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DEPRESSION IN PRIMARY CARE: PREVALENCE, DIAGNOSIS AND TREATMENT

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Major depression is currently one of the most prevalent and most disabling mental disorders. A large number of people with depression seek treatment from primary care (PC) providers. We present a critical review of the literature focused on the prevalence, diagnosis and treatment of depression in PC, giving special emphasis to studies carried out in Spain. Results indicate that Spain's 12-month prevalence for depression in PC is between 9.6% and 20.2%. In addition, depression is highly comorbid with other physical and psychological conditions. In spite of its elevated prevalence, patients suffering from depression are often misdiagnosed and rarely receive minimally adequate treatment. This leads to higher drop-out and relapse rates together with an elevated cost burden. The need for scientifically-based treatments in PC is discussed, given the fact that they have shown higher efficacy rates when compared to treatment as usual and may help to reduce social and health-care costs.
***Key words**: Primary care, Depression, Prevalence, Diagnosis, Treatment.*

La depresión mayor es uno de los trastornos psicológicos más prevalentes y que más problemas de discapacidad genera en la actualidad. Una gran parte de las personas deprimidas acude a los servicios de atención primara (AP) para buscar tratamiento. En este trabajo se presenta una revisión crítica de la literatura centrada en analizar la prevalencia, el diagnóstico y el tratamiento de la depresión en AP, haciendo especial hincapié en los estudios realizados en nuestro país. Los resultados indican que en España la prevalencia año de depresión en AP se encuentra en un rango entre el 9.6% y el 20.2%. Además, la depresión posee una alta comorbilidad cursando con otros problemas tanto físicos como psicológicos. Pese a su alta prevalencia, este trastorno no se diagnostica correctamente en un importante porcentaje de los casos y pocas veces recibe un tratamiento mínimamente adecuado, lo que a la larga produce más abandonos y recaídas, así como elevados costes. Se discute acerca de la necesidad incluir tratamientos basados en la evidencia científica en AP, los cuales han demostrado ser más eficaces que la práctica habitual y que pueden reducir los costes sociales y sanitarios.
***Palabras clave**: Atención primaria, Depresión, Prevalencia, Diagnóstico, Tratamiento.*

In the last few years, depression has come to be included among the most prevalent psychological disorders in the general population and is one of the most incapacitating disorders (Paykel, Brugha, & Fryers, 2005). So much so, that the WHO estimates that it will become one of the three main causes of worldwide disability by the year 2030 (Mathers & Loncar, 2006).

According to data from the ESEMeD study, an epidemiological study carried out in different European countries including Spain, the prevalence of depression in the last year was situated at 4.0% in our country, the lifetime prevalence being 10.5% (Haro et al., 2006). Similar results were found in this same study for the European population as a whole (Alonso et al., 2004a), where the last 12-month prevalence was 3.9% and the lifetime prevalence was 12.8%. These data indicate that the probability of suffering from depression is superior to that of other mental disorders, such as the different anxiety disorders or substance-related disorders.

Along with prevalence data, research on depression has also attempted to determine its scope in terms of disability for the person who suffers from it, economic costs, comorbidity with other disorders, as well as risk of death. In this regard, different authors have drawn attention to the imbalance that depression can cause in areas such as work, social relationships, daily activities or intimate relationships (Kessler et al., 2003). The results of the ESEMeD-Spain study showed that mental disorders, among these depression, caused the greater negative impact on quality of life related to health and functional disability (more work loss days), even surpassing the impact caused by chronic physical diseases. Thus, for example, in the cases of moderate disorder,

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approximately 13.4% of affected people would have lost some days of work (between 1 and 4) in the last year (Codony et al., 2007). Transferring these data to economic figures, it is estimated that in Spain the annual cost of depression is 5,005 million euros (Valladares, Dilla, & Sacristán, 2008), which represents a mean cost per depressed patient of 3042.45 euros per year. It is quite a high cost, as it almost doubles the mean health cost per inhabitant in Spain, which according to data from the OCDE is $2099 (about €1713.5) (Casajuana & Romea, 2009).

Moreover, depression does not always appear in an isolated manner, but rather it is highly comorbid with other psychological and physical problems (Hasin, Goodwin, Stinson, & Grant, 2005; Kessler, Merikangas, & Wang, 2007). For example, 41.7% of individuals with an affective disorder suffer from an anxiety disorder or an alcohol use disorder (Alonso et al., 2004b) whereas the prevalence of patients with chronic physical disease with a depressive disorder has come to be situated between 9.3% and 23.0% (Moussavi et al., 2007). Regarding the risk of death, one of the most worrisome characteristics of depression is its link to suicide. According to recent data (Bernal et al., 2007), depression appears as one of the mental disorders more related to the presence of suicidal ideas or attempts, the percentage of individuals with depression that present risk of suicide being 28%.

All these data have led to the consideration of depression as an important public health problem that requires an adequate diagnosis and treatment. In this regard, although not all depressed persons seek professional help to solve their problem, of those who decide to go to a health service, about 60% will attend Primary Care (PC) (Fernández et al., 2006). Therefore, carrying out an adequate diagnostic and therapeutic approach to depression from PC services has become an essential aspect, not only for the improvement of the health and wellbeing of the patients themselves, but also with a view to reducing both the social and economic impact that this disorder can bring in its wake.

With the objective of examining the implications of depression on PC services, in this paper, we present a critical review of the literature that, in the last few years, has focused on analyzing the prevalence, diagnosis and adequacy of the treatment of depression in PC, making special emphasis on the studies carried out in our country.

PREVALENCE OF DEPRESSION IN PC

In a recent meta-analysis conducted using 41 studies (N= 50371) carried out in different countries, the general prevalence of depression in PC was 19.5% (Mitchell, Vaze, & Rao, 2009). However, a result that must be highlighted in this paper was the existence of important differences in the prevalences of the countries evaluated. In Europe, the results of the PREDICT study, conducted in 6 different countries (United Kingdom, Spain, Portugal, Slovenia and Holland) using the DSM-IV diagnostic interview and criteria, showed a prevalence of depression in PC of 12.2% (8.5% for men and 13.9% for women) (King et al., 2008). Once again, in this study great differences among the evaluated countries were found, the greatest prevalence being for depression in men in the United Kingdom (12.7%) and for women in Spain (18.4%), whereas the lowest were 4.4% for men and 6.5% for women, both in Slovenia (King et al., 2008).

If we focus specifically on the studies carried out in Spain and conducted with adult populations, the prevalence of depression has been situated in a range between 9.6% and 20.0% (see table 1). The differences in these figures are essentially a consequence of methodological issues, such as the assessment method employed (for example, whether self-report or interview measures are used), the type of disorder assessed (for example, whether other disorders are assessed along with major depression, such as dysthymia) or the type of design (for example, whether the assessment is conducted in two phases - a first screening phase and another diagnostic assessment phase - or in one single phase). Perhaps, one of the studies presenting the greatest methodological guarantees, and also the most recent, is that conducted by Serrano-Blanco et al. (2010). In this study, an ample adult

TABLE 1
PREVALENCE OF DEPRESSION IN PC IN SPAIN

Study	Measure	N	Prevalence
Gabarrón et al., 2002	BDI+MINI	400	20.2%
Aragonés et al., 2004	SDS+SCID	906	14.3%
Caballero et al., 2008	GADS+MINI	1150	14.0%
King et al., 2008	CIDI	1270	16.3%
Serrano-Blanco et al., 2010	SCID	3815	9.6%

BDI: Beck Depression Inventory; MINI: Mini International Neuropsychiatric Interview; SDS: Zung's Self-Rating Depression Scale; SCID: Structured Clinical Interview for DSM-IV Axis I Disorders; GADS: Goldberg Anxiety and Depression Scale: Composite International Diagnostic Interview

population sample was assessed "face-to-face" (in one single phase) by different psychologists previously trained in the use of the Spanish version of the SCID, a diagnostic interview based on the DSM-IV criteria. The results showed a 12-month prevalence of depression of 9.6%. On the other hand, the 12-month prevalence for any mood disorder was 13.4% and 31.2% for any mental disorder. However, this study was only carried out in PC services in Catalonia, which hinders the generalization of its results to the rest of Spain.

Of the variables associated to a greater prevalence of depression in PC, gender was that which has shown to be more consistent throughout the literature, with greater prevalence in women in comparison to men (Aragonés, Piñol, Labad, Folch, & Melich, 2004; Serrano-Blanco et al., 2010). This result is similar to that found in the general population (Alonso et al., 2004b) and has been replicated in studies conducted in different countries. Thus, for example, no differences were found with respect to this proportion among the 15 countries of 4 continents where the WHO study "Psychological Problems in General Health Care" was carried out (Sartorius et al., 1993), for which, it is probable that the greater prevalence of depression in women in comparison to men may be more influenced by biological and/or psychological-type factors than cultural factors. Another of the variables commonly associated with depression has been the presence of other psychological problems especially anxiety disorders (Ansseau et al., 2004; Aragonés et al., 2004) and substance use disorders (Serrano-Blanco et al., 2010), as well as other physical and/or somatic problems (Caballero et al., 2008; Mergl et al., 2007). Regarding this aspect, the probability of suffering from chronic-pain problems or a gastrointestinal problem was found to be 2.6 to 2.1 times greater (respectively) in individuals with depression in the study by Serrano-Blanco et al. (2010). Finally, it is also worth highlighting that the number of visits to PC services is significantly higher in those who suffer from depression (Aragonés et al., 2004), a result which is consistent with other studies that have shown how the probability of becoming frequent PC services visitors is greater in those patients with depressive symptoms (Dowrick, Bellón & Gómez, 2000).

Overall, these results show us that the prevalence of depression in PC services is very superior to that expected in the general population as a whole. In addition, depression does not always appear as an isolated problem, but rather it is common for depressed individuals to present other psychological and/or physical problems, and a greater chance of having previously visited PC services.

Consequently, the precision with which PC professionals detect and diagnose depression in their patients seems of great importance, as it will greatly influence whether they receive the treatment that can help them most. In the next section, the main difficulties that have been examined in the literature regarding the diagnosis of depression in PC will be analyzed.

DIAGNOSIS OF DEPRESSION IN PC

Patients with depression do not always go to PC services demanding assistance for their psychological symptoms or presenting their mood-related problems as their main concern. As has previously been pointed out, depression and physical problems are closely related and, on occasion, these patients will present other ailments as their main complaints, especially of a somatic nature, without making a direct attribution to their emotional problems. In this regard, some authors have shown how the probability of presenting symptoms of muscular pain, headache or stomach ache is between 4 and 7 times greater in those patients diagnosed with depression (Means-Christensen, Roy-Byrne, Sherbourne, Craske, & Stein, 2008). Thus, making the correct diagnosis is not always easy.

The literature has signaled two main difficulties in the diagnosis of depression: underdiagnosis, that is, not diagnosing depression in individuals who are really suffering from it leading to false negatives, and overdiagnosis, that is, diagnosing depression in individuals who are not really suffering from the disorder, resulting in false positives. In the previously mentioned meta-analysis by Mitchell et al. (2009), it was found that PC doctors correctly identified depression in only 47.3% of the cases and registered depression in their notes in only 33.6%. Moreover, in this study, the incidence of false positives was greater than that of false negatives. Just as commented with respect to prevalence rates, the precision in the diagnosis also varied significantly from study to study, with a wide range from 6.6% to 78.8%. With respect to Spain, there are few studies published which focus on

analyzing this question. Aragonés et al. (2004), in a study conducted in Tarragona, found that 72% of patients were correctly detected, this percentage being much lower in the case of moderate depression (45%). Using the same sample, Aragonés, Piñol and Labad (2006) also found an overdiagnosis percentage of 26.5%, mainly associated to the presence of previous depressive episodes. Nevertheless, a bias to be taken into account in these studies was the fact that PC doctors that participated knew beforehand that their patients would undergo a psychiatric assessment, which could have increased their sensitivity in the diagnosis, and therefore, increased the percentage of correct diagnoses. More recently, Fernández et al. (2010), using the same sample as in the work by Serrano-Blanco et al. (2009), found that the percentage of patients with depression correctly diagnosed in PC was only 22% and that only one quarter of the cases diagnosed as depression were "true cases". On the other hand, the percentage of correct diagnoses was increased up to 40% in this study when not only major depression was taken into account but also the presence of other mood disorders such as dysthymia. This finding led the authors to suggest that, although PC practitioners are more capable of detecting depressive disorders in general, they may find more difficulties in discriminating between the different disorders (Fernández et al., 2010).

Knowing which variables are associated with greater or lower precision has been a common objective in the studies aimed at examining the diagnosis of depression in PC. In general, the fact that the depression is of lower intensity (light or moderate), that patients report physical symptomatology as their primary complaint, that the diagnosis is made in people of increased age, or that the persons diagnosed have a previous history of problems with depression (which tends to increase the possibility of false positives) stand out among the variables associated with lower precision (Aragonés et al., 2004; Fernández et al., 2010; Mitchel, Rao, & Vaze, 2010, 2011). On the other hand, greater precision in the diagnosis has been associated with the fact that patients show greater functionality problems, that they present psychological and/or emotional symptoms as the main complaint or that long-term follow up of patients is performed (Aragonés et al., 2004, 2006; Fernández et al., 2010; Mitchell et al., 2009).

There have been varied explanations suggested to respond to the difficulties in the diagnosis. Among these, temporal precision has been systematically identified as an important obstacle when offering an adequate diagnosis (Mitchel et al., 2009), making it more difficult in complex cases and impeding an adequate expression of problems on the part of the patients. Other variables can respond more to aspects of a methodological nature. In this regard, it is important to take into account that diagnosis for research purposes (carried out in most of the studies reviewed), can differ from diagnosis for clinical purposes (Fernández et al., 2010). Thus, whereas the measures used in studies are usually based on categorical classification determining the presence or absence of different symptoms, it is possible that PC practitioners use a more dimensional perspective when assessing said symptoms, giving greater importance to the severity of these. Finally, different studies have shown that the PC doctors' attitudes toward depression may have an influence in its recognition; thus, for example, attitudes related to the possibility of treating depression successfully or with the effectiveness of psychotherapy have shown to be related to greater accuracy in the diagnosis (Gask, Dixon, May, & Dowrick, 2005).

In general, the results of the studies reviewed indicate that the precision when diagnosing individuals suffering from depression in PC is very far from what is desirable. A correct diagnosis is the starting point for an adequate treatment. In this regard, whereas underdiagnosis may lead to depressed patients not receiving any treatment, overdiagnosis may result in an unnecessary, as well as costly, treatment (Mitchel et al., 2009). On the other hand, although depression may not always be the main problem for many of the patients who go to PC and may present itself as a secondary problem of other medical conditions, in fact, suffering from it is a risk factor for the worsening of other physical problems (Moussavi et al., 2007; Scott et al., 2007) and its correct identification will be of great importance with a view to making correct decisions regarding treatment. In the next section we will focus on analyzing the results of different studies that have examined the adequacy of the treatment that individuals with depression receive in PC.

DEPRESSION TREATMENT IN PC

Identifying the most effective treatment for depression has been the objective of an important body of scientific

works mainly carried out in the last three decades. Most of these works have focused on analyzing the effects of antidepressive drugs, psychological treatments or a combination of both. A significant part of these have been included in different meta-analysis in which the effects of psychological treatments were compared to those of pharmacological treatments and which all coincide in indicating that although both treatments show similar results in the short-term, psychological treatments present better long-term results with lower withdrawal and relapse rates (De Maat et al., 2006; Imel, Malterer, McKay, & Wampold, 2008). This finding is consistent in studies comparing psychological treatments to both tricyclic antidepressants or IMAO and second-generation antidepressants (SSRIs) (Spielmans, Berman, & Usitalo, 2011). On the other hand, there is evidence that the combined treatment (which includes psychological treatment along with pharmacological treatment) is more effective than psychological treatment alone in the short-term, but not in the long-term (Cuijpers, van Straten, Warmerdam, & Andersson, 2009). Of the different psychological treatments analyzed, those denominated "bona fide" are the ones that have demonstrated to be most effective and which unite the following criteria (Spielmans et al., 2011; Spielmans, Pasek, & McFall, 2007): the therapist must have been trained to provide psychotherapy and must have specific training, there must be a face-to-face and individualized therapeutic relationship (not only a single standardized application of procedures) and the treatments must have a manual as a guideline and must be directed toward modifying specific psychological components. Along these lines, the psychological treatments that have shown greatest effectiveness for depression include cognitive-behavioral therapy, behavioral activation, interpersonal therapy or problem-solving therapy (Cuijpers et al., 2009).

With respect to the sphere of PC, psychological treatment has also shown to be more effective than conventional treatment (Bortolloni, Menchetti, Bellini, Montagui, & Berardi, 2008), even in the case of brief interventions (Cape, Whittington, Buszewicz, Wallace, & Underwood, 2010). Similarly, Cuijpers, van Straten, van Schaik and Andersson (2009), in a recent meta-analysis of 15 controlled studies (with 1505 patients) in which psychological treatment was compared in control groups with conventional treatment, found that the former was more effective for depression, especially when the patients were referred by their general practitioner. Several studies in our country point in this same direction, showing the efficacy of group psychological interventions both in the short and long term (González, Fernández, Pérez, & Amigo, 2006), and in the case of depression as well as other emotional problems (Segarra, Farriols, Palma, Segura, & Castell, 2011). Likewise, psychological treatments are preferred to pharmacological treatments by PC patients (van Schaik et al., 2004) and do not suffer from the problems of psychotropic drugs regarding secondary effects. All these data have led to the consideration of psychological treatment as an essential element in the treatment of depression in general, and in PC in particular. So much so that different international guidelines recommend the application of computerized cognitive-behavioral therapies, self-help programs and/or physical exercise in the initial treatment of depression (indicating the non prescription of antidepressants in this phase), the election between psychological or pharmacological treatments in the cases of moderate depression, and the application of combined treatments or the access to specialized services when there is no improvement (NICE, 2010). However, the adherence to these evidence-based clinical guidelines is in general very low, which is consistent with studies at an international level that inform of the important deficiencies regarding the adequacy of mental health treatments (Wang, Demler, & Kessler, 2002; Wang et al., 2005). For example, in the United States, the percentage of treatment adequacy for depression ranged from 14.9% in general medical services to 52% in the specialized sector (Wang et al., 2005), and in Europe, in a study conducted in Holland, only 31% of the patients with depression received a treatment consistent with clinical guidelines (Tiemeier et al., 2002).

In Spain, the results of a study conducted with 333 patients diagnosed with a depressive disorder that were followed-up over a 6-month period (Pinto-Meza, Fernández, Serrano-Blanco, & Haro, 2008), showed that 65% of the sample did not receive an adequate treatment for their problem. Thus, only between 27% and 32% of the patients received adequate treatment during the acute

phase, with these percentages being lower in the continuity phase (between 21% and 25%). Although 99% of doctors prescribed antidepressants adequately regarding drug type and recommended dosage, most of them did not complete the necessary number of follow-up sessions. In addition, pharmacological treatment was even employed in those cases in which it is not recommended by the international clinical guidelines (such as in the case of light depression). Another finding worth mentioning is the percentage of withdrawal from treatment, which was situated between 30% and 33% at 3-month follow up, and around 41% to 44% at 6 months. Fernández et al. (2006) found similar results using data from the ESEMeD-Spain study. In this case, the percentage of depressed individuals who received adequate treatment in PC was 31.3%. In this study, data on the treatment adequacy in specialized care services were also analyzed, but the results were not better (only 31% received adequate treatment for their depression).

As a whole, the results of these studies show us that, although at present we have treatments that have shown to be efficient for depression (most of them are included in international clinical guidelines), these treatments are not being used adequately in PC services. This gap between research and clinical practice in PC may be due to many different factors, going from the attitudes or the training of the professionals involved to organizational and/or logistical difficulties (Freeman & Sweeny, 2001). Despite this, some countries have opted for the implementation of interventions based on scientific evidence. This is the case of Great Britain, where since 2007 the national health service works following the Improving Access to Psychological Therapies (IAPT) program (Turpin, Richards, Hope, & Duffy, 2008) aimed at providing psychological treatment in PC for adults with emotional disorders, especially depression and anxiety, and that has obtained positive results in terms of effectiveness (Richards & Suckling, 2009). Along these lines, there are different authors who have suggested that the implementation of psychological interventions in PC can considerably reduce the medical and social costs of depression (Blount et al., 2007; Pastor, 2008). In this way, for example, although psychological treatments may be expensive, group cognitive-behavioral therapy has shown a better long-term cost/effectiveness relationship compared with antidepressants (Hollinghurst, Kessler, Peters, & Gunnell, 2005).

CONCLUSIONS

At present, depression has become one of the most prevalent psychological problems in the general population, and one of the greatest burdens in terms of disability. Most of the individuals who suffer from depression seek help in PC services; however, they are not always adequately diagnosed and treated. The fact that depressed individuals do not receive the necessary treatment may lead to important negative consequences, such as a reduction in their quality of life (Spitzer et al., 1995), the chronification of emotional problems (Kessler et al., 2011), an increase in the use of health services (Greenberg, Stiglin, Finkelstein, & Berndt, 1993), or an increase in the risk of suicide (Oquendo et al., 2002). Therefore, the application of an adequate intervention for the problems of depression must be an essential objective for assistance at the primary health care level and thus, important efforts in this direction are needed.

Some of these efforts require educating the public regarding mental health problems. The fact that depressed persons present their psychological and/or emotional problems as the main complaint has shown to be related to greater precision in the diagnosis. In this regard, improving education on how emotional problems work, the main symptoms and treatment options available, and reducing the stigmatization surrounding these, can be of great help for increasing the probability that these are expressed and recognized in PC services (Fernández et al., 2010). On the other hand, improving the mental health training of PC professionals, as well as reducing their possible negative attitudes toward depression, has been proposed as an effective strategy with a view to increasing diagnostic precision (Gask et al., 2005). Making the correct diagnosis is a key step in providing the most adequate treatment. However, PC practitioners usually prescribe antidepressants without making specific diagnoses or distinguishing between more or less severe cases of depression (Pinto-Meza et al., 2008), making frequent mistakes that lead to both false positives and false negatives. Hence, having validated diagnostic tools can be of great help in PC services. There are several studies that have shown evidence of the usefulness of having brief instruments when identifying psychological problems in PC (Mitchell & Coyne, 2007). This is the case of the PHQ-2 (Kroenke, Spitzer, & Williams, 2003), a scale of only 2 items that has shown

high sensitivity and specificity indexes for the detection of major depression.

Improving the diagnosis of depression is the first step to providing adequate treatment, but other efforts are also necessary for treatment adequacy in PC, which must be in the line of implementing evidence-based treatments. In this regard, psychological treatments are presented as an essential tool (Cano-Vindel, 2011a; Cano-Vindel, Dongil-Collado, Salguero, & Wood, 2011). Not only have they been shown to be more efficient in general than psychotropic drugs, but they have also shown this effectiveness in the PC sphere, improving the results of conventional treatments in terms of efficacy as well as effectiveness. In addition, research on psychological treatment is in good health making the development of efficient intervention programs through group interventions possible, with a transdiagnostic approach, incorporating computerized and on-line tools (for example, for making assessments, including session-backup materials or follow-up sessions) that reduce professional working hours or even reduce treatment sessions (for a review see Cano-Vindel, 2011b). Therefore, the inclusion of psychological-assistance services in PC seems to be a necessary step in our country (Pastor, 2008). There are several collaboration models in the psychological and medical services of other countries which are obtaining good results and that display an increase in the quality and sustainability of the service (Turpin et al., 2008). On the other hand, a necessary step toward a comprehensive treatment of mental health problems would be taken, going from the essentially biomedical framework prevalent at present, which is excessively based on pharmacological treatments, toward a biopsychosocial framework.

Primary care services are an essential resource in the intervention of mental health problems. In this paper, we have attempted to show the state of the art regarding the diagnosis and treatment of depression in PC, placing special emphasis on those studies conducted in our country. In this regard, we have analyzed some of the main problems reported in the literature as well as some roads to a solution that we hope will be helpful with a view to planning an adequate strategy in mental health. Undoubtedly, providing efficient assistance in PC for emotional problems in general, and specifically for depression, will be a great advancement for our public health system.

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