

Ten noteworthy reviews on updates on *child and juvenile health psychology*

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INTRODUCTION

According to the official website of Division 54 of the American Psychological Society, (APA onwards) Child and Juvenile Psychology or Pediatric psychology is *an integrated field of science and practice in which the principles of psychology are applied within the context of pediatric health. The field aims to promote the health and development of children, adolescents, and their families through use of evidence-based methods. Founded in 1969, the field has broad interdisciplinary theoretical underpinnings and draws from clinical, developmental, social, cognitive, behavioral, counselling, community and school psychology. Areas of expertise within the field include, but are not limited to: psychosocial, developmental and contextual factors contributing to the aetiology, the course and outcome of pediatric medical conditions; assessment and treatment of behavioral and emotional concomitants of illness, injury, and developmental disorders; prevention of illness and injury; promotion of health and health-related behaviours; education, training and education of psychologists and providers of medical care; improvement of health care delivery systems and advocacy for public policy that serves the needs of children, adolescents, and their families.*

From our point of view, the difference in names between the *Pediatric Psychology* or *Child and Juvenile Health* is not too relevant. The former may actually be more often used in Anglo-Saxon countries and the latter in other countries. However, this seems to be changing, as the APA itself has included the Society of Pediatric Psychology as one more of its divisions. The first name can also be more often found in clinical environments and the second in university settings.

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What we actually find relevant is advocating for the existence of this area of knowledge adjusted to childhood and adolescence due to the fact that child illnesses are different from those of adults and because the developmental changes in the emotional and cognitive reactions to health and illness need to count on a child health psychology different from the one for adults. In spite of the thematic overlapping, a different methodological approach is necessary in aspects such as types of illness affecting childhood, differences in the cognitive and emotional responses to the illness, and the involvement of the family, which is greater in these ages (Eiser and Main, 2001).

To our mind, training in Clinical Psychology makes it possible to meet the aims mentioned in the above definition, although approaches from Social Psychology or Developmental Psychology have also been made. For example, ill children and adolescents can be diagnosed by any of the categories in the mental disease classification systems. However, there are some categories which are often most helpful, such as the *psychological factors affecting the physical state, factitious disorders or failure to comply with the therapy*, which are not so usually diagnosed in child psychopathology. Consequently, as child health professionals, we need to pay special attention to performance variables such as psychosocial adjustment, family functioning or the functioning related to the illness. Therefore, we think that in order to identify, assess and treat these and other problems, training in Child Psychology in particular and in Clinical Psychology in general are suitable for successful treatment in health care and child and teenage illness, as focused from the biopsychosocial approach.

This article compiles ten reviews which we find most relevant in relation to this area of study. For this, we have followed two paths, first, the authors', teachers' and researchers' knowledge and experience, over a long period of time, in the subject matter. So the four first references are presented and they are the foundation article on the subject matter by Wright (1967) as are the three manuals that come later. The second compilation path is determined by a bibliographic search carried out on the two databases we believe to be the most important on health issues nowadays, namely *Scopus* and *The Journal Citation*

Reports. Each of them makes the most cited references available by introducing some key words, *Pediatric Psychology* or *Health Psychology* and *child** or *adolesc**. A product of this second path, the article by Holmbeck (1997) is clearly the most cited one, actually more than twice as much as the next one, and is the first we review. The remaining reviews are either among the most cited works or relevant to this paper as long as they address cross-sectional issues in the discipline.

Wright, L. (1967). The pediatric psychologist. A role model. *American Psychologist*, 22, 323-325.

Logan Wright (1967) published in only three pages the article which is considered to be the foundation of Pediatric Psychology, entitled "The pediatric psychologist: a model to follow." The article picks up the proposal made by J. Kagan (1965) suggesting a 'marriage' between psychology and pediatrics, which had been made two years earlier. That was the time when the term 'pediatric psychology' was coined and defined as a discipline primarily dealing with children in a non psychiatric medical scenario (Wright, 1967). The proposal widened psychologists' usual work, which used to assess and treat some child and adolescent psychopathological disorders from the approach of clinical psychology. Thus, Wright suggested that the training of these professionals of pediatric psychology should be based on child development and clinical child psychology.

Another important characteristic of Wright's work is the fact that he detailed those areas which he argued should receive special attention from pediatric psychology. Thus, in the area of psychological assessment, professionals were asked to assess cognitive development more widely than the psychiatric world was used to doing. In the area of child upbringing, it was argued that they needed to be capable of responding to the behavioural, affective or interpersonal difficulties that might arise. This professional should be interested in the area of normal personality, positive mental health and in the prevention of emotional problems, and should also apply timely and financially effective methods, as the number of mental health professionals is not very high in comparison to those of so called 'physical' health.

Other contributions of the article made reference to clarifying the role of the pediatric psychologist and of valuing the training that he should have, which should be developed by means of affiliated clinical training programmes, residences and post-graduate university programmes. As we will see in the next references reviewed, all of these issues and contributions are still highly topical subjects.

Roberts, M.C. y Steele, R.G. (Eds.) (2009). *Handbook of Pediatric Psychology*. New York: The Guildford Press.

This is the fourth edition of the *Handbook of Pediatric Psychology* (Roberts and Steele, 2009), whose first edition was published in 1988 (Routh, 1988). It is the manual of the American Society of Pediatric Psychology and most of the authors of the

chapters are important members of the Society. This new version consists of 808 pages and offers an enlarged and updated vision of the topics addressed in older editions as well as some new ones.

The first part deals with professional issues and, among others, we can find an historical introduction to the discipline and its development in the United States of America, which goes deep into its history in the official journal, (*The Journal of Pediatric Psychology*), and in the training necessary for pediatric psychologists. The second chapter, on ethical and legal issues, shows some dilemmas likely to be met in daily practice, such as on-line treatments or the consent form. The third chapter illustrates professional development in pediatric psychology and how training is currently undertaken. The following chapter deals with research design and statistical application in psychiatric psychology, and the last one of this first section on American psychological services and private health insurance.

The second part, with 10 chapters, addresses present day cross-sectional topics, starting with cultural diversity and its relationship with illnesses. The following chapter discusses how to manage evidence based practice in order to apply the best available treatments. The next chapter deals with inpatient pediatric interconsultation, which involves the most active way for pediatric psychologists and pediatric specialists to collaborate. The chapter on adherence to pediatric treatment regimens is divided into three parts: definition and measurement, factors associated to better adherence and a review on interventions in order to improve them. The chapter on pain goes through the variables influencing its experience by children, its assessment and the approaches, which have proved effective, to deal with it. The next chapter discusses the necessary management of pain and distress during medical procedures. The next chapter makes a critical reflection on the most often prescribed medicines for psychopathological disorders and a number of chronic diseases. Chapter 13 of the manual is novel, as it proposes a category called *pediatric medical traumatic stress* (PMTS), referred to as *a set of psychological and physiological responses of children and their families to pain, injury, serious illness, medical procedures, and invasive or frightening treatment experiences*" (Kazak, Schneider y Kassam-Adams, 2009, p. 205). Chapter 14 describes the role played by palliative care, end of life and bereavement due to the death of a child. The last chapter in Part 2 deals with the applications of electronic health (e-Health) in pediatric psychology, that is, the use of the new interactive technologies of communication which improve health and care, such as PDA's, the Internet or virtual reality.

The third part of the manual, consisting of 21 chapters, is the longest one. It discusses specific chronic diseases, some child psychopathological disorders and organ transplantation. Given the large extension of this work, we cannot comment on each chapter separately.

Part 4 in the manual deals with public health and a variety of issues. Chapter 38 discusses racial and ethnic disparities in the access to a variety of health care services. Chapter 39 is about prevention of unintentional injury and how to reduce mortal accidents in childhood. The next chapter analyzes

health promotion in children and adolescents (integrating the biopsychosocial model and ecological or environmental approaches). The last chapter of this part relates pediatric psychology and primary attention and examines the cost reduction that such interrelation might contribute to the health system.

The fifth part of the manual has five chapters. It starts with a brief overview of systems in pediatric psychology research and practice by starting from the socio-ecological system model. The next chapter shows how family and health related contextual factors are organized from the socio-ecological model. Another chapter shows peer relationship perspectives of children with chronic illnesses, focusing on social functioning. Another chapter discusses schools and the patients' reintegration or integration into them after they have gone through especially acute phases of some illnesses. The last chapter starts from asthma as an example and discusses family interactions with the health care system.

The sixth part, on emerging issues, consists of five chapters. The first one shows the genetic advances that allows for the prediction of the onset of some child diseases and the psychosocial consequences deriving from them. The second chapter explains how findings of neuroscience can be transferred to the treatment of some disorders, focusing on those of the autistic spectrum and the hyperkinetic conduct disorder. Another chapter describes how some allergic diseases other than asthma have biopsychosocial consequences on the child's and his or her family's quality of life. Another novel chapter is the one on positive psychology, in which the authors analyze some variables that are starting to be studied, such as quality of life related to health and the so called post-traumatic growth. The last chapter analyzes the clinical, research and organizational collaboration that can be taken into account between pediatric psychology and other disciplines.

Gómez de Terreros, I., García Rodríguez, F. y Gómez de Terreros Guardiola, M. (2002). *Atención integral a la infancia con patología crónica*. Granada: Editorial Alhulia.

This large volume, in which 84 health and education professionals participate, is the first manual for the attention of chronic child pathology edited in Spain. It is not by chance that it has been conducted in Andalusia and that the authors are largely Andalusian and work in this Autonomous Region, since Social Pediatrics, as a section of Pediatrics, has, for several years now, been presided over by Professor Gómez de Terreros, who has largely contributed to its impetus, and one of its fruits has been the 30 year collaboration with the Unit of Social Pediatrics of Seville's University Child Hospital *Virgen del Rocío* and the Department of Personality, Psychological Assessment and Treatment of the University of Seville, which brought about the birth of the research group called "Pediatria Social y Psicología de la Salud" (Social Pediatrics and Health Psychology) (CTS-152), one of whose lines of research is child chronic pathology.

The manual shows the impact and consequences that a chronic illness can have in a family, without leaving aside the prevention and treatment of

these pathologies. It consists of four parts, the first of which, with seven chapters, addresses introductory and general issues. The first chapter of the manual calls attention to the difficulty of defining chronic pathology in children, given the fact that some authors establish different time limits in order to regard a condition as chronic. For that reason, after reflecting on the issue, García, Gallardo, Goya and Vázquez (2002) propose as the most adequate definition the one in the *Guía de atención a la infancia con problemas crónicos de salud* (Attention guide for children with chronic health problems), (Junta de Andalucía, 1997): *Chronic pathology is a health problem interfering with a child's daily activities, which lasts for over six months and requires specific and complex resources* (p. 32).

The second chapter deals with bioethics in pediatrics. Bioethics, which is ethics applied to medicine, is especially addressed to encouraging good health. The three principles which medical ethics is based on are autonomy, charity and justice. For more related information, one can check the recent and excellent manual in Spanish by de los Reyes and Sánchez (2010).

Very much related to the former, the third chapter deals with the minor's legal protection, which starts with a brief historical introduction on children's rights up to the moment when, in the 20th century, the Convention on the Rights of the Child came into force and was ratified by Spain in the year 1990, 30 years after the Declaration of the Rights of the Child. This chapter looks at this convention in great detail, as well as at Act 1/1996 on the minor's legal protection and the rights of disabled children in Spain, the informed consent form in pediatrics and the Spanish figure of El Defensor del Menor (the Public Defender of Minors).

The fourth chapter deals with "health promotion", which lies on the last step of integral attention to health. The term *health promotion* is understood as "controlling the factors influencing one's health as a citizen and as a member of a given group or community" (p. 91). In addition to this, there are reflections over strategies to work on quality of life.

The fifth chapter deals with the family as the health carer of a child with a chronic pathology, and it emphasises the importance of informal health care, understanding as informal those services which provide help or care without receiving any economic payment in exchange. This chapter details the functions carried out by the family as they assume this role, and focuses especially on the mother figure, who most often carries the responsibility and extra burden that this entails.

The sixth chapter of this first part of the book deals with child hospitalization. It draws attention to how strongly children feel their hospital experience and focuses on the recommendations that should be followed when a child is admitted to hospital. The chapter finishes by reflecting over what future hospitals will be like and by showing hospital structures, hospital humanization programmes, information to provide children with, hospital school services, or the necessary continuous care that should be carried out.

The last chapter of the first part deals with integral attention and is a conclusion for all of this

part of the manual. The authors consider that in order to be able to give health care, it is necessary to know the resources that are available. For this reason, reference is made as much to on-line services as to those offered by the public administration.

The second part of the manual deals entirely with various neontological problematic situations. Parts III and IV respectively deal with common and specific issues of chronic pathologies. Among the common ones, discussion is on adherence to treatment, pediatric psychopharmacology, painkilling and sedation, rehabilitation, diet and nutrition problems, vaccination, the psychological assessment of the chronically ill child patient, their schooling and the necessary school curricular adjustments. Social integration is also dealt with, as well as the family's relational dynamics, communication between and among professionals and the meaning of death to a child. Chapter IV deals with specific issues referring to a number of chronic diseases and psychopathological disorders.

Ortigosa, J.M., Quiles, M.J. y Méndez, F.X. (Coords.) (2003). *Manual de Psicología de la Salud con niños, adolescentes y familia*. Madrid: Pirámide.

This is the first manual (Ortigosa, Quiles and Méndez, 2003) published in Spain which includes the term *health psychology* related to children and it is 401 pages long. For the authors, child health psychology seeks to isolate the cognitive, behavioural and social variables that affect child and teenage health and illness. The patient's parents, who play a fundamental role, are also a basic pillar to promote health, prevent and intervene in the disease and affect the health system, the four objectives of the definition by Matarazzo (1980). In coherence with these assumptions, the manual is divided into three sections.

The first part looks at the fundamentals. The first chapter mentions the cognitive development in the concepts of health, illness and death in childhood and adolescence. The second chapter deals with stress and the coping strategies used by children depending on their age and the way they relate to those used by their parents. Later on it summarizes the development of the variables of child vulnerability to stress. The next chapter makes a full analysis of the variables that affect therapeutic adherence and subdivides them into variables related to the patient, the treatment, the doctor-patient relationship, structural variables and variables of the illness itself, and finishes with indications to assess and treat adherence. The fourth chapter deals with communication and health, which is fundamental to achieve child collaboration. It provides the functional communication strategies and advice to improve them.

The second part of the manual focuses on the interventions in a number of chronic illnesses. These chapters have a similar structure: after a brief description of the illnesses, they discuss instruments for the assessment of important variables of the illnesses as well as treatment strategies. Furthermore, the two last chapters deal with child maltreatment (although no reference is made to intervention) and physical disability.

The third part of the manual is titled *Prevention and Promotion of Health*, areas that very often receive less attention than is desirable. This part consists of seven chapters. One of them is on education for health, which analyzes some of the existing models and their application to childhood and adolescence. The next chapter is on attention to couples who undergo assisted reproduction treatment, although it only discusses the couples and there is no mention at all about the possible future children. Another chapter deals with preparation for hospitalization and surgery. It offers techniques for minimizing their negative consequences. The table shown at the end of the chapter is really useful to choose the best intervention. The following chapter is on the prevention of teenage drug use, using the example of the *Greetings to the Weekend* programme. Another chapter is on AIDS, and goes through the different generations of programmes related to teenagers, and finishes with the third phase of prevention of AIDS in children. The penultimate chapter, which includes postural hygiene and the prevention of lumbago, proposes specific programmes to mitigate these health threats. The final chapter analyzes the factors having a bearing on limited sports practice and proposes strategies to increase the habit of sporting activity.

Holmbeck, G.N. (1997). Toward Terminological, Conceptual, and Statistical Clarity in the Study of Mediators and Moderators: Examples From the Child-Clinical and Pediatric Psychology Literatures. *Journal of Consulting and Clinical Psychology*, 65, 599-610.

This is the most cited article in the databases checked when the term *Pediatric Psychology* was introduced. However, it is not an easy work to read for those professionals who lack training in research methods, as this is the theme discussed.

According to Holmbeck (1997), there is a frequent lack of conceptual, methodological and statistical clarity in the study of mediating and moderating effects in the specialised mental health literature. Thus, researchers attempt to examine the factors that moderate or mediate the associations between predictive variables and the results observed in adjustment variables or adaptation variables. Both in child clinical psychology and in pediatric psychology, the psychosocial models relating prediction and adjustment have become complex and the researchers working on these areas have found it necessary to hold conceptual models which do not escape the mediating and moderating effects of the variables studied.

In face of the facts described, the author has three objectives:

1. To explain the terms 'moderator' and 'mediator,' which are well defined and well differentiated.

A moderating variable is a qualitative variable, for example, sex, race or social class, or a quantitative one which affects the direction or the strength of the relationship between an independent or predictive variable and a dependent or criterion variable. In other words, a moderat-

ing variable is one which affects the relationship between two variables.

A mediator, on the other hand, specifies the way or the mechanism by which a given effect takes place. In other words and to make it simple, *the independent variable causes the mediator that then provokes the result* (Shadish and Sweeney, 1991, p. 883).

2. To revise and present statistical strategies to conduct tests on mediating and moderating effects. This work discusses two statistical tests, namely multiple regression and structural equation modeling (SEM). Even though SEM is often regarded as the perfect method due to the information it provides on the degree of *adjustment* for the whole model after controlling for measurement error (Peyrot, 1996), the adequate use of techniques can also provide significant data in relation to the hypotheses set. In addition to this, according to researchers on pediatric psychology, where the sample populations are often relatively small, the use of regression techniques, in comparison to SEM, can be necessary due to considerations of *strength*.
3. To present examples of adequate and non adequate uses of these terms in the literature specializing in child clinical psychology and in pediatric psychology, although to do that reference is only made to two published works. This section emphasizes the different kinds of problems that have started to arise in the literature, whilst researchers have been embarking on the study of moderating and mediating effects, such as terminological incoherence, incoherence between terms and concepts, incongruity between terminology and statistical analyses, lack of clarity of charts, and lack of conceptual clarity when a proposed mediator represents a *response* to a predictive variable.

Special Issue: Evidence-based Assessment in Pediatric Psychology. *Journal of Pediatric Psychology*, 33 (9), October 2008.

The objective of this series of articles published in a special volume devoted to evidence based assessment in pediatric psychology is, according to Cohen *et al.* (2008), to systematically identify and assess the best and most widely used instruments for assessment which are available to child and juvenile mental health professionals. As a matter of fact, in 2005, Division 53 of the APA published a special issue on evidence based assessment in child and adolescent disorders.

Seven of the most important assessment areas are studied in this issue, namely quality of life, family functioning, psychosocial and psychopathological adaptation, adherence to treatment, pain, stress and coping, and cognitive functioning. Of them, the articles devoted to the measures of family functioning (Alderfer *et al.*, 2008) and to stress and coping (Blount *et al.*, 2008) are among the most cited studies in the search carried out in the Scopus database when the term 'Pediatric Psychology' is selected in the field of key words.

The review of works by Alderfer *et al.* (2008) provides valuable information about the

measures of family functioning. However, it is argued that more attention should be paid to the psychometric properties of measures on the family when they are used in pediatric populations. Most family assessment measures used in pediatric psychology have been developed for the general population and have been applied to pediatric samples without there having been enough previously conducted research on their reliability and validity in these specific samples. For example, the article suggests that special attention should be paid to family heterogeneity and diversity.

Research is also needed on providing information about the validity of the measures in pediatric samples and it would be fundamental to provide some norms for these samples. In practice, some families of children with chronic illnesses can obtain scores which are interpreted as 'dysfunctional' when norms developed in and for the general population are used. Yet, these functioning patterns can be adaptive within these families, for example, the rigid adherence to complex treatments.

As regards the article making reference to assessing stress and coping strategies, Blount *et al.* (2008) make the point that it is essential to assess these aspects in practically all illnesses, as well as whenever child patients are submitted to medical procedures that generate fear or are painful, such as injections, treatment, surgery and hospitalization. Stress and coping are usually studied together. The latter can be defined as a fact or experience that drains an individual's resources. Coping has traditionally been defined as the thoughts and behaviours used to manage the internal and external demands of the situations assessed as stressing (Lazarus and Folkman, 1984).

That is why the assessment of stress and coping is essentially the assessment of risk factors and the ability to adapt or adjust to change, respectively. Identifying these risk and resilience factors through research on psychological assessment will be useful as long as these factors can be manipulated in order to achieve better medical and psychological results (Blount *et al.*, 2000).

Drotar, D. (1977). Clinical psychological practice in a pediatric hospital. *Professional Psychology*, February, 72-80.

In this article, Drotar addresses the characteristics of the exercise of Clinical Psychology in a service of pediatric hospitalization. The conclusions that the author puts forward are of great interest as they feature the same goals currently pursued by Pediatric Psychology. However, it is interesting to observe how certain the changes or improvements have taken place.

One of the most noteworthy aspects that describe the functioning of the service is that the consultations carried out by the doctors in the Psychological Attention service followed a given pattern: doctors in training were the first to seek psychological consultation. The pediatric unit's acceptance of the service was a more gradual process, as it was neurologists and general pediatricians that dealt with more children with developmental problems and, so, carried out more consultations.

Another important conclusion of this study is the difference between the demands for psychological assistance by external and hospitalized patients. In both cases the most common demands refer to assessment of cognitive development. However, the health professional's demands from hospitalized patients refer to psychological adjustment in chronic diseases, somatic complaints, acute emotional crises and adaptation of the child. It is necessary to bear in mind that, thanks to advances in diagnosis and treatment, illnesses which had until now been considered lethal were becoming chronic with long term consequences and with great significance for psychological and family adjustment. Such illnesses require complex interventions implying an understanding of human mechanisms to become adapted to stress and loss. The field of Pediatric Psychology can actually anticipate these problems and provide the necessary support to seriously ill children and their families, as well as to medical and nursing personnel.

Drotar refers to another important area of psychological intervention: its preventive character in disorders related to deprivation caused by hospitalizing babies and whose emotional alterations are first identified by pediatricians and nurses. As their reversibility is known, early identification allows for effective intervention. This may be one of the areas in which Pediatric Psychology has advanced most.

A criticism that the author makes about Child Health Psychology put into practice refers to the isolation and lack of coordination of hospitals and other community services such as education, social or legal services, in spite of the fact that communication is essential, above all in cases of abuse and negligence. Nowadays, we can say that Drotar's criticism and studies have permitted our discipline to advance in areas which used to be regarded as exclusively related to medicine. This is so much so that Drotar himself stated as a conclusion to his research that the demands on the psychological services in health care services would increase, as has actually occurred.

Harper, D.C. (1997). Pediatric Psychology: child psychological health in the next century. *Journal of Clinical Psychology in Medical Settings*, 4 (2), 181-192.

This article deals with the advisability that hospital based psychologists count on administrative support in order to see themselves strengthened as a group, and the need of the psychologist being not a mere collaborator in the health system, but one more health professional with a clear and perfectly defined place in the hospital organizational chart. That is to say, and just as the author states, future psychologists should be something else than a 'one-trick pony.' One of the resources suggested to achieve this goal is specialization.

In addition to specialization, collaboration and coexistence with other health professionals is also necessary. Furthermore, psychologists can function as links between the hospital and the school in order to communicate the needs of the child patients and their families. Collaborating with doctors can also ease communication with the patient about difficult information, methods and models in order to

make decisions together, adherence to treatment, intervention in pain and chronic illnesses or coping strategies in face of chronic illnesses. As a thought for the future, Harper sets out the need to collaborate with a number of organizations, both national and international.

This article also sets out the effectiveness of behavioural treatments when addressing severe behavioural problems in children and adolescents with severe developmental disorders. This may be the area in which Pediatric Psychology has advanced the most and in which the need to check effectiveness is now driving research.

Other important areas to develop are, first, intervention in developing countries, which would represent the opportunity to spread knowledge and to explore problems related to the transculturality of psychological health attention. Besides this, it is necessary to focus on education, having as its aim the primary prevention of risky behaviour on health and that this education reaches training areas and, as a consequence, the preventive sense of behavioural sciences will achieve a wider goal.

Janicke, D.M., Finney, J.W., Riley, A.W. (2001). Children's health care use. A prospective investigation of factors related to care-seeking. *Medical Care*, 39 (9), 990-1001.

This article reflects on what elements are related to the search for health care by the child and juvenile population, what will make the search more effective, as it has been shown that children's and juveniles' use of health services varies dramatically. A significant percentage of them make an extreme use of such services, both by excess or by default. The consequences on the health system are, in the first case, an increase in the risk of iatrogenic harm in the child and tension or exhaustion of resources in the public health system. In the second case, that of extremely reduced use of health services, the consequence is the increase of risk in public health.

In order to determine what would be the best predictors in the search of health care made by the child and juvenile population, the authors conducted a two year long prospective study with a number of families in order to gather data on the use of health attention services and to find out the associated factors. Thus, starting from the hypothesis that, although the various health studies must be the best predictors of the future use of health services, the fact is that psychosocial, maternal and family functioning variables will also have a significant predictive character.

Once the study had been carried out, the starting hypothesis was not completely corroborated. Thus, it was shown that having used health attention in the past was the best predictor for using it in the future; although the state of health and psychosocial variables are useful predictors, when the previous use of services is included in the regression model the influence of the rest of variables is reduced significantly. Nevertheless, if this information on the influence of both child and maternal psychosocial factors is not considered, the variable having the most relevance is mother concern for her child's health.

As regards child related psychosocial variables, the most influential one on the model set out is

the child's mental health. Children with emotional or behavioural problems show more physical and psychological symptoms, which means a worse general state of health and functioning (psychological discomfort increases both in the child and its parents and, in order to reduce this discomfort, parents resort to health services).

Eccleston, C., Morley, S., Williams, A., Yorke, L. y Mastroiannopoulou, K. (2002). Systematic review of randomised controlled trials of psychological therapy for chronic pain in children and adolescents, with a subset meta-analysis of pain relief. *Pain*, 99, 157-165.

If we start from the premise that systematic revisions attempt to apply the best design to investigate the effectiveness of a therapeutic intervention (Peñazola and Candia, 2004), the article that we are reviewing can be considered an important one due to the exhaustive search and bibliometric analysis of published articles about psychological interventions carried out on children and adolescents with chronic pain.

There is clear evidence of the effectiveness of psychological intervention on chronic pain in the adult population. If we base ourselves on the data obtained from recent research studies, a high percentage of children of school age state suffering from chronic or recurrent pain for three months or longer. Psychological therapies are being promoted as potentially effective interventions to manage severe pain and its consequences. Due to this, this study reviews clinical tests carried out with such therapies, and reveals that the most widely used treatments in this area of interest are relaxation techniques, relaxation plus bio-feedback, cognitive behavioural therapy, and cognitive behavioural intervention in the family.

After observing the analysis carried out by this study, its main conclusion is that there is not enough evidence to assess the effectiveness of psychological therapies that make it possible to improve mood, class attendance or the disability associated with chronic pain in children or teenagers. The reason is that the analyzed studies lack data which permit the assessment of other negative aspects associated with chronic pain and apart from this, what it suggests is that the only goal of the diverse treatments is to alleviate pain. As a positive aspect, the authors point out that all the studies included in the systematic analysis provide data on pain related standardized measures but they actually lack measurements with standardized multidimensional instruments to assess the impact of pain in the lives of children, teenagers or their families.

CONCLUSIONS

Therefore, it should be made clear that current health care professionals not only act on the ill child or adolescent, not only treat or improve their health, but they should try to make it possible for them to be able to become integrated into society in all aspects of life by collaborating with their families and other social entities such as associations of par-

ents of affected children, in order to achieve the goal of integral attention.

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