

Epidural Analgesia in Labour from a Sociological Perspective – A Case Analysis of Andalusia, Spain

Rafael Serrano-del-Rosal,
Lourdes Biedma-Velázquez and José M^a García-de-Diego
*Institute for Advanced Social Studies,
Spanish National Research Council (IESA/CSIC), Córdoba
Spain*

1. Introduction

Health is a key area for humans and the main indicator of the quality of life we enjoy. For this reason health has been studied, analysed, and discussed across numerous scientific disciplines from a wide range of theoretical perspectives. From the quantitative point of view, it is noteworthy that life expectancy in Western countries has reached its highest level in the history of mankind¹. Medical research has made significant contributions to our understanding of the human organism, as well as the treatment and prevention of many diseases. These advances have had a direct impact not only on increased life expectancy, but have also changed the concept of medical practice, which is increasingly focused on “adding life to years rather than adding years to life” (Herrera & Duran, 1995). Indeed, in medical practice today, the patient’s quality of life has become as or even more important than the disease itself. From the qualitative standpoint, this has led to a significant change in how health is conceived. Health is now understood as a multidimensional concept that in addition to purely medical aspects (morbidity, mortality, life expectancy), encompasses physical elements (physical surrounding, housing, the environment, etc.), social components (occupational health and safety, education and health care, equitable distribution of available resources, etc.), lifestyle (adequate diet, physical exercise, tobacco and alcohol consumption, etc.), the healthcare system (physical and human resources, hospital care, social security, research, etc.), and others.

The health as a multidimensional concept where the culture and society to which an individual belongs, alongside its norms, values and roles, influence they way that individuals experience health problems, condition such experiences even when they are not the cause of the illness or disease itself, and affect how individuals deal with them. Similarly, at the political level, institutions, organisations, and the entire fabric of a

¹ According to data from 2004 for Spain, the life expectancy at birth was 77 years for men and 83 years for women (Source: WHO)

government influence how a health “problem” is viewed, financed, legitimised or delegitimised (Cockerham, 2002).

For this reason, sociology has now been incorporated into health analyses and the interpretation of medical events. Sociology contributes to the medical discipline by analysing the social causes and consequences of health and disease in individuals. It therefore goes beyond integrating a subjective approach to medical events, but encompasses a global social vision.

From the sociological perspective, health cannot be understood as a purely biological event involving physical and chemical elements. As the World Health Organization (WHO) has acknowledged, the concept of health goes beyond the purely biomedical and is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 1952). Indeed, it is precisely these social elements affecting health and disease that is of concern to the field of sociology.

One issue of particular interest to sociological research in this sphere is the analysis of social inequalities in health. The existence of health disparities have been reported for most countries of the world (Starfield, 2002), with the most disadvantaged, women, and immigrants from low-income countries showing the worse health indicators.

This field of study examines, for example, inequalities due to gender, that is, the social condition of being male or female and not the biological bases characterising gender. It has been shown (Rohfs et al., 2000) that although women generally have lower mortality rates and a longer life expectancy, they also suffer from more chronic diseases, have higher levels of disability, suffer more pain, respond more poorly to analgesics, and report more negative perceptions about their own health. Some researchers attribute differences in health to biological and genetic variations (Mogil, 2004; Greenspan et al., 2007), while others point to the psychological and social components of these differences (Hanna et al., 2009; Breivik et al., 2006). However, scholars are unable to explain all the differences, nor do all the studies have a solely biological basis.

In this chapter we analyse health as a social concept, focusing specifically on the role of women in medicine as subjective and passive elements of medical practice. This approach will serve as the basis of our analysis of the use of epidural analgesia during childbirth, which is explored in the second part of the chapter. In the first part we deal with pain as a social element and provide an overview of the history of pain and the evolution of treatment for pain.

2. Pain as a social element

Pain, like health and illness, is the representation of an individual state that is only possible for “others” to decipher through the patient’s own perception of suffering (Baszanger, 1992). According to this approach, pain is defined, in addition to its physical, biological and chemical components, according to the norms, values and symbols that the sick or ailing, those who accompany them, and the health professionals who care for them attach to such pain. In other words, pain is defined according to the social meaning conferred to it.

But pain has not always been interpreted in the same manner. Therefore, in this section we first attempt to contextualise pain as a social element. We then go on to provide a brief

overview of how pain has been interpreted socially throughout history, and finally discuss the use and extent of anesthesia and analgesics to relieve pain.

2.1 Conceptualisation of pain as a social elements

Pain has accompanied human beings throughout history (Pérez-Cajaraville et al., 2005), but has not always been interpreted the same way (Le Breton, 1999, 2010). The manner in which pain is interpreted has changed as have society and culture, which have attempted to convey meaning to pain. Pain is a disruptive experience that forces individuals to seek meaning for the ailments they suffer from (Barragán-Solís, 2006).

Pain has an undeniable physical and anatomical component (Loeser & Melzack, 1999), as well as a cultural and social component, which lead it to be interpreted from different perspectives (Kirmayer, 2008). Yet the social component of pain has not always been taken into account and was, for a long time, treated merely as a sign that something physical or organic was not functioning properly.

Today, however, the multidimensionality of pain has been widely accepted. The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory (objective) and emotional (subjective) experience associated with actual (injury) or potential (pathology) tissue damage, or described in terms of such damage (as if it already existed and were the cause) (IASP, 1979; Guevara-López, 2004).

Nowadays it is much more difficult to define pain as it is viewed as a somatic sensation (Franco, 1999) that can only be determined through the personal interpretation of the patient who “lives” the painful experience (Leriche, 1937), that is, according to the subjective perception of the individual (Suvin et al., 2005). Moreover, data from studies that have attempted to “objectively” measure pain have been largely unsatisfactory. From a sociological perspective, pain is conditioned not only by the particular elements characterising the sufferer, that is, the subjective view of pain or what has been called “private pain” (Mosoco, 2002), but also by social elements or “public pain” that affect the sufferer such as education, culture, society, politics, and others.

The fact that people with less educational level have been found to suffer more pain than those with a higher level cannot be explained by biological factors, but rather as a set of social effects that have had an influence on the occurrence of the event. To reduce these inequalities it is therefore necessary to determine which elements are most relevant in explaining social inequalities in health.

However, pain as a process for which individuals seek meaning cannot be removed from the actual cause of the pain. Chronic pain due to an incapacitating disease is not perceived in the same manner as an occasional sharp pain that is not severely debilitating and can be overcome with a more or less rapid cure (Biedma-Velázquez et al., 2010). This second context refers to pain during childbirth and occasional, transitory pain, which is the result of a biological event that does not constitute an illness, usually has a positive outcome (a birth), and for which there is no fear of future renewal or intensification (Bayes, 1998); all of which affect the perception of pain. However, pain during labour is very intense (Fernandez & Villalonga, 2000) and greater than that experienced by other animal species. To this we must add elements such as fear, anxiety and stress that can increase pain and make labour

difficult (Calderon et al, 2006). Such factors have prompted the search for methods to alleviate the suffering of mothers during childbirth. Indeed, in this quest to eliminate pain, physicians in particular and the medical discipline in general are currently responsible for putting an end to and managing pain in today's society.

2.2 History of pain and its social interpretation

Although pain and disease have accompanied humans throughout history, they have not always been interpreted in the same manner. In this chapter we will obviously not attempt to provide a comprehensive overview on the history of pain as excellent reviews on pain already exist. However, we would like to highlight different conceptions of pain with a view to understanding how the culture and society to which an individual belongs condition the way pain is experienced. To do so, we rely chiefly on the work of Bonica, 1990; Morris, 1991; Perez-Cajaville et al., 2005; Perez et al., 2005; and Krivoy et al., 2010.

Primitive peoples believed that pain was caused by demons or spirits entering bodily orifices. Given that these primitive societies did not make a distinction between the spirit and the body, tribal shamans and sorcerers played a dual role as both priests of the spirit and healers of the body. Moreover, in these cultures pain was considered a rite of passage; something that was not only inevitable but desirable and sought after as a passage to adulthood, social prestige or a new status.

This concept of pain persisted among primitive tribes for a long time, especially in ancient Native American cultures, or other primitive tribes throughout several periods in history. The notion that pain entered bodily orifices was common in ancient Egypt, albeit the Egyptians made considerable advances in this regard such as the development of a body of medical professionals grouped into specialised schools overseen by priests.

The notion that pain comes from an outside source and is something external to man as a means to pass a test or as punishment has persisted throughout much of humanity to a greater or lesser degree. In Judeo-Christian culture, pain was considered the manifestation of divine punishment for man's sin. The Old Testament contains numerous references to pain as being synonymous with sin, as punishment for humanity's ills or as evidence of man's loyalty to God (Jaron, 1991). Part of this concept of pain was reflected in the New Testament and medieval Europe, permeating traditions, customs and conceptions of health and illness that have survived until today.

Buddhism views pain as a form of punishment for a sin committed in this or a previous life, although it introduces an innovative element of great importance: the psychological component of pain.

The Greeks, particularly Hippocrates and later his disciples, did not reject the role of the gods in pain, but also began to seek a more pragmatic meaning for pain by considering it a sign that something in the body was not functioning properly, thus providing a biological explanation for the process of pain. This view of pain as a "symptom" has endured and constituted an important turning point in the evolution of medicine.

From this moment onwards, explanations for pain sought its origin in different parts of the human organism. Aristotle taught that pain originated in the heart alongside feelings, and considered pain a "disease of the soul". Later, Galen and others, believed that pain

originated in the brain, dissociating it from the supernatural, and opening the door to the role of the nervous system and neurons in pain. Nevertheless, whether in the heart or the brain, pain remains a symptom that something is wrong.

During the Middle Ages, pain was again interpreted in Europe according to the philosophical teachings of Aristotle and strongly influenced by religious thought, mainly Christian doctrine. These doctrines legitimised suffering and pain as a way of approaching God; a way to atone for past, present or future sins; and an element of purification and redemption. According to this notion, which went so far as to promote martyrdom, combating pain was considered a negative and “unnatural” behaviour. In particular, pain during childbirth was considered the “price” that women had to pay for being the cause of man’s exile from paradise, and according to the Old Testament, as a “gift” that women must learn to appreciate.

It was not until the Renaissance that the classic texts reopened the debate on the origin, treatment and interpretation of pain due to a renewed interest in the scientific knowledge of medicine. At the time, science and religion lived side-by-side in a tense equilibrium in which religion served to explain the source of pain, while science dictated how to combat it. Once again, pain was regarded as a symptom that something was not quite right.

The eighteenth century was a time of great scientific and theoretical advances in the fields of anatomy, physics and chemistry. Medicine was gradually moving away from religion; a retreat that was more marked in subsequent centuries until the two ultimately separated in the twentieth century.

The twentieth century brought other substantial and important changes. One was the more or less formal inclusion of psychological elements in the definition of pain. After treating a large number of wounded soldiers during World War II, Dr. Beecher observed the effect of “placebo” drugs on pain, finding that the mind played a key role in the perception of pain. Indeed, pain could no longer be explained merely as a symptom, but as a reflection of something else; a suffering that is not always related to a biological problem. Leriche (1937), a pioneer in the treatment of surgical pain, is another important reference in twentieth century medicine. Had pain not been controlled in surgery, many of the common and everyday operations performed today would not have been possible. Thanks to Leriche’s contributions, medicine has made significant advances regarding pain relief.

Dr. Bonica (1953) established the world’s first multidisciplinary pain clinic. His concern, vision and understanding of pain laid the grounds for a model to manage pain that continues to be emulated to this day and opened the door to the first professionals specialised in pain management.

The late twentieth and early twenty-first century could be defined as the culture of disease prevention and medicalisation. Enormous advances have been made in biomedical research in the West and medical interventions are now performed that were unthinkable just a century ago. The use of anesthesia and analgesics have now become common place under the philosophy that pain is in many ways useless, sterile and demeaning (Le Breton, 1999). As a consequence, the social threshold regarding the tolerance of pain has decreased.

Today, pain is no longer viewed merely as a sign or symptom that something is wrong, but has begun to be perceived as a disease in itself. The idea that pain functions as an alarm is

beginning to lose force, while patients increasingly request to live with as little pain as possible. Traditional medicine has given way to a new “patient-centred” medicine (Baszanger, 1992) in which patients have the say and physicians must try to address their needs. As occurred in the past with priests, the hegemony that physicians enjoyed as experts has now been lost to some extent.

2.3 Treatment of pain

It should come as no surprise that the treatment of pain has been conditioned by the very concept and meaning attributed to pain. Thus, for example, if one considers that pain is not only natural but even “good”, either because it brings us closer to God, or because it is a symptom, a clue that “something is wrong” and helps us diagnose the real disease, eliminating pain will not only not be a priority, but could be considered an error.

How pain is treated is also influenced by the role of the patient, and how the patient manifests his or her pain. Depending on whether or not a patient feels they have the right to express their pain or on how the disease is perceived by society, it will be more or less socially acceptable to attempt to alleviate pain caused by disease. Drugs and treatments for pain are also subject to social evaluation. If one believes that a certain drug or treatment is useful in alleviating pain, the treatment is more likely to be effective than when the treatment is discredited or its effectiveness is questioned by society. For these reasons pain relief treatments are also the object of social research since they are, at one and the same time, a reflection and a cause of the society in which they arise or are developed.

While pain is as old as mankind, so are the attempts to alleviate it. From the shamans of ancient primitive communities to today’s pain clinics, the search for ways to free human beings from the suffering caused by acute or chronic pain have continued to evolve. Pain during labour and delivery is no exception, and has been the objective of various techniques and methods to minimise or eliminate pain during childbirth.

We have knowledge of the use of medicinal plants by primitive peoples as early as 4000 BC. These societies believed that pain and sickness were gods’ way of punishing man. Because diseases and illnesses were thought to enter through the body’s orifices, treatments for pain responded to this conception. For this reason, tribal priests, shamans and sorcerers were responsible for relieving pain, curing members of the tribe and acting as mediators with the spiritual world. They also performed complex practices such as trepanation as a way of freeing spirits and ridding the ill and ailing of pain.

There are many references to the different medicinal uses of many plants throughout the history of mankind. We know that hashish was employed as anesthesia in ancient China and that opium was used in Greece as a means “to forget one’s sorrows” (Morris, 1991). The use of white willow bark (a predecessor of acetylsalicylic acid) has also been documented to relieve labour pain.

When pain is related to coming closer to God, as was common in the Middle Ages, the ailing resort to God, saints virgins, penance and atonement for sins rather than medicine to alleviate pain. The church rejected the use of analgesics and other drugs as many medical practices were believed to be the work of Satan and “evil”. Nonetheless, drugs and anesthetics were used, but mainly under the tutelage of the church, which had its own body

of physician-priests who decided which medical practices were allowed in accordance with Christian faith and which were not.

The Renaissance was a time of greater tolerance and permitted the use of medications forgotten during the Middle Ages. In the eighteenth century, the advent of modern anesthesia and pharmacology marked a turning point in the treatment of pain.

The nineteenth century saw the birth of ether and morphine, great allies in the fight against pain. In fact, James and Simpson (1847) introduced the use of ether as an anaesthetic during labour (Pérez-Cajaraville et al., 2005) despite the conservative currents of thought of the time which believed that women should suffer during childbirth, as God wills. The divide between medicine and religion gradually widened until the twentieth century when a clear distinction was made between both.

As described above, today the focus has turned to preventing pain. Enormous advances have been made in the treatment and relief of pain, the development of anaesthetic methods and the establishment of pain clinics.

Until recently, midwives played a predominant role in the childbirth process, while gynecologists and obstetricians remained in the background (Campuzano, 2007) in the event of complications. Childbirth was considered a “natural” event that did not require medical supervision; and just as natural as the fact of being born, was the fact that women were expected to suffer pain during the process.

As epidural analgesia came to be used more widely in childbirths in Spain in the 1990s (Torres, 1999), the role of physicians and anaesthesiologists underwent enormous changes. They once again came to play an important role in the process, with both organisations and personnel having to adapt to these new changes.

3. Supply of obstetric epidural analgesia

Today, epidural analgesia is the most widely used method of pain relief in childbirth. This does not mean that the method is free of complications or contraindications, but these are considered to be of minor importance and a generally infrequent event. In general, the gains outweigh the losses and epidurals are now regarded as a safe method for both mothers and babies (Torres A, 1999; De la Torre & Pérez-Iraola, 2002, Fernández-Guisaola et al., 2004) provided there are no specific medical indications that advise against or prevent using this anesthesia and informed consent has been obtained from the expectant mother. However, each case must be analysed individually by trained and qualified professionals.

3.1 The implementation of obstetric epidural analgesia in Spanish hospitals

As mentioned above, drugs to relieve pain in childbirth have a long history of use. The first lumbar epidural analgesia technique was described in 1921 (Pagés, F, 1921), but the technique would not begin to be employed until the late sixties (Fernández-Guisasola, 2003). Spain, however, would have to wait until the 1980s before epidural analgesia came to be used, mainly in private hospitals. By the 1990s there was a spectacular increase in the demand for epidural analgesia, which was introduced into many public hospitals (Fernández-Guisasola, 2003).

The provision of epidural analgesia in Spain was largely the result of a report of great impact known as the *Plan Integral de la Atención a la Mujer* (Comprehensive Plan for the Care of Women, 1998). Following the publication of the report, epidural analgesia was offered to all pregnant women in Spanish hospitals in 2000.

Today, women in Spain are ensured a series of rights during labour and delivery by law (Law 41/2002). Specifically, they are entitled to be informed about all aspects of the clinical care they receive during childbirth; and the information they are given must be easy to understand, appropriate to their needs, and aid them in making decisions freely. Once informed, women have the right to decide about their own health and body and to refuse any treatment or clinical intervention that is proposed to them. They have the right to choose freely from among the available clinical options including the birthing position, continuous or intermittent monitoring, the possibility of walking or remain lying down during labour, whether they want to receive epidural analgesia or not, or receive constant emotional support during delivery. The ability to choose is only limited by the availability of options, that is, the services provided at each hospital.

In this regard, the law has elevated epidural analgesia during childbirth to the category of a right. As in other neighbouring countries, before a woman gives birth in a hospital in Andalusia in particular, and in Spain in general, they must be provided the so-called "*Plan de Parto*" or Birth Plan, which in addition to informing them about the birthing process, also provides information on epidural analgesia and asks women to decide whether or not to use it.

But introducing epidural analgesia in Spanish hospitals has not been an easy task. Not only have hospitals not developed the necessary infrastructure at the same pace, but it has also been necessary to train professionals in the protocol of this technique (Campuzano, 2007).

However, according to the General Law of Health (Law 14/1986), "public health care will be extended to the entire Spanish population" and "access and health care will be provided in conditions of effective equality" to prevent discrimination for territorial, social, or other reasons. To achieve this aim, a common portfolio of specialised care services was developed for the entire country (Royal Decree 1030/2006). This portfolio includes the use of epidural analgesia according to health service protocols for so-called "normal" pregnancies.

To promote the widespread use of epidural analgesia in Spain, the health agencies of the autonomous communities regulated the use of this method in the 1990s. In this regard, Andalusia has been a pioneering region (Decree 101/1995). However, in spite of these legislative regulations, the use of epidurals was not implemented in an equal manner or at the same rate in all the hospitals of Andalusia, prompting complaints from users. Indeed, citizens claimed their right to health protection, which not only encompasses health care in the event of a disease or illness, but also care to alleviate pain as in the case of labour and delivery; a view that is in line with the broad concept of health defined by the WHO (WHO, 1988).

3.2 The case of Andalusia

Today, all women in Andalusia have the right to request epidural analgesia during labour in the public hospitals of the region, irrespective of their size, type, or location.

The fact that epidural analgesia is now a reality is reflected in both the services portfolio of Andalusian hospitals and data gathered through annual surveys of user satisfaction with hospital care in Andalusia conducted by the Institute for Advanced Social Studies/Spanish National Research Council (IESA-CSIC).

As regards the services portfolio², Table 1 shows an increase in the total percentage of assisted births with epidural analgesia. The first year for which data are available is 2003, when epidural analgesia was used in one of every four deliveries at a public hospital in Andalusia. In 2009, this proportion rose to more than 1 in 2 deliveries.

Year	Mean in Andalusia
2003	25.4
2004	38.9
2005	47.1
2006	52.7
2007	53.1
2008	54.5
2009	56.3

Table 1. Percentage of assisted vaginal deliveries with epidural analgesia of all births in Andalusian hospitals

Data from surveys give very similar results, showing again that the use of epidural analgesia during labour is widespread among women giving birth in Andalusia. According to the responses given by the women themselves, the percentage of all births with epidural analgesia increased from 26% in 2000 to 64% in 2010. One reason for this widespread use is no doubt due to the fact that epidural analgesia is offered universally at all Andalusian hospitals. Women who underwent assisted deliveries in 2000 (14%) indicated that epidural analgesia was not available in the hospital where they gave birth; a percentage that decreased by around 6% mainly after 2004, and has maintained a downward trend to the present. In 2010, only 1.4% of women indicated that they were not allowed to use epidural analgesia because it was not available at the hospital where they gave birth (see Table 2).

In the first years that the study was conducted, important differences were found regarding the type of hospital. In general terms type A hospitals (regional hospitals) showed lower percentages of users who were not allowed to use epidural analgesia in the early years, while this occurred in type B hospitals (specialty) at first, and in type C and D hospitals (county I and county II hospitals) in following years. Since 2006, the gap between hospitals has narrowed, with all hospitals showing very low values that have practically equalled out.

² According to data on the percentage of assisted vaginal deliveries with epidural analgesia of all assisted deliveries by hospital based on hospital databases. The data were provided by the Andalusian Health Service and are available at: www.juntadeandalucia.es/servicioandaluzdesalud.

Year	Type A	Type B	Type C	Type D	Total
2000	9.1	18.7	14.9	13.7	13.5
2001	1.1	1.6	3.1	2.4	2.0
2002	8.0	6.2	13.4	9.2	9.1
2003	10.6	7.5	16.0	9.4	10.5
2004	3.7	3.4	11.1	6.1	5.9
2005	5.4	1.6	9.1	3.6	4.6
2006	2.7	1.8	5.2	2.8	3.1
2007	2.1	2.5	4.5	2.6	2.8
2008	3.3	1.2	3.2	2.6	2.6
2009	0.8	1.2	4.4	0.7	1.6
2010	1.7	0.4	2.5	1.3	1.4

Table 2. Response rate per year for the response category “*Did not use epidural analgesia because it was not allowed or it was not available at the hospital*”

4. Demand for epidural analgesia

But the use of epidural analgesia not only depends on the supply, that is, the fact that it is available and offered at hospitals. It also depends on women’s own choice, who once informed can freely decide whether or not to make use of this pain relief method.

4.1 Characteristics of demand for obstetric epidural analgesia

Let us now analyse the characteristics of women requesting epidural analgesia during labour in Andalusian hospitals. If using or not using this type of anaesthesia during labour is distributed randomly, we could only examine whether use has increased or decreased. However, as shown in an earlier study by our research group (Biedma -Velázquez et al., 2010), women who reject the use of epidurals have clearly defined characteristics, as we will discuss in the following pages.

The IESA-CSIC, in collaboration with the Andalusian Health Service (SAS), systematically conducts a survey of users of Andalusian hospitals to analyse their satisfaction with the services delivered. These surveys include a section dedicated to delivery care practices in which respondents are asked if they were administered an epidural. If they answer no, they must indicate the reason (e.g. did not consider it opportune, could not do so due to the characteristics of the birth that impeded using the epidural such as a cesarean section, the birth occurred very quickly and there was not enough time to administer it, complications, the service was not provided in the hospital, and others).

The percentage of women who choose epidural analgesia during labour is on the rise in Andalusia. This is due firstly to the increasing provision of this method at hospitals belonging to the Andalusian Public Health System (SSPA), and secondly to the increasing number of women who decide to use this method (see Table 3). Similarly, the percentage of women who state that they were unaware that they could request epidural analgesia during childbirth has also decreased.

Year	Yes	No, because I didn't consider it to be opportune	No, because I didn't know that I could request it	No, because it was not allowed/wasn't available at the hospital	No because I had a cesarean section/general anesthesia	No, because there was no time, it was very quick
2000	26.2	37.6	5.6	13.5	8.0	-
2001	36.7	52.4	6.6	2.0	0.0	-
2002	36.1	41.3	3.5	9.1	7.6	1.8
2003	45.0	35.6	1.9	10.5	6.9	0.0
2004	53.6	19.9	1.2	5.9	5.4	14.0
2005	58.4	17.9	0.9	4.6	4.6	13.7
2006	64.2	13.7	0.7	3.1	3.6	14.7
2007	60.8	16.2	0.7	2.8	4.6	14.8
2008	61.5	16.1	1.1	2.6	3.8	14.8
2009	66.4	12.8	0.4	1.6	5.1	13.7
2010	64.3	12.4	0.3	1.4	7.6	14.1

Table 3. Percentage of responses to the question “Did you have epidural analgesia?” by year

As shown in the table, the percentage of women who receive epidural analgesia during childbirth in Andalusian hospitals has increased by 250% since 2000, while the number of women who expressly reject this method of pain relief has dropped by an even higher percentage (3 times). In 2010 only 12% of the women surveyed rejected epidural analgesia as they did not consider it to be necessary or opportune.

However, although the number of women who decide not to use this type of anesthesia in a voluntary and conscious manner has decreased, they still account for a relatively significant portion of all women who give birth, particularly in a social context in which suffering pain is viewed as being pointless. Our objective is therefore to analyse whether these women have certain characteristics or whether the rejection of epidurals by mothers giving birth in public hospitals of Andalusia is randomly distributed.

To facilitate the analysis, and because certain answers do not depend on the express wishes of the expectant mother but on external circumstances (i.e. unavailability of epidural analgesia in the hospital or complications at birth), we consider only two possible answers: “Yes” and “No, because I did not consider it opportune” (see Figure 1). Not being aware of epidural analgesia was not taken into account either as only 0.3% of respondents gave this answer in 2010.

As shown in Figure 1, in 2000 a larger number of women rejected epidural analgesia than those who used it during childbirth, with a 17.8 point difference between rejection and use. The year 2002 marked a turning point in the use of epidurals as these two values showed similar percentages (53.4 and 46.6), with only a 6.7 point difference in favour of not using this pain relief method. This is the smallest difference observed across the time series between the two alternatives. From that year onwards, the difference continued to increase in a gradual but steady manner through 2010 when a difference of more than 67 points was observed between rejection and use (16.2 and 83.8).

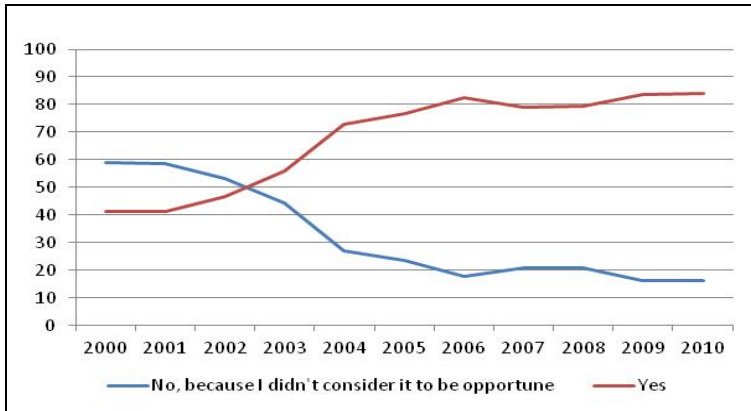


Fig. 1. Percentage of response to the question "Were you given an epidural during labour?" with only two response categories. Total years (2000-2010)

To analyse the characteristics of women who refuse epidural analgesia as opposed to those who choose to use it, we performed a cluster analysis in two phases using the SPSS 12.0 statistical package and subsequent versions. This method allows categorical and numeric variables to be entered jointly in order to group respondents according to common characteristics in different variables. After grouping the respondents, Pearson chi-square tests were performed to establish differences in the proportions between the clusters in the variables that formed them.

The results gave rise to three clusters. Specifically, women who gave birth in a hospital of Andalusia from 2000 to 2010 can be divided into 3 groups according to their sociodemographic characteristics (educational attainment, employment status and income) and use or not use of epidural analgesia. A total of 12,501 women were classified following this procedure. As shown in Figure 2, the 3 groups are comprised of different numbers of women.

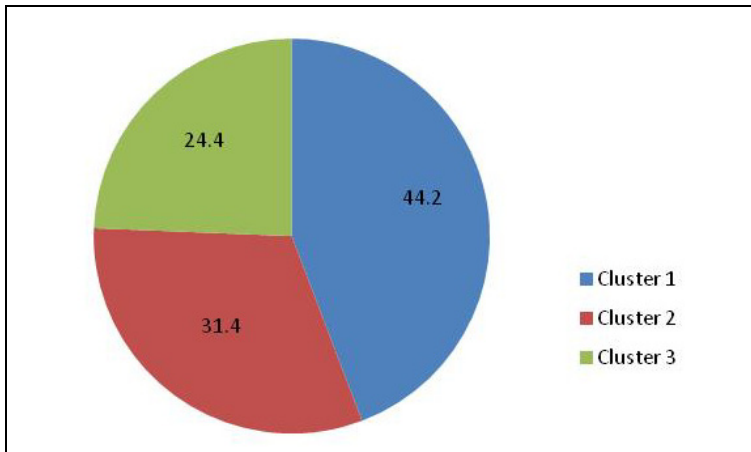


Fig. 2. Percentage of women in each cluster

We obtained three homogeneous groups taking into account the use of epidural analgesia during childbirth and the main sociodemographic characteristics of each such as educational attainment, income level and employment status.

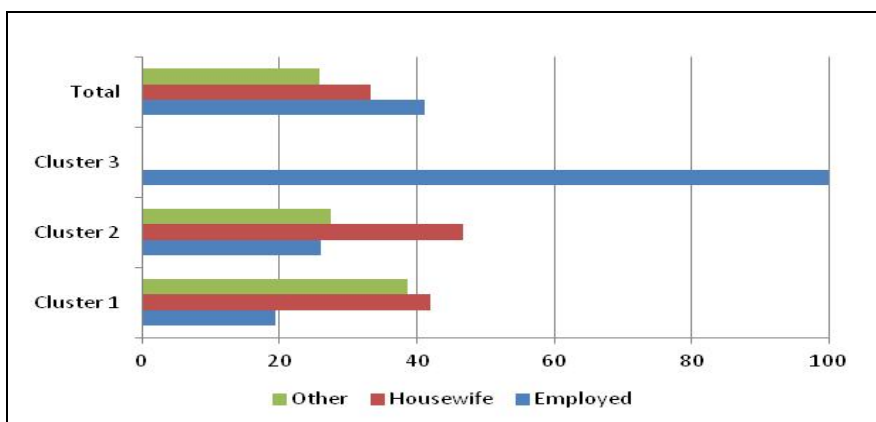
Briefly, cluster 1 consists of women who behave close to the average values regarding their choice of epidural analgesia. These are women of all educational levels, employment status and income. As shown in Figure 3, cluster 1 contains women with differing levels of education, including a few with informal education. Regarding employment status, this group has the lowest number of employed women, with the majority belonging to another employment status (unemployed, students, etc.) or those who define themselves as housewives. Finally, family income (total income contributed by different members of the family) generally shows a similar distribution to that of the overall population. Cluster 1 is the largest group and comprises 44% of the women studied.

Cluster 2 is positioned well below the average with regard to the use of epidural analgesia during labour. The women in this cluster are mostly housewives, although there are some who work or have a different employment status. None of the women have a higher than primary school education. This is undoubtedly its main characteristic. In terms of the economic status of the family, cluster 2 mainly includes women from low-income families.

Finally, cluster 3 shows a higher than average use of epidural analgesia. It is interesting to note that all the women in this group work outside the home, have a secondary or university education and a higher family income than the women in the other two groups.

As can be observed, there are fundamental differences between clusters 2 and 3 in terms of both the use of epidural analgesia and the sociodemographic characteristics that define them.

The following graphs (see Figure 3) show the composition of each cluster according to their sociodemographic characteristics.



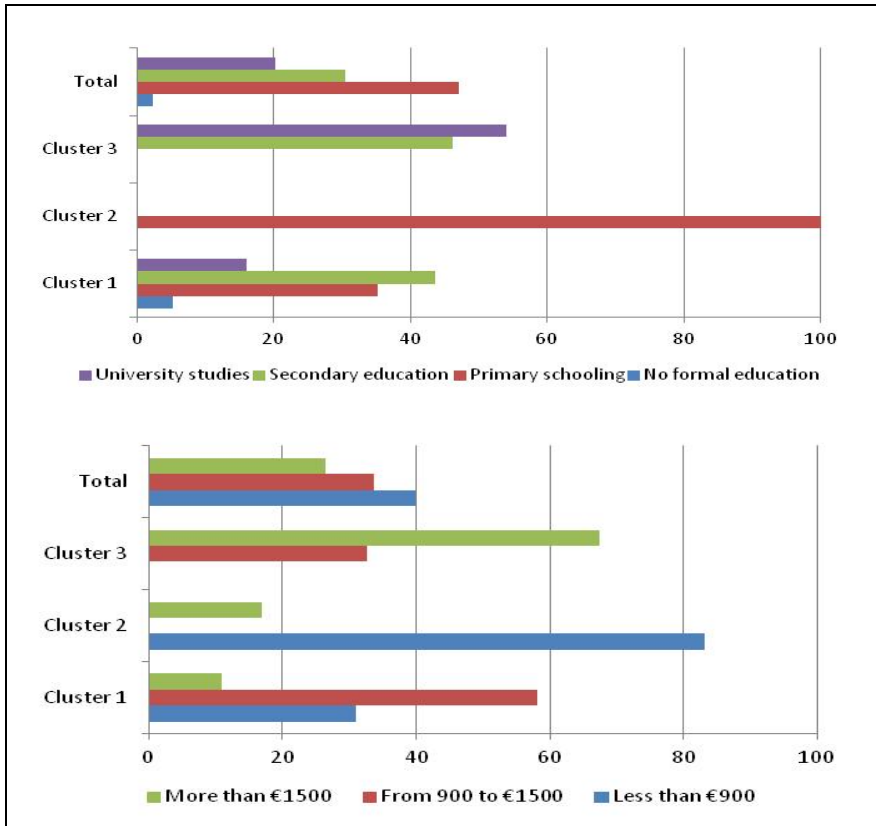


Fig. 3. Composition of the clusters according to employment status, educational level, and family income

Table 4 shows the differences between the three clusters regarding the use of epidural analgesia. Specifically, 39.1% of the women in cluster 2 indicated they did not use epidural analgesia during labour because they did not consider it opportune, while this percentage drops to 21.8% for cluster 3; a difference of more than 17 points. On the other hand, cluster 1 obtained a percentage that is close to the average for the rejection of epidural analgesia (32.1%).

Epidural Analgesia		Cluster 1	Cluster 2	Cluster 3	Total
	No, because I didn't consider it to be opportune		32.1%	39.1%	21.8%
Yes		67.9%	60.9%	78.2%	68.2%
Total		100%	100%	100%	100%
Sig 0.000					

Table 4. Percentage of response to the question "Did you have epidural analgesia?" in each cluster

In light of the data, it is interesting to note that the rate of voluntary refusal to have epidural analgesia during labour, and hence the acceptance of going through a painful experience when an alternative is available, differs among Andalusian women and is closely related to characteristics such as employment status, educational level and family income.

As shown in Table 3, the percentage of use of epidural analgesia during labour has increased significantly in Andalusia in recent years. However, there remains a group of women who explicitly reject the use of this method of pain relief, although they are clearly declining.

In short, the characteristics of women who refuse epidural analgesia in Andalusia differ from the characteristics of those who decide to use it (Biedma-Velázquez et al., 2010). This is highly relevant as it indicates that the social and cultural characteristics of women influence their decision to bear the pain of childbirth or not. The three groups have been defined according to income level, educational level and occupation and show different rates in terms of the use of epidural analgesia during childbirth in Andalusia. Family income was found to have a direct relationship to the use of epidurals; specifically women from higher income families are more likely to use this method of pain relief during childbirth. The same relationship was found for educational level, thus confirming that the lower the educational level, the higher the rejection of epidural analgesia and vice versa. Moreover, with regard to occupation, housewives are most likely to reject this pain relief method during childbirth, with clear differences observed between housewives and employed women and, to a lesser extent, between housewives and unemployed women or students.

When analysing educational level and occupation jointly (Figure 4), we see that the use of epidural analgesia increases among women with a higher educational level (values from 1 “not use” to 2 “use”). However, when analysing women according to their educational level, the lowest epidural usage rates occur among housewives for all the groups. Thus, although women with a university education use anesthesia during childbirth (always at a higher rate than women with no schooling), women with a university degree who most reject this pain relief method are housewives. Hence, being a housewife influences rejection of epidural analgesia, regardless of the mother’s educational level.

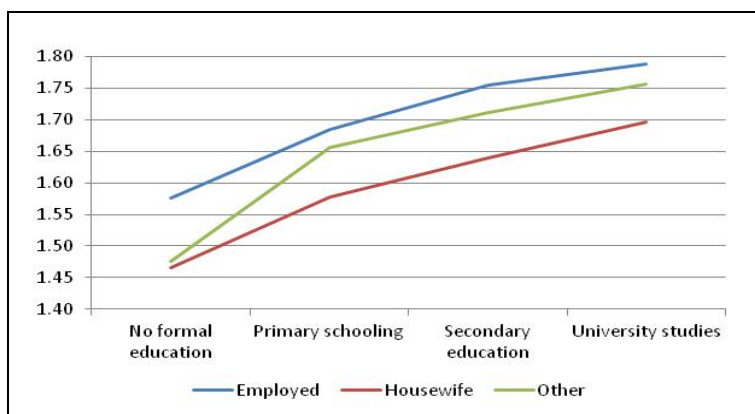


Fig. 4. Relationship between educational level and occupation in use of epidural analgesia during childbirth

The same is true when analysing family income and women's occupation. As can be seen in Figure 5, women with higher incomes show higher epidural usage rates, but being a housewife (regardless of economic status) has a negative impact on the use of this anaesthetic method, with significantly lower levels of use in all response categories.

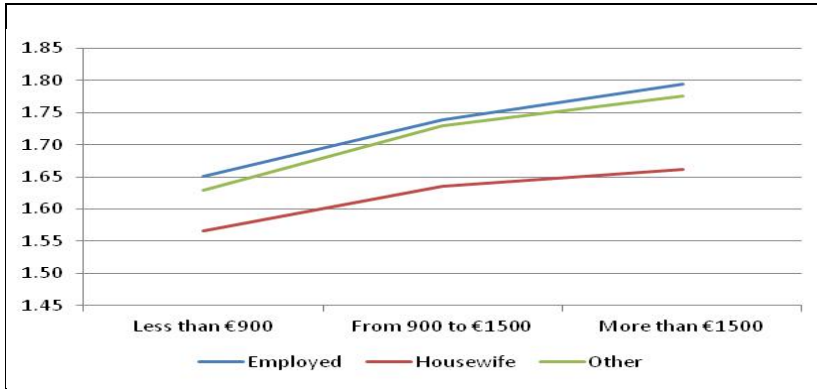


Fig. 5. Relationship between educational level and occupation in use of epidural analgesia during childbirth

In short, after performing a cluster analysis to determine the characteristics of women in the different groups that were formed according to sociodemographic variables and the variable “use or not use” anesthesia, we observe that the highest rejection rate occurs among women with low family incomes and a lower educational level; and as variables that impact on the rest, women who are housewives. As discussed in previous studies (Biedma-Velázquez et al., 2010), these characteristics define what we call “women folk” (Martín Criado, 2007a, 2007b). These women could be defined as being opposed to the new “modern” or “postmodern” lifestyles observed among women in Western societies. These women folk, although not in an excluding manner, could be defined by three areas of exclusion: labour, educational and economic. Hence their social integration implicitly involves assuming the role of social reproduction; a “traditional” lifestyle or role (Moreno, 2005) based on a socially acceptable discourse that advocates sacrifice and seeking the good of others before their own.

4.2 The “new culture” of natural childbirth

Despite the widespread use of epidural analgesia during childbirth, in recent years voices have been raised against administering this method of pain relief as well as the use of oxytocin. Some health professionals disagree about the benefits of this practice, warning of the risks of epidurals to both the mother and the foetus.

In addition, there is now a trend that could be called “post-modern”, which extols the virtues of alternative birthing methods with minimal medical and biochemical intervention. The characteristics of the mothers who have taken up this trend differ greatly from those of “traditional” mothers in that women who choose alternative methods usually belong to a high socio-educational class and reject the use of epidurals for very different reasons based on highly elaborated biomedical arguments.

Today this new trend is known as “natural childbirth”, although its meaning has yet to be conceptualised. Natural childbirth is grounded in the notion of an “ideal” delivery without monitoring or other instruments and with minimum medical and pharmacological intervention. However, the bases or method of this approach to childbirth have not been clearly established. Natural childbirth has emerged more as a movement against the medicalised model common in developed countries rather than as a specific practice on the grounds that practices removed from the “natural” are “unnatural”. This practice, which is also known as “natural, non-medicalised childbirth”, takes place under supervision and with minimal obstetric intervention only when strictly necessary to solve a problem. This method is in line with some of the recommendations made by the WHO in 1996 (Chalmers et al., 2001).

This movement emerged in England, the Netherlands and the Scandinavian countries driven by women’s movements in the 1980s that put pressure on public institutions to allow women who felt that they had become a passive participant to take the reins of the birthing process.

The followers of this movement opt for home births attended by health professionals and with the necessary precautions in the event that they have to be transferred to a hospital. Some popular personalities who chose this method, such as Princess Marie Louise of Norway, were considered an example to follow. However, one should question if this system is actually viable if generalised, or whether these are practices that only a very small portion of the population with sufficient financial resources can afford and manage privately, at least in many countries. However, in countries like the Netherlands, where the cost of home births is covered by the public health system, over 30% of women give birth at home.

Furthermore, health professionals have yet to reach a consensus on the benefits of giving birth at home given that complications, which may initially appear to be minor, can lead to serious consequences if not handled quickly enough. Some maintain that it would be more feasible to try to recreate the home environment in the hospital.

Perhaps it would be wiser to advocate not using unnecessary medical interventions, rather than rejecting any type of medical intervention at all. In a like manner, the psychological and social as well as biological and physical aspects present during childbirth should be taken into account in order to attend to women in an integrated manner and ensure that labour and delivery are tailored to and meet the needs and preferences of women and their families. Indeed, this is the path that has already been taken by some health institutions (i.e. La Inmaculada Hospital in Almeria, Spain), which attempt to reduce the medicalisation of childbirth to a minimum, while monitoring the birth and permitting the mother and family to play a major role in the process.

5. Conclusion

As we have explained throughout this chapter, pain must be understood as a socially constructed concept involving psychological, educational, cultural, and sociological factors, which must be examined from the standpoint of subjective perceptions and context. Context influences the perception of pain, and how individuals address their suffering or the decision not to suffer. This issue was explored in section 4.1 of this chapter, where we

discussed the socioeconomic factors that define Andalusian mothers who choose not to use epidural analgesia during childbirth.

Andalusian hospitals are making an effort to include epidural analgesia during labour in their clinical protocols by offering this method of pain relief where possible and when there is no risk to the baby or mother. In attempting to offer epidurals in a universal manner to all women who give birth, we must not overlook the fact that a portion of the demand side (in this case expectant mothers) hold a biased opinion about this method. This is a self-imposed bias, chosen in some way, but by no means lacking in social and political motives replete with elements of social inequality. Such biases respond to social and cultural stereotypes in which being a low-income woman with low educational level and a housewife are decisive factors in deciding to reject this healthcare service.

While other studies have reported similar differences with regard to the use of epidural analgesia discussed in this chapter (Fernández-Guisasola et al., 2004), they place greater emphasis on obstetric and biological variables, ignoring social and cultural aspects of the phenomenon. Without denying the effect and influence of the biological, psychological and obstetric (which were not analysed here due to the nature of our research) characteristics of the women studied, our work advocates the need to analyse this phenomenon from a social perspective. In line with Martín Criado (2007a, 2007b, 2004), we believe that women who reject the use of epidurals base their decision on values and beliefs supported in the traditional image of what it means to be a “good mother”; women who create their identity from the image that others have of them. It is an image that is characterised in part by women’s complete devotion and capacity to sacrifice themselves for the good of others (in this case the baby before the mother) in the hope of earning social recognition in compensation for the sacrifices made (Tobias, 2002), or as a rite of passage and self-affirmation of a lived experience (Morris, 1991). In this sense, suffering becomes an exchange value (Matta, 2010) in which the baby in particular and the family in general acquire a “social debt” with the mother for her pain, based on the moral value that suffering should be rewarded.

A well-informed woman is fully aware of her right to refuse epidural analgesia during childbirth and demand that her decision be respected. Nonetheless, such rejection becomes a concern when it is the consequence of the social and gender inequality suffered by women who are not integrated in the labour market, have a low family income in which they do not participate directly, and have no formal education. Le Breton foresaw this trend when observing that the middle and upper classes reject pain as an enemy, while the lower, disadvantaged classes have a more submissive and resigned attitude towards pain and suffering (Le Breton, 1999). In a society like today’s where, in general, avoidance of pain is highly valued over gratuitous or avoidable suffering, it is paradoxical and therefore worthy of explanation that a particular group of women choose to suffer when such suffering can be avoided (Illich, 1975; Levinas, 1993). Indeed, this could be another indicator of firmly-rooted gender behaviours and values that are characteristic of unequal patriarchal societies (Biedma-Velázquez et al., 2010).

In her anthropological studies, Margaret Mead (2001a, 2001b) discussed the effect of culture on pain during labour. She determined that if the expectant mother’s culture views childbirth as a painful process, then most women in that society will have a painful childbirth. However, if giving birth is perceived of as a painless process, the experience is

more likely to be painless (Macfarlane, 1977). In this case, education and culture are the main variables that condition the pain of childbirth. While pain cannot be perceived of as solely a cultural phenomenon, neither can pregnancy and childbirth be considered merely a biological event as they involve social and emotional aspects that influence the experience and the entire process; a process in which the mother cannot be relegated to a simply passive role (Castro & Bronfman, 1993).

Pain does not involve only the patient, or the expectant mother in this case, but their families and relations (Barragan-Solis, 2006; Kleinman, 1994), as well as the professionals that assist the patient and who give sense and meaning to the pain of others through compassion, acknowledgement and admiration; sentiments that the sufferer perceives and analyses as part of the meaning of such suffering, and which finally legitimises it or not, gives it meaning or not, and therefore makes it seem “useful” or not.

Today’s hegemonic biomedical model offers multiple techniques, therapies and drugs to relieve pain, although not always with the desired results. However, relatively few works have examined the subjectivity let alone the “sociability” of pain. While it is accepted that pain may have a physical, emotional and psychological origin, regardless of its underlying causes, how pain is manifested will depend on the culture and society in which the individual has learned to perceive and interpret his or her pain. Despite this, little research has been conducted on the social context of those who suffer pain or the variables that may affect the interpretation, perception or even the intensity of pain. This lack of attention to the social responses of pain is undoubtedly due in part to the difficulties medical research encounters in analysing and empirically and “scientifically” testing such phenomena (Morris, 1991). It is difficult to analyse the social factors that influence the perception of pain; perceptions that vary from one society to another and from one moment in time to another because society is constantly changing. However, without such analyses our knowledge of pain will be incomplete when interpreting its meaning.

6. Acknowledgments

The authors would like to thank the Andalusian Health Service/Ministry of Health-Regional Government of Andalusia for their dedication and collaboration in the research project that has served as basis for this and many other works arising from the research group. We also acknowledge the valuable contributions, suggestions and support from our colleagues at the IESA-CSIC, especially Julia Ranchal and Sergio Galiano. In spite of these contributions, the authors assume full responsibility for the contents of this chapter. We do not want to finish without mentioning all the women who have selflessly contributed to this study through their responses. Without them this work would have been impossible.

7. Legislation

Decree 101/1995 of 18 April to determine the rights of parents and children during the birth process. BOJA 72 (17/05/1995).

Law 14/1986 of 25 April; General Law on Healthcare.

Law 41/2002 of 14 November regulating patient's autonomy and rights and obligations regarding information and clinical documentation. BOE 274 (15 November 2002).

Royal Decree 1030/2006 of 15 September establishing the common service portfolio of the National Health System and the procedure for updating the portfolio.

8. References

- Barragán-Solís, A. (2006). El dolor crónico: una visión antropológica de acuerdo a familiares y pacientes [Chronic Pain: An Anthropologic View According to Relatives and Patients]. *Medicina Familiar*, Vol.8, No.2, pp.109-117, ISSN 1405-9657
- Baszanger, I. (1992). Deciphering chronic pain. *Sociology of Health & Illness*, Vol.14, N°.2, pp.181-215, ISSN 0141-9889
- Bayes, R. (1998). Psicología del sufrimiento y de la muerte. [Psychology of suffering and death]. *Anuario de Psicología*, Vol.29, No.4, pp.5-17, ISSN 00665126
- Biedma-Velázquez, L.; García-de-Diego, JM. & Serrano-del-Rosal, R. (2010). Análisis de la no elección de la analgesia epidural durante el trabajo de parto en las mujeres andaluzas: “la buena sufridora”. *Rev Soc Esp Dolor*, Vol.17, No.1, pp.3-15, ISSN 1134-8046
- Bonica, JJ. (1990). *History of pain concepts and therapies. The management of pain*. 2nd edn. Lea & Febiger, Vol.1, ISBN 0812111222, Philadelphia
- Breivik, H.; Collett, B.; Ventafridda, V.; Cohen, R. & Gallacher, D. (2006). Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. *European Journal of Pain*, Vol.10, pp.287-333, ISSN 1090-3801
- Calderón, E.; Martínez, E.; Román, MD; Pernia, A.; García-Hernández, R. & Torres, L (2006). Remifentanyl intravenoso mediante infusor elastomérico frente a meperidina intramucular. Estudio comparado en analgesia obstétrica. *Rev Soc Esp Dolor*, Vol.13, N°7, pp.462-467, ISSN 1134-8046
- Campuzano, C. (2007) Guidelines for obstetric epidural analgesia within a framework of innovative management and quality and safety criteria [Protocolo de analgesia epidural obstétrica en el contexto de la gestión innovadora de la asistencia y de los criterios de calidad y seguridad] *Rev Soc Esp Dolor*, Vol.14, No.2, pp.117-124, ISSN 1134-8046
- Chalmers, B.; Mangiaterra, V. & Porter, R. (2001). WHO principles of perinatal care: the essential antenatal, perinatal, and postpartum care course. *Birth*, Vol.28, N°.3, pp.202-207, ISSN 1523-536x
- Castro, R. & Bronsman, M. (1993). Teoría feminista y sociología médica: bases para una discusión. *Cad Saúde Publ Rio de Janeiro*, Vol.9, N°3, pp.375-394, ISSN 0102-311X
- Cockerham, WC. (2002). *Sociología de la Medicina*. Pearson Education, ISBN 84-205-3084-0, Madrid
- De la Torre, MR. & Pérez-Iraola, MP. (2002). Analgesia epidural del parto: ropivacaína vs bupivacaína. *Rev Soc Esp Dolor*, Vol.9, pp.441-446, ISSN 1134-8046
- Fernández, MA.; Ros, J. & Villalonga, A. (2000). Fallos en la analgesia epidural obstétrica y sus causas. *Rev. Esp. Anestesiología y Reanimación*, Vol.47, pp.256-265, ISSN 0210-3591
- Fernández-Guisasola, J. (2003). *Analgesia epidural obstétrica: organización y aspectos clínicos en un hospital general*. Unv. Compl Madrid, ISBN 84-669-2118-4, Madrid.
- Fernández-Guisasola, J.; Rodríguez, G.; Serrano, ML.; Delgado, T.; García, S. & Gómez-Arnau, JI. (2004). Analgesia epidural obstétrica: relación con diversas variables obstétricas y con la evolución del parto. *Rev. Esp. Anestesiología y Reanimación*, Vol.51, pp.121-127, ISSN 0210-3591

- Franco, A. (1999). El dolor en la historia. *Rev Soc Esp Dolor*, Vol.6, pp.261-262, ISSN 1134-8046
- Greenspan, JD.; Craft, RM.; LeResche, L.; Arendt-Nielsen, L.; Berkley, K.; Fillingim, RB.; Gold, MS.; Holdcroft, A.; Lautenbacher, S.; Mayer, A.; Mogil, J.; Murphy, AZ. & Traub, RJ. (2007). Studying sex and gender differences in pain and analgesia: A consensus report. *Pain*, Vol.132, Suppl.1, pp.26-45, ISSN 0304-3959
- Guevara-López, U.; Córdova-Domínguez, JA.; Tamayo-Valenzuela, A.; Ramos, E. & Martínez-Espinoza, H. (2004). Desarrollo de los parámetros de práctica para el manejo del dolor agudo. *Revista Mexicana de Anestesiología*, Vol.24, No.4, pp.200-204, ISSN 0185-1012
- Hanna, M.; Tuca, A. & Thipphawong, J. (2009). An open-label, 1-year extension study of the long-term safety and efficacy of one-daily OROS hydromorphone in patients with chronic cancer pain. *BMC Palliative Care*, Vol.8, No.14, pp.1-13, ISSN 1472-684X
- Herrera, C. & Durán, MA. (1995). Las demandas de trabajo no monetizado (DETRANME) de los ancianos. *Política y Sociedad*, Vol.19, pp.117-138, ISSN 1130-8001
- Illich, I. (1975). *Némesis medica: la expropiación de la salud*. Barral editores, ISBN 84-7658, Barcelona
- International Association for the Study of Pain [IASP] (1979). Pain terms: a list with definitions and notes on usage. *Pain*, Vol.6, pp.249-252, ISSN 0304-3959
- Kirmayer, LJ. (2008). Culture and the metaphoric mediation of pain. *Transcult Psychiatry*, Vol.45, N°2, pp.318-338, ISSN 1363-4615
- Kleinman, A. (1994). *Pain and Resistance: The Delegitimation and Relegitimation of Local Worlds..* In Delvecchio, MJ.; Brodwin, PE.; Good, BJ. & Kleinman, A. *Pain as Human Experience. An Anthropological Perspective*. Chp.6, pp.169-197, University of California Press, ISBN 0-520-07512-9, Berkeley
- Krivoy, S.; Tabasca, M.; Adelaide, W. & Díaz, M. (2010). *El dolor en la historia*. En Soulie, A. & Briceño-Iragorry, L. (ed.). Colección Razetti. Vol.X. Cap.6, Editorial Ateproca, pp.163-224, ISBN 978-980-6905-71-9, Caracas
- Le Breton, D. (1999). *Antropología del dolor*. Ed. Seix Barral, ISBN 84-322-0833-7, Barcelona
- Le Bretón, D. (2010). Pain and the care relationship. *Soins*, Vol.749, pp.34-5, ISSN 0253-0465
- Leriche, R. (1937). *Cirugía del dolor*. Ed. Morata, ISBN 84-458-0374-3, Barcelona
- Levinas, E. (1993). El sufrimiento inútil. En Levinas, E. *Entre nosotros. Ensayos para pensar en otro*. Pre-textos. ISBN 978-84-7213-138-5, Valencia
- Loeser, JD. & Melzack, R. (1999). Pain: an overview. *Lancet*, Vol.353, N°9164, pp.1607-1609, ISSN 0140-6736
- Macfarlane, A. (1977). *The psychology of childbirth*. Harvard University Press, ISBN 0-674-72106-3, USA
- Martín-Criado, E. (2004). El valor de la buena madre. Oficio de ama de casa, alimentación y salud entre las mujeres de clases populares. *RES*, Vol.4, pp.93-118, ISSN 1578-2824
- Martín-Criado, E. (2007a). El conocimiento nutricional apenas altera las prácticas de alimentación: el caso de las madres de clases populares en Andalucía. *Revista Española de Salud Pública*, Vol.81, pp.519-528, ISSN 2173-9110
- Martín-Criado, E. (2007b). La dieta desesperada. Algunas consideraciones sociales que obstaculizan el control del peso entre madres de clases populares. *Trastornos de la Conducta Alimentaria*, Vol.6, pp.578-599, ISSN 1699-7611

- Martins, RJ.; García, AR.; Garbin, CA. & Sundeled, ML. (2008). The relation between socio-economic class and demographic factors in the occurrence of temporomandibular joint dysfunction. *Cien Saude Colet*, Vol.13, N°2, pp.2089-2096, ISSN 1413-8123
- Matta, J. (2010). Cuerpo, sufrimiento y cultura; un análisis del concepto de „tecnicas corporales“ para el estudio del intercambio lástima-limosna como hecho social total. *Cuerpos, Emociones y Sociedad*, Vol.2, pp.27-36, ISSN 1852-8759
- Mead, M. (2001a). *Sex and temperament in three primitive societies*. Perennial and Imprint of HarperCollins, ISBN 0-6093495-6, New York.
- Mead, M. (2001b). *Coming of Age in Samoa: a psychological study of primitive youth of western civilisation*. Perennial Classic, ISBN 0-688-05033-6, New York.
- Mogil, J. (2004). *The Genetics of Pain*. IASP Press, ISBN 978-0-931092-51-0, Montreal
- Moreno, A. (2005). Empleo de la mujer y familia en los regímenes de bienestar del sur de Europa en perspectiva comparada. Permanencia del modelo de varón sustentador. *RES*, Vol. 112, pp.131-163, ISSN 1578-2824
- Morris, DB. (1991). *The culture of pain*. University of California Press, ISBN 0-520-08276-1 Berkeley, Los Angeles-Oxford
- Moscoso, J. (2002). *Dolor privado, sensibilidad pública*. En Barona JL, Mocosco J, Pimentel J. *La ilustración de las ciencias. Para una historia de la objetividad..* Biblioteca Valenciana, Cap. 6, pp.137-151, ISBN 84-370-5503-2, Valencia
- Pagés, F. (1921). Anestesia metamérica. *Rev Esp Cir*, Vol.3, pp.121-148, ISSN 0009-739X
- Pérez, J.; Abejón, D. & Ortiz, JR. (2005). El dolor y su tratamiento a través de la historia. *Rev Soc Esp Dolor*, Vol.12, pp.373-384, ISSN1134-8046
- Pérez-Cajaraville, J.; Abejón, D.; Ortiz, JR. & Pérez, JR. (2005). El dolor y su tratamiento a través de la historia. *Rev Soc Esp Dolor*, Vol.12, pp.373-384, ISSN 1134-8046
- Rohfs, I.; Borrel, C.; Anitua, C.; Artazcaz, L.; Colomer, C. & Escribá, V. (2000) La importancia de la perspectiva de género en las encuestas de salud. *Gac. Sanit.* Vol. 14, N°2, pp.146-155, ISSN 0213-9111
- Starfield, B. (2002). Equity and health: a perspective on nonrandom distribution of health in the population. *Pan. Am. J. Public. Health*, Vol.12, N°6, pp.384-387, ISSN 1020-4989
- Suvienien, TI.; Reade, P.; Kemppainen, P.; Könönen, M. & Dworkin, SF. (2005). Review of aetiological concepts of temporomandibular pain disorders: towards a biopsychosocial model for integration of physical disorder factors with psychological and psychosocial illness impact factors. *Eur J Pain*. Vol.9, N°6, pp.613-633, ISSN 1090-3801
- Tobío, C. (2002). Conciliación o contradicción: como hacen las madres trabajadoras. *RES*, Vol.97, pp.155-186, ISSN 1578-2824
- Torres, A. (1999). Más sobre la anestesia epidural obstétrica. *Rev Soc Esp Dolor*, Vol.6, pp.403-405, ISSN 1134-8046
- World Health Organization [WHO] (1952). *Constitution of the World Health Organization*. Handbook of basic documents (5ª ed.). pp. 3-20, Ginebra, Palais des Nations
- World Health Organization [WHO] (1988). *Distritct health system in action. 10 years after Alma-Alta experiences and future directions*, Neubrandenburg