22 | ref23 | ref24 | ref25 | ref26 | ref27 | ref28 | ref29 | ref30 | ref31 | ref32 | ref33 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ref1 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref2 | 1.0  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref3 |      | 0.47 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref4 |      | 0.59 | 0.55 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref5 |      |      |      | 0.25 | 0.41 | 0.38 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref6 |      |      |      | 0.25 | 0.31 | 0.22 | 0.21 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref7 |      |      |      |      |      |      |      | 0.35 | 0.27 | 0.31 | 0.31 | 0.43 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref8 |      |      |      |      |      |      |      |      | 0.27 | 0.2 | 0.23 | 0.28 | 0.17 | 0.33 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref9 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 0.51 | 0.42 | 0.42 | 0.2 | 0.19 | 0.19 | 0.18 | 0.37 |
| ref10|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref11|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref12|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref13|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref14|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref15|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref16|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref17|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref18|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref19|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref20|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref21|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref22|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref23|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref24|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref25|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref26|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref27|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref28|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref29|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref30|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref31|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref32|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref33|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| ref34|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
Furthermore, in order to isolate the factor content, the items have been included in the various factors taking into account that their factor loadings had to be greater than 0.30 (see Table 5), as it is the cut-off point agreed on by the scientific community. The factors have been named as a function of the content of the items chosen.

Thus, the first factor, named Laughter & Comments, accounts for 8.92% of the variance of the set of items. It represents thoughts about other people who are laughing at them, as well as discussing or criticising his or her behaviour. Items 1, 2, 3, 4 and 14 belong to this factor.

The second factor, called Guilt, Shame, accounts for 8.77% of the total variance. It deals with thoughts about being blamed for or accused of a given behaviour or situation, as well as with experiences which imply feeling ashamed. Items 28, 29, 30, 31 and 33 belong to this factor, as well as Item 9, whose factor loading is 0.410, even though it is conceptually better assigned to the fifth factor.

Table 5. Matrix of rotated components (Varimax)

<table>
<thead>
<tr>
<th>Items</th>
<th>Components: saturations</th>
<th>h²</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. If I see someone laughing, I often wonder if they are laughing at me.</td>
<td>0.759 0.35 -0.022 -0.108 0.085 0.734</td>
<td></td>
</tr>
<tr>
<td>2. I often think that people talk about me when I walk down the street.</td>
<td>0.728 0.172 0.147 0.226 0.07 0.657</td>
<td></td>
</tr>
<tr>
<td>14. Quite often I wonder if people are laughing as I walk by.</td>
<td>0.727 0.025 0.208 0.121 0.083 0.662</td>
<td></td>
</tr>
<tr>
<td>4. Strangers often smirk at me.</td>
<td>0.536 -0.002 0.112 0.011 0.295 0.592</td>
<td></td>
</tr>
<tr>
<td>1. When I overhear a conversation, I often wonder if people are saying bad things about me.</td>
<td>0.53 0.502 0.04 0.032 0.034 0.609</td>
<td></td>
</tr>
<tr>
<td>31. Although I know deep down inside it is not true, I often feel that others blame me for things.</td>
<td>0.095 0.747 -0.045 0.083 0.084 0.684</td>
<td></td>
</tr>
<tr>
<td>30. When I see something broken, I often wonder if others blame me for it.</td>
<td>0.133 0.731 0.107 -0.047 0.129 0.6</td>
<td></td>
</tr>
<tr>
<td>33. I often think that people are making accusations about my behavior.</td>
<td>0.239 0.633 0.249 0.059 0.073 0.58</td>
<td></td>
</tr>
<tr>
<td>9. I often feel that people are looking at me.</td>
<td>0.392 0.41 -0.129 0.142 0.188 0.63</td>
<td></td>
</tr>
<tr>
<td>28. When I feel ashamed, I think others often know why I feel that way.</td>
<td>0.276 0.313 0.01 0.276 0.248 0.501</td>
<td></td>
</tr>
<tr>
<td>27. I often wonder why so many people leave the highway using the same exit that I use.</td>
<td>0.111 0.059 0.726 0.159 0.03 0.678</td>
<td></td>
</tr>
<tr>
<td>15. I sometimes think that newspaper articles contain messages for me.</td>
<td>0.035 -0.002 0.682 0.013 0.132 0.67</td>
<td></td>
</tr>
<tr>
<td>34. I often wonder if people are in a class because I am there.</td>
<td>0.157 0.107 0.621 0.053 0.183 0.62</td>
<td></td>
</tr>
<tr>
<td>6. When I see two people talking at work, I usually think they are criticizing me.</td>
<td>0.158 0.442 0.507 -0.021 0.027 0.574</td>
<td></td>
</tr>
<tr>
<td>11. I have read books that seem to have been written about me.</td>
<td>0.089 0.02 -0.054 0.696 -0.128 0.566</td>
<td></td>
</tr>
<tr>
<td>12. Films often seem to be very similar to my life story.</td>
<td>-0.05 0.066 0.009 0.689 0.069 0.579</td>
<td></td>
</tr>
<tr>
<td>10. When I hear a favorite song, I think that it was probably written with me in mind.</td>
<td>0.057 -0.014 0.083 0.657 0.166 0.544</td>
<td></td>
</tr>
<tr>
<td>13. I often wonder if radio DJs play songs just for me.</td>
<td>0.24 0.044 0.271 0.526 0.193 0.59</td>
<td></td>
</tr>
<tr>
<td>21. Even if they do not say it, it seems to me that other people are always wondering how smart I am.</td>
<td>0.165 -0.011 0.276 0.436 0.077 0.542</td>
<td></td>
</tr>
<tr>
<td>19. I do not think that people on the street pay special attention to me.</td>
<td>0.202 0.057 -0.031 0.034 0.713 0.629</td>
<td></td>
</tr>
<tr>
<td>32. I am not sure why, but people often seem to pay a lot of attention to me.</td>
<td>-0.01 0.192 0.175 0.2 0.614 0.586</td>
<td></td>
</tr>
<tr>
<td>5. People often fidget in their seats when I enter a room.</td>
<td>0.113 0.247 0.405 0.037 0.536 0.579</td>
<td></td>
</tr>
<tr>
<td>18. When I am on a train or bus, it seems that people often watch me closely.</td>
<td>0.172 0.303 0.207 0.007 0.471 0.609</td>
<td></td>
</tr>
<tr>
<td>8. People I do not know often notice how I dress.</td>
<td>0.073 0.067 0.034 0.015 0.135 0.633</td>
<td></td>
</tr>
<tr>
<td>24. I often think others comment to each other about my clothing.</td>
<td>0.295 0.252 0.084 0.051 0.049 0.541</td>
<td></td>
</tr>
<tr>
<td>20. Professors (or speakers) often seem to direct their lectures to me.</td>
<td>-0.006 -0.015 0.099 0.184 -0.012 0.514</td>
<td></td>
</tr>
<tr>
<td>17. Dogs seem to bark a lot when I am near.</td>
<td>0.05 0.023 0.146 -0.079 0.056 0.499</td>
<td></td>
</tr>
<tr>
<td>22. Small animals seem to take special notice of me as I walk by.</td>
<td>0.107 0.224 -0.169 0.059 0.197 0.721</td>
<td></td>
</tr>
<tr>
<td>25. It seems to me that other people often imitate my style of dressing.</td>
<td>-0.004 0.062 0.043 0.092 0.127 0.702</td>
<td></td>
</tr>
<tr>
<td>26. I think others often imitate my manner of speaking.</td>
<td>0.017 0.154 0.306 -0.101 -0.088 0.663</td>
<td></td>
</tr>
<tr>
<td>29. People almost always notice the parts of my personality or character that I try to hide.</td>
<td>-0.012 0.484 0.01 0.031 0.205 0.583</td>
<td></td>
</tr>
<tr>
<td>7. When I hear two people speaking a foreign language, I often think they might be comment- ing on my behavior.</td>
<td>0.264 0.143 0.219 0.091 -0.158 0.455</td>
<td></td>
</tr>
<tr>
<td>23. I have noticed that people I do not know often wave to me.</td>
<td>0.307 0.018 0.037 -0.021 0.36 0.628</td>
<td></td>
</tr>
<tr>
<td>16. Traffic lights usually turn red because I am driving in a hurry.</td>
<td>0.035 0.092 0.139 0.01 0.028 0.82</td>
<td></td>
</tr>
</tbody>
</table>
The third factor accounts for 7.17% of the variance of the set of items. This study calls it causal explanations as it represents self-referential interpretations of various external events, such as the reason for the presence and the movement of other people. This factor is made up of items 26, 27, and 34, as well as item 15, with a factor loading of 0.68 in spite of conceptually being a better indicator of the fourth factor; as with item 6, with a factor loading of 0.507, although being a better indicator of the first factor in terms of interpretable content.

The fourth factor, which accounts for 6.44% of the total variance, is called songs, newspapers, books. It deals with referential ideas emerging from contact with different mass media, books, and songs. This factor is made up of items 10, 11, 12, and 13, as well as of item 21, which has a factor loading of 0.436, although it is conceptually more closely akin to the fifth factor.

Finally, the fifth factor, attention, appearance, accounts for 6.04% of the variance of the set of items. It represents the referential ideas about being other people's object of attention and glances. This factor is made up of items 18, 19, and 32, as well as of items 5 and 23, with factor loadings of 0.536 and 0.307 respectively, but greater conceptual affinity with the third factor.

In consequence, items 7, 8, 16, 17, 20, 22, 24, and 25 are outside of any particular factor.

These results indicate that a good reliability level has been obtained if we take into account the total number of items in the REF scale, as the rate obtained is greater than 0.80 (0.88 to be specific). Furthermore, inter-factor internal consistence rates range between 0.56 and 0.79 (see Table 7).

**Discussion**

The results in this study confirm again the multidimensionality of the REF scale and the isolation of five independent factors, as set out by previous studies (Lenzenweger et al., 1997; Rodriguez-Testal et al., 2001). Nevertheless, the factor solution accounts for an accumulated percentage of the total variance (37.5%) which is lower than that required by Social Science studies (at least 60% of the total variance), even though it surpasses the figure obtained by Lenzenweger et al.'s original study (the factor solution accounting for 35.1% of the variance).

In addition to this, we have noticed high factor loadings of some items in several factors simultaneously, as well as important factor loadings in factors conceptually different in relation to the item content. Furthermore, poor internal consistency levels (attention, appearance, 0.56) and weak consistency levels (causal explanations, 0.639; songs, newspapers, books, 0.062) were observed in three of the isolated factors (George & Mallery, 1995).

Therefore, with the data available up to now, some caution should be taken when suggesting the construction of subscales for the REF scale. In this sense, this test should continue to be analyzed factorially by carrying out a future refinement of the items, and by starting from a conceptually referentiality model that may have clinically more relevant components, (e.g. laughter-comments and guilt), removing those with a lesser psychopathological entity (e.g. the songs, newspaper, books factor).

On the other hand, this study validates the important weight of the laughter, comments factor among the manifestations of self-referentiality, which was also supported by previous studies (Lenzenweger et al., 1997; Rodriguez-Testal et al., 2001). It also emphasizes the importance of self-referentiality with connotations of guilt and shame, which was left out in other instruments assessing schizotypal symptoms (Lenzenweger et al.). Therefore, the isolation of both the first and the second factor and their acceptable levels of internal consistency (0.79 and 0.70, respectively) (George and Mallery, 1995) confirm the classical distinction made by Wings et al. (1974) about the ideas of simple reference and the ideas of guilt reference, respectively.

Likewise, given the coverage of this scale to assess all manifestations of referentiality, it should be used to assess this facet of the schizotypal spectrum, to the detriment of the more general instruments which only included some items for this dimension, such as for example, the Schizotypal Personality Questionnaire (SPY) (Raine, 1991), which does not consider guilt as manifestations of referentiality, among others.

Along the same lines, the wide heterogeneity that might be assumed from REF scale, due to its content variety, contrasts with the good global internal consistency observed; on obtaining a Cronbach’s Alpha of 0.88 in the total scale, in line with the results by Rodriguez-Testal et al. (2001), with Alpha = 0.90; and by Senín-Calderón et al. (2010), with Alpha = 0.90. Hence the global score of the scale is a clinically relevant measure as it brings together the broad spectrum of referentiality.
One more issue to bear in mind is the nature of the participant sample, namely university students, used in the original study by Lenzenweger et al. (1997), and which gave rise to constructing the REF scale. In contrast, the present study is based both on clinical and general population samples. Yet, it would be advisable for further research studies to carry out more representative population sampling by recruiting participants going to various health services.

Finally, new research lines are proposed to go more deeply into the following issues. First, it would be interesting to address the relationship among various manifestations of referential thinking as a function of diagnostic categories from all the psychopathological spectra. To do that, it would be necessary to have large groups for the various disorders, criterion which is not met by the current study, as most of the clinical sample (61.1%) consisted of participants with disorders from anxiety-depressive spectrum.

On the other hand, we point out the need to carry out factorial analyses by adjusting the REF questionnaire to a Likert type scale, already used in other studies (Senín-Calderón et al., 2010a; Rodríguez-Testal et al., 2009). The use of a continuous scale, which is the criterion to use Pearson’s correlations that have been used in this study, would allow the analysis of whether the intensity of referentiality changes in the various psychological spectra and, at the same time, would provide better psychometric results (Wuthrich and Bates, 2005). We suggest that further studies using the REF questionnaire with its original dichotomic scale should implement factorial analysis from tetrachoric correlation matrices.

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**References**


**Acknowledgments**

We want to thank Dr. Ana María López Jiménez for having revised the first version of this paper; as well as all people who voluntarily committed themselves to participate in this research.
Therapeutic approach to referential thinking in a case of schizotypal disorder

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Abstract

The present study describes the evaluation procedure and therapeutic approach in a case of schizotypal disorder. The intervention carried out was of the cognitive behavioural type. In parallel, a follow-up of a fundamental measure for this disorder is accomplished: the referential thinking, by means of brief time-series. In this analysis, a clear but progressive decrease of the criteria is obtained. The post-treatment results show a general improvement in every aspects, bringing out: the interpersonal relationships, the absence of hallucinations, the increase of the capacity for enjoyment, the decrease of unusual content of thought, erroneous interpretations of reality, aggressiveness and unusual language. Distractibility, suspicion and conceptual disorganization slightly persist.

REFERENCES

From the dimensional models, it is defended that schizotypy holds an “intermediate” phenotype, less serious than schizophrenia, in intensity, frequency and dysfunction (Fonseca-Pedrero, Paine, Lemos-Giraldez, Sierra-Baigrie, Campillo-Alvarez, Ordoñez-Camblor et al., 2010), or, in a wider way, it spreads out in a continuum: at one extreme stands schizophrenia and at the other one normality (Jonhs & van Os, 2001; van Os, Linscott, Myin-Germey, Delespaul & Krabbendama, 2009). It is considered as a multidimensional construct composed of three or four dimensions (depending on the researchers): positive dimension (unusual perceptive experiences such as hallucinations; ideas of reference; magic ideation; suspicion), just as Lenzenweger characterized (Lenzenweger, Bennett & Lilienfeld, 1997; Meyer & Lenzenweger, 2009); negative dimension (social and physical anhedonia, interpersonal deficit, emotional restriction) and disorganization (odd/unalusual language, odd behaviour).
Given that schizotypy implies a variable of vulnerability related to the development of the schizophrenia-spectrum disorders, including the schizotypal personality disorder, the psychological intervention is therefore of great importance, better if given at an early stage, in order to reduce (or slow down) this condition. However, there is limited literature available with regard to the psychological intervention for the schizotypal personality disorder in particular (Quiroga & Errasti, 2001). It is often underlined that this is due to the fact that the main attention of the intervention is given when the psychotic sign is already present and not in its previous or eased stage. (Quiroga & Errasti, 2008). Consequently, there is no abundant evidence of the treatments effectiveness on the schizotypal personality disorder further than the interventions on isolated clinical cases in the cognitive-behavioural therapy (Beck, Freeman & Davis, 2005), in the acceptance and commitment therapy or in the functional analytic psychotherapy (Olivencia & Cangas, 2005). Therefore we present in this work a cognitive-behavioural intervention on a patient with this personality disorder and the follow up of a measure that reflects the variable of schizotypy: the referential thinking.

**Participant**

Carlos is a 38-year-old male, married, with an A-level. He works in a little family shop and he is the eldest of 4 brothers. He lives with his partner and has two children in his care, a 10-year-old stepdaughter and his 4-year-old son.

**Clinical history**

He attends consultation voluntarily for the first time in October 2007, although pushed by his family insistence after a family aggressive episode (he had seized his partner’s daughter by the neck). At that time, his personal situation was of extreme tension. He had been on sick leave (which he claims was due to daily worries) and his coming back to work made the stress increase. He defines himself as “always fighting with everyone, nothing seems normal to me, I am like from another planet”, “always watched by my parents, by my family, by society, for being a big public shot in the town”. He brings out his interpersonal difficulties, he tends to isolation and lacks skills for communication and for making himself valuable in the business (he sneaks away, he finds it hard to make contact with the customers, or he writes poems to female customers to establish communication with them). Since his adolescence, he has felt suspicion in his relationships with others (he wishes for them but does not obtain them, and if so with great difficulty). Since 2000, he has been under psychiatric treatment for his “obsessions” and anxiety facing other people. At that time, there was a slight evolution, periodically he would be on sick leave when the daily tensions would increase. His evolutionary and physical development is apparently normal. He always points out his “weirdness”, for instance he would not open his Christmas presents, and would either give them away to others or keep them. He had a lot of intellectual curiosity and would throw himself excessively into his studies. He remembers himself at the age of 14 or 15 as being able of everything, as being an extraordinary person for his implication in the academic field (his level of achievement was not very high), although at the same time a person distant from the games of others and encouraged to stay apart in order “not to damage the rest of the people”. From his adolescence on, a few peculiar behaviours are observed, like following people in the streets, he writes down various incomprehensible poems which he presents to his sister (his only confidant): “in 2002, I wrote a book to free myself”. The book is riddled with formulas resembling physical science. In most of his interpretations, he tries to establish links between nature, space, time, people and the town where he lives in. In one of the paragraphs, he points out: “Development of j. In our land of Seville things are often based on the 90-degree turns. Sometimes being patient and the matter of the 90-degree start to make more sense. It fits up a bit more than what we thought it was and did not know. The turn to which is linked everything in reference to High Street and Main Square is of 180 degrees because it is like the Sun and the Moon. They are totally different but joined in a same point, with the same respect to base. They are totally different but this physiology does not mean it is evil, it does not imply malevolence... something different is that, later on, we fight and do not know how to get rid of resentment and hatred”.

There is no physical disease of importance. He smokes a packet of cigarettes when stressed.

He defines his parents as being absent, with little involvement even though always trying to control his conduct. His mother is described as a problem person “she doesn’t understand or mixes up reality”. The sister who accompanies him at the beginning of the two sessions is the one person who plays a more efficient role in the family, who provides control, active part, and she regulates behaviour at home. She values him as someone “weird”, worried for irrelevant matters, “ethereal”, apathetic and passive.

Since the beginning, there have always been “feelings of presence”, ideas of reference, specific language (metaphorical) and distrust. He maintains eye contact, there is no pronounced disorganization in his conduct, a certain slowness when responding, laughs relevant to context but striking in its production, negative symptomatology, apathy and anhedonia above all (social and physical). Short after the beginning of the sessions, he feels very bad and informs about au-
ditory hallucinations of little development: “Listen Carlos, "be careful," "hey, you!". He describes himself as being in "a
ball of fire, if it falls down on one side it burns the population,
if it falls down on the other side the forest catches on fire. I
have to be careful because I get dizzy". He brings out feelings
of imminence and of prediction capacity, he communicates
particular feelings: "the water in the bottle has a life of its
own".

**Evaluation process**

The therapeutic sessions were carried out in a private prac-
tice of clinical psychology. At the beginning, the sessions
would take place once a week, each session lasting for an
hour (except when his wife, parents or sister would come).
As of January 2009, they took place once a fortnight.

During the second session of therapy, he was handed a file
which included various evaluation instruments about per-
sonality, anxiety, depression, general health, vulnerability
to depression, referential thinking, and so on... The results
obtained in each of the pre-treatment evaluations are stated
below (the cutoff scores or the average scoring for general
population appear in brackets)

Initial self-administered and self-report interview: they
contain items in reference to socio-demographic aspects,
medical diseases, family medical history, medicine and
drugs/alcohol consumption. Initial pharmacological treat-
ment: perfenazina 4/25 (0/1/1) and lorazepam (1/0/1), and
later, perfenazina; haloperidol (10/10/10) and halazepam
(1/0/1) up to the present with a neuroleptics reduction at the
beginning of 2009.

**Brief Psychiatric Rating Scale (BPRS)** (Lukoff, Nuechterlein
& Ventura, 1986): Punctuation from 1 (not present) to 7 (ex-
remely severe). Overall score, 59 (2.45 on 24 items).

**Psychotic dimension:** hostility= 4; suspiciousness= 4; unus-
usual thought content= 3; grandiosity = 1; hallucinations= 3.

**Disorganised dimension:** disorientation = 1; conceptual dis-
organisation= 4; excitement= 1; tension= 4; mannerisms and
posturing= 1; negativeism = 2; self-neglect or self-aban-
donment= 2; bizarre behaviour= 2; motor hyperactivity= 1;
distractibility= 2.

**Negative dimension:** motor retardation= 3; blunted affect=
2; emotional withdrawal= 2.

**Emotional dimension:** somatic concern= 2; anxiety= 6; de-
pression= 3; guilt = 5; elated mood= 1; suicidality= 1.


**Beck Depression Inventory (BDI)** (Beck, Rush, Shaw & Emery,
1979; Spanish version by Vázquez & Sanz, 1997): 28 points
(c.o. = 14).

**The Penn State Worry Questionnaire:** (PSWQ) (Meyer, Miller,
Metzger & Borkovec, 1990): 60 points (c.o. = 68).

**Dysfunctional Attitude Scale (DAS)** (Weissman & Beck, 1978;
Spanish version by Sanz & Vázquez, 1993):

DAS-total: 135 points (c.o. = 144); DAS-achievement: 54
points (c.o. = 45); DAS-dependency/need for approbation: 36
points (c.o. = 36); DAS- autonomous attitudes: 14 points (c.o. =
27).

**Goldberg General Health Questionnaire (GHQ-28)** (Spanish
version by Lobo, Pérez-Echeverría & Artal, 1986).

GHQ-global: 7 points (c.o. = 5); GHQ-somatic= 11; GHQ-
anxiety= 8; GHQ-social dysfunction= 3; GHQ-depression= 6.

**The Referential Thinking Scale** (Lenzenweger, Bennett & Li-
lenfeld, 1997): 22 points (c.s. = 7). One month after the first
evaluation = 18 points (beginning of the time series)

**Sincerity - Eysenck Personality Inventory** (Eysenck & Eysenck,
1990): 8 points (maximum scoring = 9)

**Millon Index of Personality Styles (MIPS)** (Millon, 1994),

**Motivating aims**: Enhancing= 39; preserving= 81; modify-
ing= 52; accommodating= 47; individuating= 76; nurturing=
35.

**Cognitive modes**: Extraversion= 47; introversion= 61; sens-
ing= 37; intuiting= 69; thinking= 37; feeling= 53; systematiz-
ing= 29; innovating= 83.

**Interpersonal behaviours**: Retiring= 72; outgoing= 60; hesi-
tating= 64; asserting= 72; dissenting= 77; conforming= 49;
yielding= 53; controlling= 81; complaining= 43; agreeing= 40.

**Adjustment T Score= -22**.

**Millon Clinical Multiaxial Inventory (MCMI-II)** (Millon,
1997), Spanish version of TEA (1999). The scores above 75 are
considered indications (for Axis II disorders) or syndromes
(for Axis I disorders), from 85 points on, the punctuation is
considered a sign of pathology.

**MCMI-II Axis II**: schizoid= 71; phobic= 83; dependent= 86;
histrionic= 106; narcissistic= 89; antisocial= 104; aggressive/
sadistic= 90; compulsive= 48; passive/aggressive= 89; self-
destructive potential= 99, schizotypal= 107; borderline= 93;
paranoid= 105.
MCMI-II Axis I: anxiety = 75; hysteriform = 85; hypomania = 100; depressive neurosis = 83; alcohol dependence = 100; drugs dependence = 100; thought disorder = 101; major depression = 65; delusional disorder = 102.

Sincerity = 100

The questionnaires were completed at the patient’s house. Particularly, the Referential Thinking Scale (REF) was handed in every three days since November 2007 until the beginning of 2008. An informed and written consent was obtained in order to be able to use his information for research purposes.

Statistical procedure

For the analysis of referential thinking in particular (an aspect of schizotypy) a longitudinal design was used (brief time-series). Young’s C Statistic was employed to follow up this criterion since the beginning of the therapeutic process and to detect changes in the course of the patient’s evolution (DeCarlo & Tryon, 1993; Tryon, 1982). The Least Squares method was also used to obtain the tendency line.

The statistical procedure consisted in dividing the total of the series into two parts (phase 1: 1-24, phase 2: 25-103). The application of the C Statistic should not obtain a tendency in any of its parts (phase 1 or 2), which would indicate stability in each series separately (observed Z, theoretical Z). Finally the C Statistic is applied again to the whole serie (phase 1 + phase 2) so that: if the C Statistic obtains a significant result (Zo > Zt) it would indicate that there is a change in the tendency. In this case, the visual inspection and/or another statistical procedure (for instance the Least Squares method) can indicate the straight line that derives from the punctuations and this way estimate whether there is an increase or decrease all along the series of points.

The analysis of the uninterrupted time-series over the total of the self-references (REF scale) were carried out under a 99% level of trust and a probability always inferior to .01. The program used was designed for this purpose by Dr Vicente Manzano, senior lecturer of Statistics, University of Seville.

Treatment

Initial hypothesis: We started from a possible personality structure that determines the way of perceiving the world: altered interpersonal style, tendency to referentiality, suspicion, circumstantial language, etc.

Maintenance hypothesis: isolation, social avoidance, odd language and the writings are used as a form of relieving the discomfort although they perpetuate the global style and prevent its correction. The parents inefficient and indifferent style, and the initial communication difficulties with his wife (from abroad) may have favoured the maintenance of the problem and may have deteriorate his self-image.

Treatment objectives:

Establish a strong therapeutic relationship.
Reduce social isolation, cultivate adequacy and social abilities.
 Improve personal communication style: intention, structuration and expression of thoughts.
Identify inappropriate responses, automatic thoughts, distortion and improve capacity for understanding and resolving aspects of everyday life.
Prove beliefs.
Structure the sessions in a marked way.
Establish few aims in each session.

8) Increase sensitivity to pleasure.
9) Acceptance, support and empathic understanding.
10) Improve autonomy
11) Rebuild altered self-image.
12) Improve emotional implication at home.

The intervention carried out was of the cognitive behavioural type. The objectives 3 and 4 are the ones that can be more clearly verifiable from the information that is presented.

From the clinical evaluation, we conducted a functional analysis of the problematic behaviours in order to give greater rigor and systematization to the treatment (table 1).

The sessions were held on a weekly basis and, at the beginning, Carlos’ wife or family would take part fortnightly. The achievement of the first set out objective was of outstanding importance as patients with schizotypal personality disorder maintain a few dysfunctional beliefs about people and interpersonal relationships (Beck, Freeman & Davis, 2005). The structuring of the sessions was performed thoroughly, as the patient easily tends to digression and it was difficult to achieve results if this element was not controlled. In order to achieve the proposals of each session, a behavioural contract was presented, in which Carlos would undertake to elaborate an agenda of the matters to be discussed, dividing them into small goals with the help of the therapist.
Clinic Case

Therapeutic approach to referential thinking in a case of schizotypal disorder

From the first sessions on, cognitive restructuring process was used. We taught him the ABC Model of Rational Emotive Therapy (Ellis, 1981) so he would learn to identify his irrational thoughts (“they’re not going to like me”, “something bad is going to happen”, “he knows what I think”) and wrong evaluation of reality (“the world is dangerous”, “coincidences do not exist”, “what I think will come true”) in order to change them for more rational and biased thoughts instead of basing his beliefs on emotional responses. On the other hand, in view of the lack of critical capacity before some irrational beliefs, the creation of alternatives was favoured through differential reinforcement of other behaviours and the extravagant ideas were ignored (extinction procedure).

On the other hand, we tried to show the breaking-off of the idiosyncratic cause-effect relation through the use of daily examples and analysis of news. We used questioning and Socratic dialogue, proper of Beck’s Cognitive Therapy (Beck & Alford, 2009) to modify cognitive distortions (such as personalization, referentiality and emotional reasoning: “the town is sad, everyone is down or angry”) and the analysis of the metaphors he himself would formulate, redefining them.

Table 1. Functional analysis of problem behaviours.

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Behaviour</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal:</strong></td>
<td>Variables of vulnerability</td>
<td><strong>Motor:</strong></td>
</tr>
<tr>
<td>Auditory hallucinations “be careful”, “hey, you!”</td>
<td>Emotional absence of his parents</td>
<td>Unusual language “the water in the bottle has a life of its own”.</td>
</tr>
<tr>
<td>Ideas of reference “always watched by my parents, by my family, by society”</td>
<td>Wife from abroad</td>
<td>Interpersonal difficulties: “always fighting with everyone”</td>
</tr>
<tr>
<td>Suspicion</td>
<td>Odd behaviour since childhood “would not open his Christmas presents”</td>
<td>Odd behaviours (following people in the streets)</td>
</tr>
<tr>
<td><strong>External:</strong></td>
<td>Poor resources for coping</td>
<td>Striking laughs</td>
</tr>
<tr>
<td>When he has to deal with customers</td>
<td>In adolescence: Isolation, grandiosity (he considered himself as being an extraordinary person)</td>
<td>Slowness when responding</td>
</tr>
<tr>
<td>Family and wife presence</td>
<td>Interpersonal difficulties (following people in the streets)</td>
<td>Smoking</td>
</tr>
<tr>
<td>Periods of stress at work</td>
<td>Excessive implication in studies</td>
<td><strong>Physiological</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tension</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cognitive</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of social abilities (writes poems to his female customers to communicate with them)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily concerns (business, family) and concerns for irrelevant matters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suspiciousness and distrust with others “they know what I think”</td>
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<td></td>
<td></td>
<td>Negative anticipation of his self-image “they’re not going to like me”</td>
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<tr>
<td></td>
<td></td>
<td>Odd feelings (imminence, prediction capacity, feelings of a presence) “what I think will come true”, “something bad is going to happen”</td>
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<tr>
<td></td>
<td></td>
<td><strong>Emotional</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apathy and anhedonia</td>
</tr>
</tbody>
</table>

1 Negative reinforcement
2 Positive reinforcement
3 Positive punishment

http://institucional.us.es/apcs
in a more realistic way and with less tendency to global or metaphysical interpretations.

During the whole therapeutic process, we worked the interpersonal abilities through modelling, behavioural rehearsal and role-play. Home exercises were set out to consolidate the learning. We put into practice operant techniques such as positive reinforcement for the achieved objective-conducts, differential reinforcement for inappropriate behaviours like digression and circumstantiality in language. He was taught to handle “stress” (mainly from his partner) and “contradictions” (ask for and let do) through behaviour rehearsal, “the weight of the past” (damaged self-image like being the weirdo, the useless) through cognitive restructuring process, the lack of communication (mostly with his family) through specific tasks linked to the training in social abilities and the execution of programmed tasks. He was urged to play and get involved with the children as a source of emotional experience. We expected to minimize the tendency to isolation with this approach.

### Results

Speaking of the psychological intervention carried out, an evaluation was conducted after 14 months of therapeutic work, obtaining a significant reduction –comparing with the pre-treatment evaluation- in some of the scales from the MIPS, MCMI-II, REF (apart from the monitoring of serial measurements that came to an end in September 2008), and BPRS. From that moment (January 2009) the sessions were held on a fortnightly basis, and since September 2009, a monthly monitoring was conducted, up to the present time (September 2010). Among the major results in the MIPS we can observe in table 2 an improvement in the capacity for enjoyment and a tendency to look on the bright side of life, together with a decrease in the concentration on problems and an increasing concern for others. The patient is more outgoing and sociable, his tendency to isolation diminishes and his initiative when engaging in social relationships increases. It should be emphasized that there is an improvement in the ability to process knowledge by means of logic

<table>
<thead>
<tr>
<th>MIPS. MOTIVATING AIMS (29-69)</th>
<th>Pre-treatment (Prevalence Score)</th>
<th>Post-treatment (Prevalence Score)</th>
</tr>
</thead>
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<td>Feeling</td>
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<td>MIPS. INTERPERSONAL BEHAVIOURS (29-69)</td>
<td>Pre-treatment (PS)</td>
<td>Post-treatment (PS)</td>
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</tr>
<tr>
<td>CONVENTIONALISM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conforming</td>
<td>49</td>
<td>42</td>
</tr>
<tr>
<td>Yielding</td>
<td>53</td>
<td>52</td>
</tr>
<tr>
<td>POWER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlling</td>
<td>81</td>
<td>65</td>
</tr>
<tr>
<td>Complaining</td>
<td>43</td>
<td>35</td>
</tr>
<tr>
<td>NEGATIVISM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeing</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td>ADJUSTMENT T SCORE</td>
<td>3</td>
<td>40</td>
</tr>
</tbody>
</table>
and objective reasoning although his interest for symbolism and the unknown is growing, with a tendency to get opinions from following his emotional appreciations. We observe an outstanding decrease in dissenting and controlling.

Regarding the manifestations in Axis I and II (measured with the MCMI, versions I and II) important changes are observed (table 3). Focussing on Axis II, we notice an increase in the initiative when engaging in interpersonal relationships, taking a more active role. The need for acceptance and approval from others decreases in a significant way. The antisocial and aggressive aspects are reduced in a marked way, as well as his tendency to emphasize the miserable aspects of his life which makes his grief worse. The considered most serious components in this instrument (schizotypal, borderline and paranoid) decrease drastically down to levels that are considered acceptable. Regarding Axis I, it is necessary to emphasize the marked decrease in psychotic thinking and delirium. The somatoform meanings lessen as well as the scoring in drug and alcohol consumption, though an increase in anxiety is produced, possibly linked to daily circumstances which worry the patient in those moments.

Speaking of the analysis of the brief time-series, the results suggest a progressive decrease of referentiality (graph 1). The analysis of Young’s C Statistic indicates that both in the first and second phases, the measurements are stable, there is therefore no change in the tendency (table 4). When the whole series is taken into account, statistically significant changes are shown with a decreasing direction. A notable effect size is obtained (35.81%).

The Brief Psychiatric Rating Scale (BPRS) allows us to observe a clear decrease in each of its dimensions (table 5). It is necessary to emphasize that the disorganized and negative components are almost absent as well as the hallucinations (psychotic dimension). Distractibility, suspicion, unusual content of thought and conceptual disorganization slightly persist.

Discussion

The analysis of the scorings shows a wide change -though not definitive- in the presented case. Moreover, it is an equally noticeable fact for the people living with the patient. We established various therapeutic objectives but we gave importance to the structuring of each activity and to the favouring

<table>
<thead>
<tr>
<th>MCMI-II &amp; III. Axis II</th>
<th>Pre-treatment (BR)</th>
<th>Post-treatment (BR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizoid</td>
<td>71</td>
<td>57</td>
</tr>
<tr>
<td>Phobic</td>
<td>83</td>
<td>59</td>
</tr>
<tr>
<td>Dependent</td>
<td>86</td>
<td>58</td>
</tr>
<tr>
<td>Histrionic</td>
<td>106</td>
<td>34</td>
</tr>
<tr>
<td>Narcissistic</td>
<td>89</td>
<td>78</td>
</tr>
<tr>
<td>Antisocial</td>
<td>104</td>
<td>62</td>
</tr>
<tr>
<td>Aggressive/sadistic</td>
<td>90</td>
<td>62</td>
</tr>
<tr>
<td>Compulsive</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td>Passive/aggressive</td>
<td>89</td>
<td>54</td>
</tr>
<tr>
<td>Self-destructive potential</td>
<td>99</td>
<td>59</td>
</tr>
<tr>
<td>MCMI-II &amp; III. Axis II</td>
<td>Pre-treatment (BR)</td>
<td>Post-treatment (BR)</td>
</tr>
<tr>
<td>Schizotypal</td>
<td>107</td>
<td>58</td>
</tr>
<tr>
<td>Borderline</td>
<td>93</td>
<td>56</td>
</tr>
<tr>
<td>Paranoid</td>
<td>105</td>
<td>57</td>
</tr>
<tr>
<td>Sincerity</td>
<td>100</td>
<td>83</td>
</tr>
<tr>
<td>MCMI-II &amp; III. Axis I</td>
<td>Pre-treatment (BR)</td>
<td>Post-treatment (BR)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>75</td>
<td>86</td>
</tr>
<tr>
<td>Hysteriform</td>
<td>85</td>
<td>64</td>
</tr>
<tr>
<td>Hypomania</td>
<td>100</td>
<td>61</td>
</tr>
<tr>
<td>Depressive neurosis</td>
<td>83</td>
<td>57</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>Drugs dependence</td>
<td>100</td>
<td>65</td>
</tr>
<tr>
<td>Thought disorder</td>
<td>101</td>
<td>46</td>
</tr>
<tr>
<td>Major depression</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>Delusional disorder</td>
<td>102</td>
<td>63</td>
</tr>
</tbody>
</table>
semen, the analysis of news, press articles, some book, con-

nference assistance, and even metaphors, as recommended
(Olivencia & Cangas, 2005), represented a very rich field to

be able to identify their emotional states and to observe
the effect that their emotional expression had on him (usu-
ally pleasant).

The analysis of a schizotypy aspect, referential thinking, a
very important criterion in this case because of its large pro-
duction, expresses a significant but gradual change. The se-
ries, carried out during a little more than ten months, indi-
cates a decrease in the referential tendency, mostly from the
second month and a half of treatment (moment when the
series gets stable until the observation 24) but not its end-
ing. This aspect is shown in the residual score of the BPRS
positive indicators. As in previous works, we have been
able to observe that the measurement of referential think-
ing provides us with a nuclear characterization of psychosis
(schizophrenia-spectrum) but it might admit the effect of
a psychological intervention (Rodríguez-Testal, Valdés-
Díaz, Benítez-Hernández, Fuentes-Márquez, Fernández-
Jiménez & Senín-Calderón, 2009). In spite of the tiredness
stemming from the repetitive procedure of measures, a
high number of observations, it could possibly show a very
marked decrease in the tendency to referentiality.

<table>
<thead>
<tr>
<th>Table 4: Analysis of the time series about referential thinking (REF) and effects ascribable to treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations 1-24</td>
</tr>
<tr>
<td>Observations 25-103</td>
</tr>
<tr>
<td>Global</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>.377</td>
</tr>
<tr>
<td>.142</td>
</tr>
<tr>
<td>.549</td>
</tr>
</tbody>
</table>

The sphere of the family was another essential aspect,
mostly in the marital context, to diminish the excessive
critic, the repetition of protests without a clear formulation
of the needs at home which Carlos tended to avoid or to re-

Table 5. Pre-treatment and post-treatment results of the
Brief Psychiatric Rating Scale (BPRS), global and by psycho-
pathological dimensions.

<table>
<thead>
<tr>
<th></th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPRS total (out of 24)</td>
<td>59 (2.45)</td>
<td>32 (1.33)</td>
</tr>
<tr>
<td>Psychotic dimension: out of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Disorganized dimension: out of 10</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Negative dimension: out of 3</td>
<td>2.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Emotional dimension: out of 6</td>
<td>3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

of reflection, evaluation or response more focused on the
reality of each event. Carlos’ more immediate tendency
was to interpret things in a magic way and to cut himself off
on not understanding or on functioning unsuitably. In this
sense, the analysis of news, press articles, some book, con-

Table 1. Brief time-series of referential thinking (REF) and tendency line

Graph 1. Brief time-series of referential thinking (REF) and tendency line

\[ y = -0.0414x + 11.01 \]

\[ R^2 = 0.35811 \]
Changes in this patient were followed up in monthly sessions, appreciating—in general terms—the maintenance of the achievements. However, it is difficult to suppose that there will be a higher change than the one observed. His coming back to work in the shop, the medication reduction, realizing he was still overwhelmed if/when his working day was very long, were a few events that took place in the present year of follow up and that put him to the test with acceptable results.

To conclude, it is necessary to point out that this work has disadvantages or limitations. It deals with a unique case with a pre-test and post-test measurement. Therefore the results cannot be generalized or considered as evidence of therapeutic effectiveness. The application of the time series in a long period of time allows continuous measures to turn the human subject into his own control and to provide him with a more valuable change indicator. However, the measure used for referential thinking registration is self-report, which introduces a source of errors that needs to be taken into account. Given the fact that the BPRS has been used as a hetero-report instrument, one can point out a convergent coincidence with the self-report results. The lack of an experimental group restricts the scope of the results of this particular case, but it can suggest a way for an intervention with people suffering from schizotypal personality disorder.

**References**


Abstract

This article has two different aims: first, to test whether the Rorschach Psychodiagnostic Test can confirm the psychiatric diagnosis of 245 schizophrenic inpatients when the initial diagnosis was based on the criteria of the RDC and DSM-IV for the differentiation of schizophrenia; and second, to determine whether there are statistically significant differences between two refined samples of 191 "acutely aggravated" and 54 chronic schizophrenic patients.

The following tests were used: the Rorschach Psychodiagnostic Test (Comprehensive System), the Research Diagnostic Criteria, the DSM-IV and the Katz Adjustment Scale.

A cross-sectional study design was used to compare the groups with the Mann Whitney U, in order to test for differences between the two refined acute and chronic samples.

Analysis of the data confirmed the precision and efficacy of the Rorschach test for the differential diagnosis of schizophrenia and distinguishes it from borderline personality and bipolar disorder.

Application of the Mann-Whitney U to the two refined samples of acute and chronic patients (refined due to the presence in their protocols of L>5; R<14; X+%>70%; few M, no M- and no level 2 special codes), confirmed the existence of statistically significant differences at three confidence levels (<0.01; 0.02 and 0.05).

In the two refined acutely aggravated and chronic groups, the presence of the mechanisms of splitting, loss of perceptual accuracy, dissociated and delusional thought, isolation and deficient interpersonal relationships was confirmed in 100% of cases and all of them complied with the six criteria of the Schizophrenia Index and the five criteria of the Perceptual Thinking Index. These features were also observed in the 245 patients from the overall sample, including those who did not fully comply with these indexes.

Analysis of the values of the Rorschach structural summary in the samples of acute and chronic patients studied revealed additional information about the personalities and behavior of these people and aided in focusing their treatment. However, the most important aspect of the Rorschach test is that it does not require a three-month, six-month or two-year period to perform a differential diagnosis of people with schizophrenia, as is the case with the RDC and the DSM-IV.

Keywords: Schizophrenia, Rorschach test, differential diagnosis.

Received: 10/4/2010  Accepted: 7/31/2011

INTRODUCTION

The concept of schizophrenia has evolved since Morel (1853, 1860) used the term “dementia praecox” and Bleuler (1911) replaced it with schizophrenia, or “group of schizophrenias,” mentioning the splitting (spaltung) of the different psychic functions as one of its most important characteristics.

Many authors have described the causes and symptoms, as well as the classification and differential diagnosis criteria of schizophrenia (Kraepelin, 1896, 1918; Bleuler, 1911; APA; Arieti, 1955, 1959; Weiner, 1966; Ey, 1971, 1973; Portuondo, 1973; McReynolds, 1974; Jenkins, 1974; Jackson, 1974; Spitzer, Endicott & Robins, 1975, 1977, 1978; Crow, 1980, 1982; Obiols & Obiols, 1988; Obiols, 2000; Meyer (2002); Exner, 1968-2005; and many others).

Weiner (1966) departed from the premise of four criteria for diagnosing a schizophrenic patient: the presence of a thought disorder, evidence of inaccurate perception of reality, poor emotional control and ineffectiveness in interpersonal relationships. Exner (1978) included these criteria in the first schizophrenia index of what would become his Comprehensive System. Two variables in the Rorschach are fundamental for demonstrating the presence of a psychological disorder: X-% and Wsum6. X-% (percentage of all answers with form quality minus) is an indicator of a disorder in the perception of reality (when X-%>29%) and WSum6 (weighted sum of level 2 special scores) indicates the presence of serious thought disorders when > 17 (Weiner, 2002; Exner, 2000, 2003). These two variables form part of the Schizophrenia Index (SCZI) and the Perceptual Thinking Index (PTI).

Before the implementation of the Perceptual Thinking Index (PTI), the Schizophrenia Index (SCZI) confirmed a diagnosis of schizophrenia if six, or in some cases only four or five, of its variables were fulfilled. The Perceptual Thinking Index was introduced as way to avoid the false positives of what was then considered to be the final Schizophrenia Index on the Rorschach (SCZI).
Box I. Variables of the Schizophrenia Index (SCZI) and the Perceptual Thinking Index (PTI)

<table>
<thead>
<tr>
<th>Schizophrenia Index (SCZI)</th>
<th>Perceptual Thinking Index (PTI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.- X+%&lt;61%</td>
<td>1.- XA%&lt;70% and WDA%&lt;75%</td>
</tr>
<tr>
<td>2.- X-%&gt;29%</td>
<td>2.- X-%&gt;29%</td>
</tr>
<tr>
<td>3.- FQx-&gt;=FQxu or R.FQ-&gt;FQo or R.FQ-&gt;FQo +FQ+</td>
<td>3.- level2 de CE&gt;2 and FABC2&gt;0</td>
</tr>
<tr>
<td>4.-SUM CE. level2&gt;SUM CE level1 and FABC2&gt;0</td>
<td>4.- R&lt;17 Y WSUM6&gt;12 or R&gt;16 Y WSUM6&gt;17</td>
</tr>
<tr>
<td>5.- SUM6 &gt;6 ó SUM or WSUM6&gt;17</td>
<td>5.- M-&gt;1 ó X-%&gt;40</td>
</tr>
<tr>
<td>6.- M-&gt;1 ó X-%&gt;40</td>
<td></td>
</tr>
</tbody>
</table>

The review of diagnoses of people with schizophrenia performed via Rorschach by three Rorschachists from the European School (Loosli-Usteri, Bohm and Alcock) and Portuondo, amongst the Americans, provided information on the scope and usefulness of the Rorschach test for the diagnosis of schizophrenia. On tests of these patients, Loosli-Usteri (1965) obtained a low number of responses, failure on cards I and VII and “disjointed” content. In protocols of schizophrenic patients, Bohm (1972) observed a medium to high number of responses, a lack of popular responses on card V, failures on cards VIII, IX and X, sequences of well or badly viewed forms, an increase in W (whole) and W- responses and an increase in Dd (unusual details) among paranoid schizophrenics who occasionally presented delusional ideas. Alcock (1965) proposed three characteristics to be identified in the test for the presence of schizophrenia: flight of ideas, ideas of reference and hallucinatory perception. Alcock borrowed Bleuler’s concept of ‘flight of ideas’, which corresponds to a thought form which is interrupted in the middle of a thought and is followed by other ideas which are not interrelated (the DR2 in this study and the DR of Portuondo). As regards ‘ideas of reference’, according to Alcock, the frequent association of perceived images can be indicative of this characteristic when linked to personal experience, although they are not always pathognomonic in her opinion. In the case of ‘hallucinatory perception’, the reality of the inkblot is replaced by the sensations and feelings projected onto them by the patients, giving rise to movement, form quality minus and morbid content responses (M-, FQx-, MOR). Portuondo (1973) attributes the following characteristics to these patients: loss of the sense of reality (P+%), few popular responses (P), deviant verbalizations (DV) with a predominance of autistic logic, disjointed responses (DR), few responses with normal detail (D’), low emotional control (FC’), few human interests, H and Hd <20%, predomination of destructive impulses (CF+C>FC), human movements (M) with low form quality, oppositionality (S) and animal and inanimate movement greater than human movement (FM+M>m).

The point of reference in this study comprises normative North American groups (samples from Exner, 2000, 2002) and an initial document on people with acute schizophrenia (Vives, 1984, 1989) cited by Exner (1986, 1994), in which the four basic criteria set out by Wiener (1966) were found to be present. In this investigation, we are interested in confirming the hypothesis of our initial study (1984) in samples which are much broader—given the higher number of patients—and refined—excluding very high or very low values of specific variables which could affect the overall interpretation—without ceasing to be considered schizophrenic.

As a result, the aim of this investigation consists of performing the differential diagnosis of inpatient schizophrenics via the Rorschach test and testing to see whether there are significant differences between two refined “acute” and chronic samples. Two hypotheses are proposed: 1) Whether the Rorschach test can confirm the psychiatric diagnosis of 245 schizophrenic inpatients when the initial diagnosis was based on Research Diagnostic Criteria and the criteria of the DSM-IV for the differentiation of schizophrenia, and 2) whether the values obtained in a refined sample of people with “acutely aggravated” schizophrenia differ significantly from those obtained in a refined sample of people with chronic schizophrenia, by applying the Rorschach test to both samples.

**Participants**

This study consisted of two groups of male participants, 191 acute and 54 chronic, between the ages of 19 and 45, with a mean age of 35. We believe that the interval between 19 and 45 years is sufficiently broad to cover a range of possibilities which, justified from the clinical perspective and that of the Rorschach, does not restrict the possibility of studying them. Their sociocultural level is medium to medium-low. The use of different approaches to perform this study (RDC, DSM-IV and Rorschach) ensures the differential diagnosis of schizophrenia and its differentiation from the diagnosis of other conditions. According to an argument by Weiner (1966, 1982) that is particularly important in clinical research, the use of the Rorschach requires that the subjects’ condition be confirmed before the test is applied, by taking into account which indexes best represent these characteristics.

The first group was composed of 191 patients in an acute phase of the illness (admitted for initial onset) who meet the criteria of defined and present schizophrenia of the RDC (Spitzer, Endicot & Robins, 1977) and the criteria of the DSM-IV (APA, 1997, 2002) which are defined in sections A, B, C (Continuous signs of disturbance for at least six months, and during more than one month if different symptoms of criteria A are met), D and E. With the exception of 5 illiterate
subjects, 95 had completed primary education, 67 primary and incomplete secondary education and 24 had an associate degree. Only 15 were currently married.

The second group was composed of 54 long-term inpatients with significant signs of schizophrenia, present more or less continuously during a minimum period of two years. They presented a set of symptoms which met the criteria described in the RDC and the DSM-IV for the definition of chronic schizophrenia. Their sociocultural level varied: 32 had completed primary education while 9 had not, 7 were illiterate and 6 had intermediate-level associate degrees. Regarding their marital status, 50 were single, 3 divorced and one widowed. 30 of them possessed a family history of the illness and 5 were unaware of this information. The two groups of participants came from a range of Spanish regions: Extremadura, Catalonia, Galicia, Andalusia, Castile and Zaragoza. The protocols of people with schizoaffective and mood disorders (criteria D* of the DSM-IV) were excluded, along with patients considered by the Rorschach to be depressive and “borderline”, due to a failure to fulfill the variables of the Schizophrenia Index (SCZI) and the Perceptual Thinking Index (PTI) on the test.

**INSTRUMENTS**

The following tests were applied: the Rorschach Psychodiagnostic Test (Comprehensive System by J.E. Exner, 2000-2004), the RDC (1975, 1977) and the criteria of the DSM-IV (2002) for the differentiation of schizophrenia. Complementarily, the respective caregivers applied the Katz Adjustment Scale (Katz & Liberty, 1963) to their patients.

A cross-sectional study design was used to compare the groups via the Mann-Whitney U, after having performed a descriptive analysis of the variables of the structural summary of the Rorschach test on the 245 inpatients. The 191 “acutely aggravated” schizophrenic patients had been given an initial diagnosis by the acute psychiatry service of three hospitals in the province of Barcelona. Two “judges” applied the criteria of the RDC (all met criterion no. 8) and the criteria specified in the DSM-IV for the diagnosis of schizophrenia to the interviews conducted. The chronic patients had been inpatients at the institution for a minimum of two years and were characterized by a gradual reduction in their cognitive ability as described by their respective psychiatrists and caregivers. In fact, it was not possible to include catatonic patients in the study, given the characteristics of rigidity and isolation which they presented. The Rorschach test was administered between 10 and 15 days after the acute patients had been admitted and two years following the admission of the chronic patients. The protocols obtained and reviewed by three “judges” (1998-2004) comprised the first results from people with schizophrenia obtained with the Rorschach in Catalonia and the first results with the Comprehensive System in all Spain. All of the patients arrived medicated with fluphenazine or thioridazine, sulpiride, eskazine or levomepromazine, and Risperdal (risperidone), Zyprexa (olanzapine), Clozapine, Seroquel (quetiapine) from their respective primary care centers and continued to receive medication on a daily basis once admitted.

**Results**

Five stages of analysis were performed: 1) Descriptive analysis of the means and standard deviations of the SS variable groups of the Rorschach test of 191 “acutely aggravated” schizophrenic patients. 2) Descriptive analysis of the means and standard deviations of the SS variable groups of the Rorschach test of 54 chronic schizophrenic patients. 3) Analysis of the typology of the current period of schizophrenia in the two refined acute and chronic samples. 4) Comparative analysis of the two refined acute and chronic samples via the Mann-Whitney U. 5) Descriptive analysis of the human movement determinant, M, and its relation to human content, Pure H. Qualitative analysis of the Katz Adjustment Scale confirmed the characteristics provided by other variables and indexes.

1) Descriptive analysis of the means and standard deviations of the SS variable groups of the Rorschach test of 191 “acutely aggravated” schizophrenic patients.

According to observations, these groups consist of people without a defined response style (EB) who attempt to avoid any stimulus perceived as ambiguous or complex (Lambda) and have flattened mental activity (FM+m). They tend to be flexible in their ideation (a:p) and specify their experiences (pure form, F, and normal detail, D, responses). They also tend to isolate themselves and to dissociate and simplify reality (Lambda↑). They present severe thought disorders (DR2, INC2, FABC2, CONT), which together with the weighted sum of level 2 special codes (Wsum6) shows the presence of serious pathology. (Appendix: Tables XVI and XVII). Despite their limited initiative to observe and organize the stimulus field (Zf), the result of this organizational effort tends to fall within the parameters of non-patients (Zd), and their aspirations are slightly greater than their operational ca-

<table>
<thead>
<tr>
<th><strong>Table I: Ideation variables</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>DR2=3.30</td>
</tr>
<tr>
<td>WSum6=59.9 M.=0.87</td>
</tr>
</tbody>
</table>
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Year 2011 Volume 7

pacity (W:M). The low number of popular responses (P=3.6) on meaningful cards (I, III, V, VIII and X) may consist of a measure of their difficulty in partaking in common thought and a demonstration of their peculiarity (FQxu; Xu%). They possess poor perceptual adjustment (X+%; XA%, WDA%), with an increasing loss of perceptual accuracy (FQx->FQxu; FQf-> FQfu; X-%>29%) (Appendix: Tables X, XII, XIX).

They present low receptivity to emotional stimuli (Afr) and are unable to easily interact with their environment (lack of M in pure H). They show ambivalence, dissociation and convey a painful affective state (analysis of the blends or DM). They have difficulty in controlling their emotions, displaying behaviors such as “acting out” which may interfere with their cognitive processes (CF+C>FC) (suicide attempts, only one successful). Their affective restriction (SumC’) predominates, as well as suffering, defenselessness (SumY), cautious pursuit (T) or resignation (T=0) of affective closeness, and negative introspection (V), associated with depression and suicide attempts – though globally these latter values were relatively low. The production of anatomical content (An) in response to an aggressive stimulus (S) which was not present may be related to the difficulty in expressing affect (SumC’), which they retain or somatize (Appendix: Tables XX, XXI, XXII).

They tend to withdraw psychically (Afr¯) for fear of feeling overwhelmed or invaded by emotions which they cannot control (CF+C>FC). In addition to low self-esteem, they also present few human interests and deficient or highly deficient interpersonal relationships [M- in Hd, (H), (Hd), A, Ad contents]. Only a single participant was able to achieve appropriate interaction with the environment (Appendix: Tables XXI, XXII).

1 Another group of tables have been included (in the APPENDIX) with a view to clarifying the interpretation of the Rorschach variables used in this study (Tables X to XXII).

2) Descriptive analysis of the means and standard deviations of the SS variable groups of the Rorschach test of 54 chronic schizophrenic patients.

Likewise, according to observations, this group consists of people who attempt to avoid any stimulus perceived as ambiguous or complex (Lambda), whose psychological functioning leads them to control and restrict both affective and primitive needs, which are almost never satisfied (FM). They possess severe thought disorders, indicative of the severe cognitive disorganization from which they suffer (DR2, CONTAM), poor perceptual adjustment (X+%, XA%, WDA%) and loss of perceptual accuracy (X-%, FQ->FQu) (Appendix: Tables XVII, XIX, XX).

3) Analysis of the typology of the current period of schizophrenia in the two refined samples of 39 acute and 24 chronic patients.

The diagnoses made by applying the criteria of the RDC and the DSM-IV for the differentiation of schizophrenia were confirmed in each sample with the Rorschach test; a diagnostic coincidence of 98% was found in the acute patients and 97.8% in the chronic patients. The Schizophrenia Index (SCZI) and the Perceptual Thinking Index (PTI) were not met for only two acute patients and one chronic patient (Box I).

Table II: Information processing and cognitive mediation variables

<table>
<thead>
<tr>
<th>Zf</th>
<th>Zd</th>
<th>W:M</th>
<th>PSV</th>
<th>DQ+</th>
<th>DQy</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.16</td>
<td>0.32</td>
<td>7.46:2.25</td>
<td>0.53</td>
<td>3.57</td>
<td>2.9</td>
</tr>
<tr>
<td>P</td>
<td>X+%</td>
<td>XA%</td>
<td>WDA%</td>
<td>FQx-&gt;FQxu</td>
<td>FQf-&gt;FQfu</td>
</tr>
<tr>
<td>3.6</td>
<td>45%</td>
<td>&lt;70%</td>
<td>&lt;75%</td>
<td>5.59</td>
<td>2.95</td>
</tr>
</tbody>
</table>

Table III: Affect variables

<table>
<thead>
<tr>
<th>Afr</th>
<th>Blends:R= 1.72:17.01</th>
<th>CF+C&gt;FC= 1.39 &gt;0.72</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.43</td>
<td>SumC'=1.46</td>
<td>SumY= 0.45</td>
</tr>
<tr>
<td>0.14</td>
<td>V= 0.04</td>
<td>S=1.93</td>
</tr>
</tbody>
</table>

Table IV: Self-perception and interpersonal relationship variables

<table>
<thead>
<tr>
<th>Ego</th>
<th>FD</th>
<th>MOR</th>
<th>H</th>
<th>Ad</th>
</tr>
</thead>
<tbody>
<tr>
<td>x de 3r+(2)/R =.25</td>
<td>0.15</td>
<td>1.14</td>
<td>1.74</td>
<td>0.97</td>
</tr>
<tr>
<td>M= 2.25; M= 0.87</td>
<td>1.59</td>
<td>5.95</td>
<td>(A)=0.1</td>
<td></td>
</tr>
</tbody>
</table>
| Ad=0.97 (Ad)=0.03 | }
The Rorschach test in the differential diagnosis of 245 schizophrenic inpatients

4) Comparative analysis of the two refined acute and chronic samples via the Mann-Whitney U.

The comparative analysis of the two samples (N=39 and N=24) conducted by means of the Mann-Whitney U revealed statistically significant differences at three confidence levels < 0.01, 0.02 and 0.05.

The reduction and refinement of the protocols was based on the increase or decrease in the values of specific variables [high or very high Lambda (L>5); low number of responses (R<14); X% greater than 70%; protocols without M and M-; few special codes (lack of DR and CONTAM), and one or two variables on the Schizophrenia Index (SCZI)] (Appendix: Table XVII).

When the Mann-Whitney U was applied, it was possible to observe the lack of perceptual adjustment or perceptual peculiarity (Xu% =.007. N of C <0.01 and FQxu%=.013. N of C <0.05). Table VIII shows all of the values obtained and their significance (Appendix: Tables XVII, XIX, XXI).

5) Descriptive analysis of human movement determinants, M, and their relation with human content, pure H (interest in people and interpersonal relationships).

The qualitative analysis of human movement determinants (M) in relation to human contents, H, provides information on the interest in people and the low quality of their interpersonal relationships [(M-, or Mo in Hd, A, (H, Hd)].

This table shows the proportion of the human movement determinant, M, the distribution of its form quality (+, o, u, -), the increase in M-, linked to deficient interpersonal relationships, as well as the increase in human detail, [Hd], and whole animal (A) contents, aspects linked to partial object relationships and stereotyped thoughts respectively. The values of the chromatic (FC:CF+C) and achromatic (SUMC') color variables, and the relation between space responses, S, and An and AG contents (as escape routes from their aggressiveness) may reflect a lack of affective control (C) and difficulties in channeling their oppositionality or hostility (relationship between S, AG and An), which were more visible in “acute” patients (Appendix: Tables XII, XIV, XXI).

<table>
<thead>
<tr>
<th>Sample of chronic schizophrenic patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table V: Ideation, information processing and cognitive mediation variables</td>
</tr>
<tr>
<td>EB= 2.2</td>
</tr>
<tr>
<td>DR2= 2.04</td>
</tr>
<tr>
<td>X+%=43%</td>
</tr>
<tr>
<td>FQx&gt;FQxu</td>
</tr>
<tr>
<td>INC2=1.63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table VI: Affect, self-esteem and interpersonal relationship variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Af=.50</td>
</tr>
<tr>
<td>T=.17</td>
</tr>
<tr>
<td>Ego=.25</td>
</tr>
<tr>
<td>H=1.43</td>
</tr>
<tr>
<td>SumY=.73</td>
</tr>
</tbody>
</table>

Box II: Typology of current period of schizophrenia. Diagnoses of two refined samples of 39 acute patients and 24 chronic patients via rdc, ds-m-iv and rorschach

**DIAGNOSIS VIA RDC AND DSM-IV:**

- “Acute” sample
  - 36 paranoid schizophrenics
  - 2 undifferentiated schizophrenics
  - 1 hebephrenic schizophrenic (Do not comply with the variables of the SCZI or PTI indexes)

- “Chronic” sample:
  - 22 paranoid schizophrenics
  - 2 residual schizophrenics

**DIAGNOSIS VIA RORSCHACH:**

- “Acute” sample
  - 37 paranoid schizophrenics

- “Chronic” sample:
  - 2 non-schizophrenic patients via Rorschach
  - 1 residual schizophrenic
  - 1 non-schizophrenic patient via Rorschach (SCZI, PTI)
Table VII: Statistically significant differences between "acute (n=39)" and "chronic (n=24)" patients via Mann-Whitney U

<table>
<thead>
<tr>
<th>Variable</th>
<th>&quot;Acute&quot; schizophrenia</th>
<th>&quot;Chronic&quot; schizophrenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xu%</td>
<td>.007 **</td>
<td>.009 **</td>
</tr>
<tr>
<td>FQxu%</td>
<td>.013 *</td>
<td>.045 .</td>
</tr>
<tr>
<td>FM+m</td>
<td>.015 *</td>
<td>.035 .</td>
</tr>
<tr>
<td>DR2</td>
<td>.02</td>
<td></td>
</tr>
</tbody>
</table>

** p< 0.01 * p< 0.02 . p< 0.05

Table VIII: Comparative analysis of the variables of the structural summary of the rorschach test for two refined samples of acute and chronic schizophrenic patients via Mann-Whitney U

T-test: acute schizophrenic patients (mean 1: n = 39)
Chronic schizophrenic patients (mean 2: n = 24).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>Z</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z Sum</td>
<td>35.55</td>
<td>26.23</td>
<td>19.615</td>
<td>.0498</td>
</tr>
<tr>
<td>Dd</td>
<td>35.69</td>
<td>26.00</td>
<td>20.791</td>
<td>.0376</td>
</tr>
<tr>
<td>DQx/+</td>
<td>29.06</td>
<td>37.77</td>
<td>21.018</td>
<td>.0356</td>
</tr>
<tr>
<td>Fq Xu</td>
<td>36.40</td>
<td>24.85</td>
<td>24.713</td>
<td>.0135 *</td>
</tr>
<tr>
<td>FQf</td>
<td>28.46</td>
<td>37.75</td>
<td>19.983</td>
<td>.0457</td>
</tr>
<tr>
<td>Sum C'</td>
<td>35.54</td>
<td>26.25</td>
<td>20.494</td>
<td>.0404</td>
</tr>
<tr>
<td>Blends</td>
<td>35.55</td>
<td>26.23</td>
<td>20.396</td>
<td>.0414</td>
</tr>
<tr>
<td>DR2</td>
<td>36.10</td>
<td>25.33</td>
<td>23.093</td>
<td>.0209</td>
</tr>
<tr>
<td>FM+m</td>
<td>33.31</td>
<td>25.00</td>
<td>24.222</td>
<td>.0154 *</td>
</tr>
<tr>
<td>Es</td>
<td>35.73</td>
<td>25.94</td>
<td>20.804</td>
<td>.0375</td>
</tr>
<tr>
<td>S-%</td>
<td>35.64</td>
<td>26.08</td>
<td>20.641</td>
<td>.0390</td>
</tr>
<tr>
<td>Xu%</td>
<td>35.81</td>
<td>24.19</td>
<td>26.588</td>
<td>.0078 **</td>
</tr>
<tr>
<td>Afr</td>
<td>27.33</td>
<td>39.58</td>
<td>25.902</td>
<td>.0096 **</td>
</tr>
</tbody>
</table>

** p < 0.01 * p < 0.02 . p <0.05

Table IX: Descriptive analysis of the m determinant in the sample of acute patients (n=39) and its relationship with human content, h.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>2.25</td>
<td>1.98</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>MQ+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mqo</td>
<td>1.15</td>
<td>1.21</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Mqu</td>
<td>0.24</td>
<td>0.43</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>MQ-</td>
<td>0.87</td>
<td>1.11</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Ma</td>
<td>1.62</td>
<td>1.64</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Mp</td>
<td>0.69</td>
<td>1.01</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>H</td>
<td>1.74</td>
<td>1.63</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>(H)*</td>
<td>0.97</td>
<td>1.14</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Hd*</td>
<td>0.127</td>
<td>0.33</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>(Hd)</td>
<td>0.127</td>
<td>0.33</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>5.95</td>
<td>2.42</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Ad</td>
<td>0.97</td>
<td>1.31</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>
Discussion

From the descriptive analysis of the acute and chronic samples, it is possible to infer that they are dissociated people who avoid complex situations (L↑), tend to simplify reality and specify their experiences. If the splitting of mental associations constitutes one of the characteristics of the thought of these patients, the Rorschach test would confirm their presence through an increase in serious or level 2 special codes (WSum6=56.9 in acute patients; 47.30 in chronic patients) and specifically, through the deviation of deviant responses (DR2 A=3.3; C=2.04) and contaminations (CONT A=0.93; C=0.80) which demonstrate the delusional processes present in all acute patients and a large proportion of chronic patients. Their perceptual and cognitive peculiarity, together with the presence of serious thought disorders, is another indication of the severe disorganization from which they suffer (X%, XA% and WDA% much lower than 60%, 70% and 75% respectively). Their deficient affective control CF+C>FC, their affective restriction (C’) and their intense painful experience affect the fragility of their interpersonal relationships, which is exacerbated by their low self-esteem. This contrast of painful feelings may motivate their suicide attempts, which was successful in the case of only one patient. Their Rorschach tests showed the variables which could alert us to possible suicide attempts (S↑↑+m+Multiple color-shading determinants +Lambda↑). All of these data match the variables obtained by Exner (2002) in his research on schizophrenic inpatients (N=200).

The aforementioned significant differences between acute and chronic patients underscore the increase in deviant responses (DR2), gradual loss of realistic perception and their influence on information storage processes present in both samples. Similarities with the study by Vives (1989) are observed in the predominance of FM+m responses amongst acute patients and FQx- responses amongst chronic patients.

The descriptive analyses of negative human movement (M-) responses may confirm the presence of deficient interpersonal relationships, which were more pronounced amongst acute patients. Exner (1978, 1986) established that the presence of M- confirmed the existence of thought disorder, given that it is uncommon to find M- amongst non-patients. Since then, it has formed one of the criteria of the SCZI and current PTI indexes. It was possible to confirm the presence of M- in schizophrenic patients in the study of the initial samples by Vives (1984, 1989). Of the 25 patients who presented M-, 17 were M- while 20 of the 25 presented M together with Mu or Hd and (H), evidencing the precarious nature of their interpersonal relationships.

Upon comparing the results of the 191 acute patients with those of North American schizophrenic inpatients (N=128), we observed that in our sample 4 to 6 of the variables of the Schizophrenia Index and 4 of the Perceptual Thinking Index (PTI) were met. The following special codes increase notably: DR2 and CONTAM; Lambda; S in location; the determinants M-, m, pure C, pure F and the contents of anatomy (An), clouds (Cl), sex (Sx) and X-ray (Xy). Meanwhile, the values of WSumC, EA, es, Adj D, Mov; active and passive decrease, reflecting that the characteristics which point to people with schizophrenia are much more marked in patients from our regions (Appendix: Table XVIII).

Conclusions

In terms of the question as to whether the application of the Rorschach test to schizophrenic inpatients can confirm the psychiatric diagnosis obtained via RDC and the DSM-IV for the differentiation of schizophrenia (1st hypothesis), we believe the answer is yes. The Rorschach adequately differentiates the illness and matches the diagnosis obtained via the application of both classificatory systems in 98% of “acute” patients and 97% of “chronic” patients from the refined samples. In the total sample of 191 acute and 54 chronic patients, the agreement between the diagnoses of both classificatory systems and the Rorschach is lower. However, in this case the precision and efficacy of the test in differentiating between patients with schizophrenia and people who are “borderline” or suffering from bipolar disorder is confirmed. This allowed the false positives to be eliminated from the SCZI index – due to the low number of responses, few or no M and M-, few special codes or with appropriate form quality. The 39 acute patients and the 24 chronic patients tested positive on all of the variables of the Schizophrenia Index and the Perceptual Thinking Index. Given the above, we believe that it would be advisable to avoid a differential diagnosis, in this case of schizophrenia, through the exclusive application of well-known classification systems.

One of the greatest achievements of this research was the continual discovery of level 2 special codes in acute samples, where it was possible to observe, in the same protocol, the presence of DR2 (splitting of verbal associations) and CONTAM (delusional thought) and more florid responses than those given by chronic patients, the presence of which in the test constitutes an indicator of schizophrenia.

These results largely agree with those obtained by the pioneers of the European School (Alcock & Bohm) and those of more modern European (Rosell, Merceron and Hussein) and North American (Exner, Weiner, Meyer, Viglione and Portuondo) authors on the diagnosis of patients with schizophrenia.

The significant differences identified between the two refined samples of acute and chronic patients, as well as the analysis of each group, made it possible to confirm that an increase in serious thought disorders (DR2, CONTAM, FABC2), together with M-, high WSum6 and an increasing
loss of perceptual accuracy (PTI variables) on the Rorschach constitute an indicator of the thought and style of the schizophrenic patient and make the test the best instrument for its detection.

References


**APPENDIX**

R coding process and interpretation of the main structural variables. includes means and sds of north american adult non patients (n=600).

Table X. Location: Manner of focusing and organizing the stimulus

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION AND CONTROL GROUP MEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Whole response</td>
<td>The whole inkblot is used; all of its parts.</td>
<td>Together with developmental quality + ordinary u: analysis and synthesis capacity. x=8.28; SD=2.36</td>
</tr>
<tr>
<td>D</td>
<td>Normal detail</td>
<td>A commonly identified part of the inkblot is used.</td>
<td>Ability to perceive the obvious. The subject participates in common thought. x=12.88; SD=3.77</td>
</tr>
<tr>
<td>Dd</td>
<td>Abnormal detail</td>
<td>A rarely identified area of the inkblot is used.</td>
<td>Precision, attention to detail. x=1.16; SD=1.67</td>
</tr>
<tr>
<td>S</td>
<td>Space response</td>
<td>An area of white space is used, which is coded together with other location symbols (WS, DS, DdS).</td>
<td>May reflect oppositionality or hostility. x=1.57; SD=1.28</td>
</tr>
</tbody>
</table>

Table XI. Developmental quality: Quality of the selection of the area (linked to organizational activity, Zf and Zd)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Synthesis response</td>
<td>Description of different but interrelated objects. At least one of them must have a specific form.</td>
<td>Ability to establish analysis and synthesis processes and relations between concepts. x=7.36; SD=2.23</td>
</tr>
<tr>
<td>v/+</td>
<td>Synthesis response</td>
<td>Description of two or more different but interrelated objects. None of them present a specific form.</td>
<td>Tendency to achieve more complex levels of cognitive activity (similar to DQ+). x=0.39; SD=0.61</td>
</tr>
<tr>
<td>o</td>
<td>Ordinary response</td>
<td>Description of objects with a specific form.</td>
<td>Simple but appropriate definition of the stimulus field. x=13.58; SD=3.67</td>
</tr>
<tr>
<td>v</td>
<td>Vague response</td>
<td>Description of objects with no specific form demand.</td>
<td>Overly simplistic cognitive function. x=0.98; SD=1.26</td>
</tr>
</tbody>
</table>

Table XII. Determinants: Manner in which the stimulus is interpreted, the information is processed and the response produced

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SYMBOL</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORM R</td>
<td>F</td>
<td>Pure form response</td>
<td>Ability to perceive reality (F+, Fo). x=7.95; SD=2.83</td>
</tr>
<tr>
<td>MOVEMENT</td>
<td>M</td>
<td>Human movement</td>
<td>Appropriate and stable interpersonal relationships (Mo in pure H). x=4.30; SD=1.95</td>
</tr>
<tr>
<td></td>
<td>Mn</td>
<td>Animal movement</td>
<td>Satisfaction of primitive needs. x=3.74; SD=1.31</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Inanimate movement</td>
<td>Anxiety in the form of tension. x=1.28; SD=1.28</td>
</tr>
<tr>
<td>CHROMATIC COLOR</td>
<td>Fc</td>
<td>Form predominates over chromatic color.</td>
<td>R. based exclusively on the pure color and color naming.</td>
</tr>
<tr>
<td>COLOR</td>
<td>Cf</td>
<td>Chromatic color predominates over form.</td>
<td>Spontaneous expression of affect. x=2.42; SD=1.31</td>
</tr>
<tr>
<td></td>
<td>C, Cn</td>
<td>R. based exclusively on the pure color and color naming.</td>
<td>Impulsive expression of affect. x=0.12; SD=0.37 Failure of defenses.</td>
</tr>
</tbody>
</table>
The Rorschach test in the differential diagnosis of 245 schizophrenic inpatients

ACHROMATIC COLOR

- \( F_c, C', C' \) Depending on the predominance of the form, achromatic color or pure achromatic color. Inhibition of emotion. Flat affect. SumC' \( x=1.49; SD=1.16 \)

SHADING-TEXTURE

- \( F_t, T, T \) The shading features are interpreted as texture. Form predominates over shading (FT), shading over form (TF) or lack of form (T). ↑ Need or ↓ resignation of affective closeness. SumT \( x=0.95; SD=0.61 \)

SHADING-DIMENSION

- \( F_v, V, V \) The shading features are interpreted as depth, dimension, volume. Painful introspection associated with depression and suicide. SumV \( x=0.28; SD=0.61 \)

SHADING-DIFFUSE

- \( F_y, Y, Y \) The shading is interpreted non-specifically where it is not texture or vista. Anxiety in the form of defenselessness. SumY \( x=0.61; SD=0.96 \)

FORM-DIMENSION

- \( F_d \) The impressions of depth, dimensionality and distance are created from the outline and not the shading of the inkblot as with V. Ability to stand back and be objective. \( x=1.18; SD=0.94 \)

PAIRS and REFLECTIONS

- \( F_r, R_f \) Identical objects are described. Reflected identical objects are described. Egocentricity. \( x=8.52; SD=2.18 \)

Table XIII. Form quality: Perceptual accuracy of the object (goodness of fit) (Tables A of the CS)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>o</td>
<td>Ordinary</td>
<td>Specific answers which are easily seen. Responses which are given infrequently and whose basic outline is not forced.</td>
<td>Appropriate perception of form. May indicate both originality of the subject as well as a certain lack of perceptual adjustment.</td>
</tr>
<tr>
<td>u</td>
<td>Unique</td>
<td>The R is created using the form in a distorted and arbitrary manner which is imposed on the structure of the inkblot.</td>
<td>Severe distortion of form. Loss of perceptual accuracy.</td>
</tr>
<tr>
<td>-</td>
<td>Minus</td>
<td>The R is created using the form in a distorted and arbitrary manner which is imposed on the structure of the inkblot.</td>
<td>Severe distortion of form. Loss of perceptual accuracy.</td>
</tr>
</tbody>
</table>

Table XIV. Contents: Type of object selected

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>CATEGORY</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Whole human figure</td>
<td>Perception of a whole human form.</td>
<td>Interest in people in their environment. ( x=3.21; SD=1.71 )</td>
</tr>
<tr>
<td>Hd</td>
<td>Human detail</td>
<td>Perception of an incomplete human form.</td>
<td>↑ Meticulousness. Partial description of object. ( x=0.84; SD=1.02 )</td>
</tr>
<tr>
<td>(H)</td>
<td>Whole fictional human figure</td>
<td>Perception of a fictional or mythological whole human figure.</td>
<td>Interest in people from fantasy. ( x=1.22; SD=1.02 )</td>
</tr>
<tr>
<td>A</td>
<td>Whole animal figure</td>
<td>Perception of a whole animal figure.</td>
<td>↑ Stereotyped thoughts. ( x=7.96; SD=2.25 )</td>
</tr>
<tr>
<td>An</td>
<td>Anatomy</td>
<td>Responses which identify skeletal, muscular or internal anatomy.</td>
<td>Preoccupation with the body. ↑ Self-aggression. Somatization. ( x=0.54; SD=0.77 )</td>
</tr>
<tr>
<td>Sx</td>
<td>Sex</td>
<td>Perception of sex organs or an activity of a sexual nature.</td>
<td>Preoccupation with sex. ( x=0.11; SD=0.047 )</td>
</tr>
<tr>
<td>Xy</td>
<td>X-ray</td>
<td>Perception of an x-ray of parts of the skeleton or internal organs.</td>
<td>Preoccupation with bodily aspects, linked to self concept. ( x=0.05; SD=0.24 )</td>
</tr>
</tbody>
</table>
### Table XV. Populars: Vulgar responses according to H. Rorschach

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Popular R</td>
<td>Ability to perceive and react to the features of the inkblots &quot;generally perceived by people&quot;.</td>
<td>Ability to perceive reality like the majority of people. x=6.58; SD=1.39</td>
</tr>
</tbody>
</table>

### Table XVI. Special codes: Cognitive process deficiencies. Presence of thought disorders.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>Deviant verbalization</td>
<td>Neologisms. Redundancies.</td>
<td>Fleeting signs of cognitive disorganization. x=0.59; SD=0.78</td>
</tr>
<tr>
<td>DR2</td>
<td>Level 2 deviant verbalization</td>
<td>Disturbed speech. Interruption of associations in the formulation of the R.</td>
<td>Loss of objectivity, splitting, dissociation of thought. x=0.01; SD=0.11</td>
</tr>
<tr>
<td>INCOM2</td>
<td>Level 2 incongruent combination</td>
<td>Condensation of inappropriate details on a single object.</td>
<td>Difficulties in developing symbolic thought. x=0.02; SD=0.13</td>
</tr>
<tr>
<td>FABCOM2</td>
<td>Level 2 fabulized combination</td>
<td>Inappropriate combination between two or more objects.</td>
<td>Possibility of distorting perception. The subject draws conclusions based on false premises. x=0.03; SD=0.16</td>
</tr>
<tr>
<td>CONTAM</td>
<td>Contamination</td>
<td>Two or more impressions are merged in a single area, seriously altering reality.</td>
<td>Severe thought process disorder. Applies to schizophrenic thought. x=0.00; SD=0.00</td>
</tr>
<tr>
<td>ALOG</td>
<td>Inappropriate logic</td>
<td>Use of excessive reasoning to justify the response</td>
<td>Fanciful logic, the result of a failed thought. x=0.04; SD=0.20</td>
</tr>
<tr>
<td>AG</td>
<td>Aggressive movement</td>
<td>Movement R which implies clearly aggressive actions.</td>
<td>Manifest aggressiveness. x=1.11; SD=1.15</td>
</tr>
<tr>
<td>MOR</td>
<td>Morbid content</td>
<td>Broken, destroyed, damaged objects. Dysphoric qualities.</td>
<td>Pessimistic, depressive thought. x=0.79; SD=0.89</td>
</tr>
</tbody>
</table>

Symbols, criteria and interpretation of the main groups of variables from the rorschach structural summary

### Table XVII. Ideation

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Number of responses of the protocol</td>
<td>It is recommended not to exceed 5 R per card.</td>
<td>Affects the decision on the validity of the protocol if &lt; 14 or &gt; the mean. x=22.32; SD=4.40</td>
</tr>
<tr>
<td>L</td>
<td>Lambda</td>
<td>Ratio of pure F R to the rest of the R of the protocol.</td>
<td>Affects the decision on the validity of the protocol. x=0.60; SD=0.31</td>
</tr>
<tr>
<td>EB</td>
<td>Erlebnistypus</td>
<td>Ratio of M to WSumC (EB=M:C)</td>
<td>Indicates the R style of the S, now extended by Exner. x=4.30:4.36; SD=1.95:1.78</td>
</tr>
<tr>
<td>FM+M</td>
<td>Animal movement, FM Inanimate movement, m</td>
<td>Sum of all animal and inanimate movement scores.</td>
<td>Mental activity induced by stress, unsatisfied needs or both at the same time. x=5.01; SD=1.70</td>
</tr>
<tr>
<td>A:P</td>
<td>Active and passive movements</td>
<td>Ratio of active to passive movements of the protocol.</td>
<td>Provides information on the flexibility or rigidity of cognitive operations. x=6.44:2.90 SD=2.23:1.64</td>
</tr>
<tr>
<td>MA: MP</td>
<td>Active and passive human movements</td>
<td>Ratio of active to passive human movements of the protocol.</td>
<td>Mp&gt;Ma by more than one point indicates passivity, dependency. x=2.90:1.42; SD=1.57:1.03</td>
</tr>
<tr>
<td>DR2</td>
<td>Level 2 deviant verbalization</td>
<td>Disturbed speech. Interruption of associations in the formulation of the R. Greater severity than in level 1 R.</td>
<td>Loss of objectivity, splitting, dissociation of thought. x=0.01; SD=0.11</td>
</tr>
<tr>
<td>INCOM2</td>
<td>Level 2 incongruent combination</td>
<td>Condensation of inappropriate details on a single object.</td>
<td>Difficulties in developing symbolic thought. x=0.02; SD=0.13</td>
</tr>
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<td>FABCOM2</td>
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<td>Possibility of distorting perception. The subject draws conclusions based on false premises. x=0.03; SD=0.16</td>
</tr>
<tr>
<td>CONTAM</td>
<td>Contamination</td>
<td>Two or more impressions are merged in a single area, seriously altering reality.</td>
<td>Severe thought process disorder. Applies to schizophrenic thought. x=0.00; SD=0.00</td>
</tr>
<tr>
<td>WSUM6</td>
<td>Weighted sum of the 6 special codes</td>
<td>Obtained by applying the corresponding value to each special code (INC2x4; DR2x6; CONTx7), etc.</td>
<td>Indicates the severity of the cognitive disorder and its repercussion on thought processes. x=4.48; SD=4.8</td>
</tr>
</tbody>
</table>
Table XVIII. Control, stress tolerance and situational stress

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>D Score</td>
<td>Comes from the relationship between EA and (es), the resources available and the stimulation needs.</td>
<td>Reflects aspects of current control and stress tolerance. x= -0.03; SD=0.97</td>
</tr>
<tr>
<td>Adj D</td>
<td>Adjusted D score. More reliable and valid indicator than the D score.</td>
<td>Obtained by subtracting all of the m and Y but 1 of each value, and the (es) is obtained again, the result of which is subtracted from EA.</td>
<td>Ability to delay action, control, rigidity-resistance to change or emotional overload. Indicates whether they consist of habitual states. x=0.15; SD=0.82</td>
</tr>
<tr>
<td>CDI</td>
<td>Resources or Coping Deficit Index</td>
<td>Comprises a group of variables: EA; Adj D; COP; AG; SumC; spy; Sum T, Fd.</td>
<td>Indicates aspects of immaturity, maladjustment, defenselessness and incompetence of the S. x=0.79; SD=0.89</td>
</tr>
<tr>
<td>EB</td>
<td>Erlebnistypus</td>
<td>Ratio of M to WSumC (EB=M:C)</td>
<td>Indicates the R style of the S. x=4.30:4.36; SD=1.95:1.78</td>
</tr>
<tr>
<td>EA</td>
<td>Experience actual or accessible</td>
<td>Result of the sum of the two sides of EB (M and SumC)</td>
<td>Reflects the reflexive ability of the S to access and benefit from their resources. x=8.66; SD=2.38</td>
</tr>
<tr>
<td>Eb</td>
<td>Experience base</td>
<td>Ratio between two groups of variables: animal (FM) and inanimate (m) movement, and the sum of achromatic color (C') and shading (T,V,Y) R.</td>
<td>Weight of the immediate needs and tensions of the S in relation to their affective restriction and painful affect. FM+m: SumC'+SumShad x=5.01:3.32; SD=1.70:2.09</td>
</tr>
<tr>
<td>Es</td>
<td>Experienced or suffered stimulation</td>
<td>Result obtained from the sum of the two sides of eb, animal and inanimate movement determinants (FM+m) and those of achromatic color (C') and gray-black features (T+V+Y).</td>
<td>Includes needs, anxieties, restrictions and painful feelings which can act negatively on the subject. x=8.34; SD=2.99</td>
</tr>
<tr>
<td>M, Y, T</td>
<td>Inanimate movement and shading</td>
<td>R of inanimate movement, shading-diffuse and shading-texture. Include all of the determinants issued in a R and in the order they are obtained, giving priority to human movement R.</td>
<td>Tension, defenselessness and affective closeness (by default ↓ or in excess ↑).</td>
</tr>
<tr>
<td>Dm</td>
<td>Many determinants or &quot;blends&quot;</td>
<td>All of the determinants issued in a R and in the order they are obtained, giving priority to human movement R.</td>
<td>Indicates the presence of complex psychological activity. x=5.15 SD=2.08</td>
</tr>
</tbody>
</table>

Table XIX. Information processing

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Lambda</td>
<td>Ratio of the No. of pure F R to the rest of the R of the protocol.</td>
<td>Affects the decision on the validity of the protocol and represents a certain economy in the use of resources. L↑=tendency to avoid the complex. x=0.60; SD=0.31</td>
</tr>
<tr>
<td>Zf</td>
<td>Z frequency</td>
<td>The number of times that the S has given a synthesis R (W+, Wo) or has organized different areas of the card (D+, D’d+) or has included white space.</td>
<td>Ability to observe the environment. x=11.84; SD=2.78</td>
</tr>
<tr>
<td>Zd</td>
<td>Z difference</td>
<td>Difference between the sum of all of the Z scores obtained (ZSum) and the estimated Z corresponding to this value (Zest).</td>
<td>Effectiveness of effort confirmed in Zf. x=0.57; SD=2.98</td>
</tr>
<tr>
<td>W: D: Dd</td>
<td>Whole R, normal and abnormal detail</td>
<td>Ratio between the basic location codes.</td>
<td>Indicate the manner of interpreting reality: analysis-synthesis processes (W) or their replacement by other more economic (D), meticulous or partial (Dd) ones.</td>
</tr>
<tr>
<td>W: M</td>
<td>Economy index</td>
<td>Ratio of whole to human movement R.</td>
<td>Reflects the level of aspiration of the subject in relation to their natural ability.</td>
</tr>
<tr>
<td>DQ</td>
<td>Developmental quality</td>
<td>Selected, depending on the type of organization of the R and the type of developmental quality (DQ+, Dqo; DQv+/; DQv).</td>
<td>Consists of the ability to analyze and synthesize the stimulus field meaningfully, specifically, approaching synthesis or vague.</td>
</tr>
</tbody>
</table>
### Table XX. Mediation

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>Popular R</td>
<td>Perception of easily described objects on the cards.</td>
<td>Ability to perceive reality like the majority. x=6.58; SD=1.39</td>
</tr>
<tr>
<td>x+ %</td>
<td>Conventional form</td>
<td>Percentage of R in which the form has been used conventionally in the protocol.</td>
<td>Conventional perception of reality. x=0.77; SD=0.09</td>
</tr>
<tr>
<td>xu %</td>
<td>Unique form</td>
<td>Proportion of R in which the object has been used in a peculiar or original way.</td>
<td>Indicates original or slightly distorted perception of form. x=0.15; SD=0.07</td>
</tr>
<tr>
<td>x- %</td>
<td>Distorted form</td>
<td>Proportion of R in which the use of the outline of the object has been severely altered.</td>
<td>Indicates a distorted perception of form. x=0.07; SD=0.05</td>
</tr>
<tr>
<td>xa %</td>
<td>Percentage of amplified form R</td>
<td>Proportion of R with form quality +, o and u in the entire protocol.</td>
<td>Ability for psychological adjustment. Contrasts the result obtained from x+ %.</td>
</tr>
<tr>
<td>wda %</td>
<td>Percentage of amplified form R</td>
<td>Proportion of R with form quality +, o and u in whole and normal detail responses.</td>
<td>Ability for psychological adjustment. Together with xa %, they are indicators of the perceptual ability of the subject, provided they are values below 70 and 75 % respectively.</td>
</tr>
</tbody>
</table>

### Table XXI. Affect

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>afr</td>
<td>Affective ratio</td>
<td>Comparison between the number of R obtained on the 3 last cards and those obtained on the 7 remaining ones.</td>
<td>Ability to respond to affective stimuli. X=0.67; SD= 0.16</td>
</tr>
<tr>
<td>dm</td>
<td>Many determinants or &quot;blends&quot;</td>
<td>Includes all of the determinants issued in a R and in the order they are obtained, giving priority to human movement R.</td>
<td>Indicates the presence of complex psychological activity.</td>
</tr>
<tr>
<td>cf+c&gt;fc</td>
<td>Color ratio</td>
<td>Predomination of Color-F, pure color and color naming R over form-color ones.</td>
<td>Manner of modulating emotional discharge and exchange.</td>
</tr>
<tr>
<td>t</td>
<td>Sum of the achromatic color determinants (Fc’, C’F, C’).</td>
<td>Come from the sum of the production of black, grey and white objects in the protocol, where form, achromatic color or the absence of form predominate.</td>
<td>Represents a conscious defense of affective expression. x= 1.49 SD=1.16</td>
</tr>
<tr>
<td>ft, tf, t</td>
<td>Shading-texture determinants</td>
<td>The shading features are interpreted as texture, where form (FT), shading (TF) or the absence of form (T) predominates.</td>
<td>Interpreted as a need for affective closeness. SumT x=0.95; SD=0.61</td>
</tr>
<tr>
<td>fv, vf, v</td>
<td>Shading-dimension</td>
<td>The shading features are interpreted as depth, perspective, volume.</td>
<td>Negative and painful introspection associated with depression and suicide. SumV x=0.28 SD=0.61</td>
</tr>
<tr>
<td>fy, yf, y</td>
<td>Shading-diffuse</td>
<td>Identified by the exclusion of other shading categories.</td>
<td>Defenselessness, disorientation. Sum Y x=0.61 SD=0.96</td>
</tr>
<tr>
<td>ag</td>
<td>Aggressive movement</td>
<td>Movement R which imply clearly aggressive actions.</td>
<td>Movement R which imply clearly aggressive actions.</td>
</tr>
<tr>
<td>s</td>
<td>Space response</td>
<td>An area of white space is used, which is coded together with other location symbols (WS, DS, DdS).</td>
<td>May reflect oppositionality or hostility. x=1.57; SD=1.28</td>
</tr>
</tbody>
</table>
Table XXII. Self-esteem and interpersonal relationships

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>CRITERION</th>
<th>INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGO</td>
<td>Egocentricity index: $3r+{(2)}/R$</td>
<td>Contains the R of pairs (2) and reflections (Fr, rF) of the protocol. The response is created from the impressions of depth, dimensionality and distance of the outline of the inkblot and not from the shading features as occurs in shading-dimension (V).</td>
<td>Self-concept, self-esteem, self-centeredness. $x=0.40$ SD=0.09</td>
</tr>
<tr>
<td>FD</td>
<td>Form-dimension</td>
<td></td>
<td>Ability to stand back and be objective. $x=1.18$; SD=0.94</td>
</tr>
<tr>
<td>H, Hd, (H) (Hd)</td>
<td>Human, parahuman and human detail content</td>
<td>Perception of human, H, Hd and parahuman (H) (Hd) figures, either whole H (H) or in detail, Hd (Hd).</td>
<td>Interest in people in reality, H and in fantasy (H). See contents table.</td>
</tr>
<tr>
<td>An</td>
<td>Anatomy</td>
<td>Responses which identify skeletal, muscular or internal anatomy</td>
<td>Lack of awareness of hostile impulses. $x=0.54$; SD =0.77</td>
</tr>
<tr>
<td>Sx</td>
<td>Sex</td>
<td>Vague responses, fabulations and strange elaborations regarding sex.</td>
<td>Preoccupation with sex. Suggestive of pathology in a restricted protocol. $x=0.11$; SD=0.47</td>
</tr>
<tr>
<td>M, FM, m; MoR, FQ-</td>
<td>Movements, morbid content, form quality minus responses</td>
<td>Human (M), animal (FM) and inanimate (m) movement R; broken, damaged objects (MoR), and R which entail inadequacy between the description and the outlines of the selected area (FQ-).</td>
<td>Represent the 3 projective R categories of the test.</td>
</tr>
<tr>
<td>A:p</td>
<td>Active and passive movements</td>
<td>Includes all of the movement R of the protocol.</td>
<td>Provides information on the flexibility or rigidity of cognitive operations. $x=6.44$; 2.90; SD=2.23;1.64</td>
</tr>
<tr>
<td>Fd</td>
<td>Food R</td>
<td>Comprises responses of natural or seasoned food.</td>
<td>Passivity, dependency, immaturity. $x=0.21$; SD=0.47</td>
</tr>
<tr>
<td>AG</td>
<td>Aggressive movement</td>
<td>Movement R which imply clearly aggressive actions.</td>
<td>Manifest aggressiveness. $x=1.11$; SD=1.15</td>
</tr>
</tbody>
</table>
Reviewers

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Dra. Dª. Rosario Antequera Jurado
Dra. Dª. Mª Mar Benítez Hernández
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Norms of the publication APCS

General

The Annuary of Clinical and Health Psychology is a journal published by the Department of Personality and Psychological Assessment and Treatment of the University of Seville (Spain), that tries to compile all those scientific contributions of the area of Clinical and Health Psychology that may be of interest for professionals and scientists dedicated to the study of human behaviour. Therefore, the journal would like to accept and publish empirical papers on any relevant aspect related to the field of Personality and Psychological Assessment and Treatment, as well as theoretical contributions, clinical cases, comments on researches, books’ reviews or any other type of work that may be relevant and / or of great contribution and impact for our scientific field.

Papers sent to the journal are to be original and unpublished. Therefore, all papers already published or submitted at the same time to another journal will not be admitted. Once papers are accepted, authors will transfer copyright to the Department of Personality and Psychological Assessment and Treatment of the University of Seville (Spain) which is the publisher and may print and reproduce in any manner and by any means all papers submitted and accepted.

Opinions and information contained in papers are exclusive responsibility of the authors. Likewise, all persons subscribing a paper are understood to have given their agreement for the evaluation and spreading of the same. All published papers will follow the accepted guidelines of ethics and professional deontology.

General Norms for submission, structure and presentation

Original papers are to be sent to the Annuary of Clinical and Health Psychology per email (including all the related files in a compatible word processor and specifying the title of the attached file(s) as well as the name of the word processor in the email). This means is to be used with the purpose of shortening the procedure for publication in case the paper is finally admitted.

The journal’s email is: anuarioclin@us.es. Once the original paper is received, a confirmation will be sent as soon as possible to the main author of such paper.

Papers shall have a maximum of 4,500 words -excluding Title, Abstract, Keywords and References- written in double space (size DIN A-4), without indentations or page breaks, pages printed only one face and consecutively numbered. Articles are to be written in English or Spanish. Spanish versions will be traduced into English if accepted for publication.

The first page of every submitted article is to contain the following:

Title of the paper in English and Spanish.

Name and Surname of authors and degree or professional or academic qualification.

Full address, including phone and email, of the author with whom the journal is to be in contact.

The second page is to contain the abstract of the paper in English, which will have a maximum length of 175 words (each section – objectives, methods, results, etc. – is to be mentioned), together with the key words (maximum 5).

The third page is to include a Spanish abstract and the corresponding key words. The fourth page is to again contain the title of the article, without the names of the authors, and the text is to be developed. The structure or sections to be included in the papers are specified in the specific norms for each type of publication: empirical (see paragraph 14), theoretical (see paragraphs 15 to 17) or clinical cases (see paragraphs 18 to 21).

Tables and illustrations (graphics, figures, etc.) contained in papers are to be submitted separately, each one in a different page, correlative numbered and together with a header containing the number and title of the same allowing the clear identification of its content. The desired and approximate place for tables and / or illustrations is to be indicated in the text. Tables are to be simple and in accordance with the norms and styles of APA, Excel or Word format, and are not to include vertical lines. Pictures and graphics must be 150 pixel resolution and a minimum size of 10 cm wide.

All quotations appearing in the paper are to be present in the list of references and all references are to be quoted in the text. Quotations are to be inserted in the text (never as footnote). Authors’ surnames are to be written in lower-case with the exception of the first letter. Initials of names are not to be specified unless necessary in order to distinguish two authors with the same surname (Example: J.M. Zarit y Zarit, 1982). If the author’s surname is part of the narration, only the year of publication of the article is to be included between brackets (example: According to Olesen (1991) three different types of sensory afferents in migraines can be distinguished…). If the surname and publication date are not part of the narrative, both elements are to be included between brackets, separated by a comma. (Example: Three different sensory afferents in migraines can be distinguished (Olesen, 1991)…). If a paper has two authors, both surnames are to be quoted every time the reference appears in the text (ex: Folkman and Moskowitz (2004) reviewed the situation of the investigation of the confrontation strategies…). If a paper has three, four or five authors, all of them are to be quoted the first time the reference appears in the text, and, in the following quotations...
of the same paper, only the surname of the first author followed by the phrase "et all" and the year of publication are to be written (for ex: Rodriguez, Terol, López and Pastor (1992) adapted the questionnaire...). As mentioned before, Rodriguez et al. (1992) adapted the questionnaire...). If a paper has six or more authors, then only the surname of the first author is to be mentioned followed by the phrase "et all" together with the date of publication, as from the first quotation in the text. If two or more works by different authors are quoted in a same reference, they will be written alphabetically, surnames and initials and respective publication dates separated by a semicolon within the same brackets (for example:...it is absurd to dissociate the confronting strategies from the personality of the person using them ((Bouchard, 2003; Bouchard, Guillemette and Landry-Léger, 2004; David and Suls, 1999; Ferguson, 2001; Vollrath and Torgersen, 2000)....). If there are several quotations of the same author, the surname and publication dates of the different works are to be written separated by commas and followed by a letter or being from the same year (for example:...as stated by McAdams (1995, 1997a, 1997b, 1997c)....).

The list of bibliographic references is to appear in a new page, at the end of the paper, in alphabetical order by the authors’ surnames and initials. The second line of each entry of the list is to be indented in five spaces (one indentation). The titles of books or journals are to be written in italics and, in the case of journals, the italics are to cover not only the title but up to the number of the issue (including the commas before and after the issue number). Only one space is to be left after every punctuation mark. For example: Aspinwall, L. G., and Taylor, S. E. (1997). A stitch in time: self-regulation and proactive coping. PsychologicalBulletin, 121, 417-436. Lazarus, R. S. (2000). Estrés y emoción. Manejo e implicaciones en nuestra salud. Bilbao: Desclée de Brower. (Orig., 1996). The format of periodic publications is to be the following: Author, Y. Y. (year). Title of Article. Title of journal, issue, number, pages.


### Specific Norms for Empirical Works

Articles of this section are to be relevant contributions in the field of Clinical and Health Psychology. They will follow the logical order and a clear and structured presentation according to the following order:

- Introduction and Justification of the work. Objectives and hypothesis
- Method: participants; design, variables and control conditions; materials and or instruments and procedure.
- Results
- Discussion
- Conclusions
- References

### Specific Norms for Theoretical Works

The Annuary of Clinical and Health Psychology gathers theoretical articles from different points of view (cognitive, dynamic, behavioural, systemic, etc.) that represent important contributions on the different contemplated contents. Articles in this section are to contain, as well as the others, a logical order and a clear and structured presentation. They are to express a justification for the relevance of the subject dealt with (in the introduction) and an express practical contribution so that the professional may obtain a reference of the application nature (independently from the theoretical line) of the subject to be treated (in the discussion of the same). The structure is to be the following:

- Introduction and thesis (aspect to be expound or defended)
- Discussion
- Conclusions (short and clearly delimited)
- References
Specific norms for the exposition of clinical cases

In this section, the description of one or more clinical cases is to be collected, which presume a contribution and/or important repercussion to the knowledge of the analyzed process, due to their peculiarities. Articles in this section, besides following a logical order and clear presentation, may follow these structures:

- Theoretical Background or Introduction
- Participants or Description of the clinical case(s)
- Processes for Assessment
- Treatment
- Results
- Discussion
- References

In the description of cases, no real name or initials of the patients with whom the research for publication has been performed are to be mentioned.

Review and Publication of Works

Works meeting the requirements mentioned above will be anonymously reviewed by experts on the subject, who will inform the direction of the journal of the valuation and possible modifications to be made to the same. Such valuation will be sent by the direction to the author within a maximum period of three months. Once the article has been valuated, modified (if applicable), reviewed and definitely accepted, the publication of the article is to be determined by the direction and the main author is to be informed of the date and issue where the article is to be published. In any case, the final decision for publication of an article is responsibility of the direction of the journal. Accepted articles not appearing in the last issue of the journal, are to be published in the next editions, and, in the meantime, they will be kept in the list of accepted articles pending publication. Articles not meeting the established norms or not accepted for publication will neither be submitted to review nor given back to the authors, although the reasons for their exclusions are to be notified. In any case, the journal reserves the right to introduce modifications appropriate for the fulfilment of the established norms. The delivery of an article to the Annuary of Clinical and Health Psychology assumes the acceptance of all the above mentioned norms by the authors of the submitted original work.