Community-based antenatal care: a comparative study between Chester-le-street (England) and Pamplona (Spain)

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COMMUNITY-BASED ANTENATAL CARE

A COMPARATIVE STUDY BETWEEN CHESTER-LE-STREET (ENGLAND) AND PAMPLONA (SPAIN)

MSc THESIS

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ABSTRACT

Objectives. This study was part of a comparative research between Pamplona (Spain) and Chester-le-Street (England). It aimed to compare protocols and practices of community-based antenatal care and to measure the knowledge acquired and the level of satisfaction of women with the antenatal education received.

Design. A cross-sectional survey study. A combination of qualitative and quantitative methods was used. Data were collected by face-to-face questionnaires and non-participant observations.

Participants. The final sample was 114 women, including 55 in Chester-le-Street and 59 in Pamplona. The study was performed in one health centre in Pamplona, and four in Chester-le-Street.

Results. Topics about health education were grouped into categories. The percentage of women who reported receiving information on health education topics was, in all cases, higher than the percentages of those who reported receiving advise from their midwife on the same topics. The χ^2 test was applied to the results and statistically significant differences were discovered between the two settings. The percentage of smokers in Pamplona was significantly higher than in Chester-le-Street. 30.5% of women in Pamplona smoked compared to 9.1% in Chester-le-Street. The percentages of alcohol consumption during pregnancy were 6.8% in Pamplona and 23.6% in Chester-le-Street. In general terms, 70.9% and 57.6% of the women from Chester-le-Street and Pamplona respectively were very satisfied with the information and time given to each of them by their midwife. The differences found in the non-participant observations were the length of the appointments, weight gain measurements and diet advice.

Conclusions. The analysis of the results show, that the over-all community antenatal care system in Pamplona is comparatively more advanced. However, some of the elements of antenatal care in Chester-le-Street were of the highest quality, and should be introduced in Pamplona, i.e. an organised team of community midwifes and a home-arranged birth plan.

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CHAPTER 1

INTRODUCTION

1.1 Pregnancy and antenatal care

> "The expectations of pregnant women today probably differ very little from those of their mothers. Above all, they look forward to a problem-free birth of a healthy baby. The importance of antenatal care in achieving this is well understood, although there has been much discussion as to the best use of resources...The new emphasis on consumer satisfaction within the NHS has directed the efforts of professionals into providing a more "user-friendly" service. It is to be hoped that midwives can fill this role. They are not trained simply to book and birth on a conveyor belt system but should be able to deliver personalised antenatal care within a framework which makes full use of their traditional skills in caring for women".
>
> (Flook, 1992:62).

As Bourne (1996) stated, to understand what happens during pregnancy is half-way towards a successful pregnancy. Women who understand the physical and psychological changes that occur during pregnancy might have more confidence in themselves and their ability to produce a healthy baby. The concept of personalised and humanised antenatal care might therefore help women to enjoy their pregnancy, to prepare for motherhood and most important of all, to ensure a safe delivery to a healthy baby and prevent possible complications during the course of pregnancy and delivery.

1.2 Promotion of foetal development

Pregnancy is one of the most significant events for both the woman and her family (De Bleier, 1994). The recent literature written on the topic shows that the exclusively physical aspects of pregnancy are no longer the main issue, but that a wider focus that includes psychological and sociological issues is necessary (Jacoby & Cartwright, 1990). Antenatal care should consider the person as a whole taking into account various physiological, psychological factors and social issues which influence the health of the mother and the baby.

As Bourne (1996) explains *"pregnancy is associated with many complex and interrelated changes that occur throughout the entire body"*. Despite all these changes pregnant women are healthy individuals. Antenatal care education enables women to understand the changes that happen during their pregnancies. The acquisition of such knowledge allows women to feel in control of their pregnancy, which is a step forward to an enjoyable and successful pregnancy.

Antenatal care is important for many reasons. One of the most important aspects, if not the most important, ought to be the promotion of the optimum biological foetal development in early stages and growth later during pregnancy.

The foetus is an entity that depends entirely on its mother. The woman is providing the foetus with nutritious elements, water and electrolytes through the placenta. The function of the umbilical cord is to transport the oxygenated blood to the foetus and by eliminating the carbon dioxide among other residues. The amniotic liquid protects the foetus from external pressures and provides thermic isolation, among other important functions (Serrano Monzo, 1996: 37). The foetus as an immature entity needs the protective environment that only a pregnant woman's body can provide

Pregnant women themselves are however exposed to a complex variety of factors in their daily routine. Such factors may not be significant at other stages during the woman's life, but may become a hazard for either the mother, the baby, or both during pregnancy. To illustrate this statement, the example of an anaemic woman can be used. It is not uncommon for women to suffer anaemia during pregnancy (Serrano Monzo, 1996: 53). Anaemia does not involve a life threatening risk for the health of the woman. However, if anaemia occurs during pregnancy the restricted oxygen supply implies a high risk for the development of the foetus (Dickason et al, 1995:158).

Consideration should also be given to other factors that affect the biological development of the foetus, which are not related to the nutritional pattern of the woman. Other factors include:

- Age of the woman: the incidence of Down's Syndrome is higher in women older than 35 and more specially after 40 years (Bourne, 1996:297). Teenage mothers are at a particular high risk of preterm labour, low birth weight and handicapped infants, as stated by Hughes Lee & Grubbs (1995).
- Lifestyle: Smoking has been directly link to a lower birth weight Likewise, alcohol consumption is known to have a harmful effect over the foetus, like growth and mental retardation (Dueñas Herrero et al, 1997)
- Socio-economic factors: such as stressful situations, strong emotional shocks, lack of economic resources which can lead to lower self-esteem and social isolation (Chadwick, 1994).

Therefore, the importance that antenatal care lays on the promotion of the foetal development itself, which involves also the optimum general health of the mother, in its wider meaning. A healthy pregnant woman will enjoy a healthy pregnancy that will lead to a healthy baby.

How does antenatal care promote the wellbeing of both the woman and the baby? Pregnant women receiving antenatal care are screened for abnormalities with tests that are technologically more complex. In addition, women are also helped to sustain good health behaviour. They learn how to be mothers through the health education they receive. Finally antenatal care enables women to acquire the essential practical skills for motherhood, such as breastfeeding.

1.2 Comparative study. Objectives

This study is a comparative research project that aims to measure the quality of the health education that midwives provide to first time pregnant women at community based centres, and to examine similarities and differences between the practices involved in the study.

Whether or not women have a successful and enjoyable pregnancy is strongly dependent on the health education they receive during antenatal care (Chadwick, 1994). The present study was focused on health education as one particular aspect of antenatal care and the role of the midwife in helping women enjoy their pregnancies.

It was possible to recruit 60 women from one health centre in Pamplona within a particular period of time, however, this proved not to be possible in Chester-le-Street clinics as all the clinics in this location have a small number of antenatal attendees. Therefore, four clinics were selected for this study in Chester-le-Street. The total number of GP practices involved was four.

Protocols and practices that are currently used in Spain and in the UK are different. In England antenatal care is well established, whereas in Spain changes are occurring in antenatal care in the community. The purpose of the author was to investigate the present situation in both countries.

More concretely, the objectives of this research project are:

- To compare protocols and practices used in a health centre in Pamplona (Spain) and in four GP practices in Chester-le-Street (England).

- To analyse the different roles and responsibilities of the midwives in the care of the pregnant women in both geographical settings.

- To measure the quality of the health education provided to pregnant women during the three trimesters of pregnancy and to evaluate the resources available in each health practice.

- To measure the knowledge in health education acquired during the antenatal appointments.

- To measure the level of satisfaction of women with the health education received in antenatal care.

1.3 United Kingdom: a well established system

Antenatal care has undergone many changes since it was first introduced in the United Kingdom at the beginning of the twentieth century (Bourne, 1996; Fildes et al, 1992). Antenatal care as we know it is an entirely new concept, that has evolved and learnt from past situations. The provision of antenatal care in the UK is backed up by a large amount of research that has helped to better understand the rational of antenatal care (Bourne, 1996; Currell, 1996; Chamberlain, 1997; Villar & Khan-Neelofur, 1998; Savage, 1994b; Urmeneta et al, 2001; Chadwick, 1994; Cochrane, 1992). The provision of maternity services has been the subject of a number of governmental reports during the second half of the 20th century (The House of Commons Health Committee Report, 1992; Changing Childbirth, 1993), each of which has had a significant impact on the attempts to improve the service. Thus, it can be stated that the English antenatal care system is well established. The most recent governmental reports in the UK on maternity services

have been the leading force for the current change of practice. Standards of care have reached the highest quality so far, which is evidenced by the high level of satisfaction of the recipient of care (Jacoby & Cartwright, 1990).

The English antenatal care system, although well developed, has not been fully evaluated yet. There is anecdotal evidence suggesting there are problems in antenatal care in England. The review of the literature shows that a significant number of the studies published on the subject of antenatal care in the UK target a number of common problems found in antenatal education. Such problems includes low attendance rates, high drop-out rates and selective groups attending the classes (Jacoby &Cartwright, 1990). In view of the mentioned situation, Rees (1993) attempted to discover if midwifery had lost interest in antenatal classes. His research showed that some of the problems that had already been found in the 1970s and 1980s still existed, such as the low attendance rates and the challenge for midwifes to plan lively antenatal sessions.

1.4 Recent changes in Spain

The Spanish situation of antenatal education differs from the English from the start point of the differences in the implementation of antenatal care in the community. The *Public Health Department in Spain* is still developing antenatal care as part of the Primary Care System, and is also establishing protocols. *The Public Health Department* has also created the so called "Centres for Women Care". The implementation of the antenatal care programmes is still not consistent throughout Spain, but

varies in the different regions[1] of the country, with coverage rates varying from 9% to 75.5% in 1993. Some of the regions have implemented the maternity care services in community settings only since such a short period of time as from 1997, which is the case of Navarra, the region where Pamplona is located. Previously, care regarding women and pregnancies was based in specialised maternity units within hospitals.

The author was encouraged to consider the possibility of the Spanish system learning from and adopting the most positive aspects of the English system, as community antenatal care is in such an early stage in Spain and so well established in the UK. The analysis of the findings from the research study and a detailed knowledge of the English protocols and practices would enable the author to make suggestions about those issues that could possibly be included in the new Plan for Women Care in community settings.

The amount of literature written on antenatal education in the community is therefore not as profuse as in England. The problems that the antenatal education programmes have in a particular region or health centre can differ from those problems identified in another region or even in a different health centre within the same region. Two different studies can be compared to illustrate the difference in the percentages of women attending community settings for their antenatal care. The study performed by Guillén Rodriguez et al (1999) in the region of Huelva showed a coverage rate of 89.6% of women receiving antenatal care in primary care locations. On the other hand, only 13.5% of the pregnant

[1] A detailed exposition and explanation of the concept of region in Spain and the geographical distribution of the Spanish regions will be given in the Chapter 2 of this thesis.

women in the region of Madrid were still receiving antenatal care in their health centres at the end of their pregnancies, as Diaz Sanchez et al (1993) shows in his descriptive-retrospective study.

1.5 Health education and the role of the midwife

Women ought to acquire certain number of skills that she will need during the pregnancy and after the child's birth. The wellbeing of the foetus depends entirely on the mother. Therefore it is her responsibility to avoid any factor that could put her and her foetus' health at risk.

Under the opinion of the author, health education programmes tend to be disease-orientated. People in Spain and England still associates health centres with the provision of medical care rather than health promotion. Health centres have invested in health programmes for smokers, diabetics or asthmatics. Such programmes are intended for recovering or maintaining of health once the disease in question has already developed. A more preventative approach would be the promotion of health programmes such as nutrition for a healthy lifestyle, exercise for health or dental hygiene education. Antenatal education programmes are to be included in the preventive approach group since the target is a healthy population of women with the particular condition of being pregnant.

Although being healthy individuals, expectant women may also demonstrate certain unhealthy habits, such as alcohol or drug consumption, unbalanced diet, smoking habits or a complete lack of exercise. Midwives should in these cases encourage women during health education and provide more personalised programmes that would enable women to acquire the knowledge necessary to identify and modify any damaging health habit during the pregnancy.

The most important role of the midwife is to enable women to realise that pregnancy is an episode to be enjoyed. Midwives and maternal services in general should strive to meet the needs of each woman. They have a major contribution to make to the health and well-being of pregnant women. They are ideally placed to implement a prescribed programme of health education in the community.

Midwives with counselling skills or those who speak different languages must also commit themselves to health education as multi-cultural societies are an increasing phenomenon. A major involvement in issues of public as well as environmental and occupational health should also been considered by midwives (Chadwick, 1994).

However, there are external factors which do not promote healthy pregnancies in young women. These factors are, among others: migratory patterns of young people, diffusion of the traditional family model, intention of providing the best education to children, unemployment, the delay and decline of marriages, efficient fertility control, decline of religious beliefs, increase in numbers of women with superior studies and their incorporation to remunerated jobs. It is not easy to assess the influence of these social, cultural and economic factors, although they are certainly the manifestation of an important change in the family concept and the women's functions in society.

One of the objectives of this study was to evaluate antenatal education as one particular aspect of antenatal care in two locations: one district in the North East of England and one region in the North of Spain.

The ultimate aim of this study is to contribute towards a more homogeneous model for health education in antenatal care. It may help to understand and identify the actual problems and lacking areas in the organisation and provision of antenatal care in the settings selected for the study. Furthermore, the study might help the practices studied to attempt to meet women's expectations when planing for future services.

CHAPTER 2

REVIEW OF THE LITERATURE

HISTORY, ORGANISATION AND PRACTICE OF ANTENATAL CARE IN THE UNITED KINGDOM AND SPAIN.

2.1. Contributions of antenatal care to women's health and foetal development.

2.1.1. Concept of antenatal care

The concept of antenatal care has been widely studied since it was first established in England in Edinburgh in 1901. It is not easy to find a complete model of antenatal care covering all the aspects that the subject involves.

Pregnancy represents a physical, psychological and social change for the future parents, and all these aspects should be taken into account in the care they receive along the pregnancy (Maternity Services Advisory Committee, "Maternity Care in Action" 1982).

The principal function of antenatal care has been referred to by Santos de Vega et al (1992: 36):

> "Antenatal care aims to optimise the development of the foetus and to avoid (or to reduce to the minimum) the possible complications during pregnancy, labour, puerperium and the neonatal period".[2]

Some authors focus their studies on single elements of antenatal care. Hoddinott & Pill (1999) for example focuses on breastfeeding rates among women in a specific socio-economic group with particularly low rates of breastfeeding. Others provide a model of antenatal care based on their professional qualifications, with a remarkable different orientation between midwives and obtetricians (e.g. Langer et al (1999); Goberna i Tricas et al (1996)). One of the best examples of the influence of the authors' professional backgrounds on what they write , is the book *"Essays on Women, Medicine and Health"* by Ann Oakley (1997). She emphasises the midwifery role in antenatal and women care in general, insisting on the nurses and midwives' rights and competence that have been overlapped by the obstetricians and medical professionals.

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[2] Author's translation. Original quote: "La asistencia prenatal infulye en el desarrollo óptimo del feto y evita o reduce al mínimo las complicaciones del embarazo, parto, puerperio y periodo neonatal".

A model proposed by Bourne (1996:118) may be considered appropriate as it covers all physical, psychological, social and educational factors in antenatal care:

> " Antenatal care aims at maintaining the good health of the mother during pregnancy which will enable her to produce a healthy, normal infant and remain healthy herself. It is greatly concerned with health education during pregnancy to ensure the maximum preparation of each individual for her labour and role of motherhood. One of its outstanding features is the early detection of any condition which might adversely affect the health of the mother or her baby" (Bourne, 1996: 118).

The concept above describes some aspects considered to be important by the author. The first aspect is that women should be prepared adequately for their future role as mothers in antenatal care. This point shows the close link that exists between antenatal and postnatal care. Antenatal care should create a base for postnatal care. Only in this way will the woman be prepared to cope with all the new changes that motherhood means. Wilson agreed with this approach and pointed out the unique opportunity that antenatal educators have, not only during pregnancy, but also on the future health of the women herself and her family (Wilson, 1990:1).

The second positive aspect of Bourne's definition is her use of the expression "maintain the good health of the mother..." Oakley (1997) stated that all the different professional groups that somehow are related to childbirth, have transformed the normal process of birth into what she calls "a professional subject". The result is that birth is therefore considered as an abnormal event, as an isolated episode in women's lives and their families.

The third aspect of the definition, which the author agrees with, is the notion of how greatly concerned antenatal care is with health education during pregnancy.

> "Health education is an activity that is in accordance with the community's sociocultural environment. It organises a whole range of activities executed by professionals, individuals and the community for the positive enjoyment of pregnancy and the facilitation of a normal delivery and puerperium, both physical and psychologically"[3]. (Guillén Rodríguez et al, 1999: 44).

The above mentioned is a statement by Guillén Rodríguez et al (1999) in their study about maternity education in primary care in Huelva (Spain). They designed a longitudinal study in which 222 pregnant women took part initially, although the achieved sample was 113. The study consisted of three different questionnaires that were given to the women at three different points during their maternal education: before they initiated any maternal education, at the end of the maternal education and 15 days after the labour. The items in the questionnaires included topics such as personal details, pregnancy information, dietetic-hygienic habits, number of cigarettes per day before and during the pregnancy, number of alcohol units before and during pregnancy, exercise pattern and knowledge on pregnancy, labour and newborn care topics. The findings in Rodriguez' study strongly emphasises the importance of antenatal education as it has been shown that it can improve knowledge and health habits of pregnant women.

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[3] Author's translation. Original quote: "La educación maternal (EM) es una actividad que, estando en consonancia con el ámbito sociocultural y respetando el mismo, organiza un conjunto de actividades que realizan profesionales, comunidad e individuos para que la gestación se viva de forma positiva y facilite un parto y puerperio normal, tanto física como emocionalmente".

2.1.2. Previous studies on antenatal care

A large number of research studies on antenatal care have been carried out using a variety of research designs. The range of these studies ranges from national to local ones, both random and non-random. For example, Comerford et al (1993) compared client and health care provider perceptions concerning health topics in antenatal care. She conducted a survey at the first antenatal visit, asking women about levels of interest in a number of topics. Significant differences were found. The final suggestions given by Comerford are that the location where antenatal care is provided (community or hospital based) and the number of previous pregnancies should be considered when developing antenatal education.

Dueñas Herrero et al (1997) designed an retrospective and descriptive observational study. They aimed to analyse variations in monitoring a pregnancy programme in three different population groups distinguished by their socio-demographic characteristics, with a sample of 415 women from urban, rural and marginal areas. The conclusions confirmed a lack of monitoring and adherence to the pregnancy programmes in areas where is a large number of single parents and teenage mothers.

Among comparative studies, we can quote another survey performed by Langer et al (1999) in which they compared routine antenatal care in eight different countries of Europe. The survey was developed by means of a questionnaire with questions covering clinical examinations and investigations performed during pregnancy. They concluded that the differences observed in antenatal care in the countries of study are the exclusive reflection of the health professionals' uncertainties concerning the validity of the various tests used to monitor pregnancies.

The fact is that antenatal care is a very complex interaction of many elements. This includes patient education, evaluation of physical factors and medical history that might require special care, assessment of gestational age and determination of the success with which the mother and the foetus are tolerating the pregnancy, as Nagey (1989:516) described.

This complexity increases the difficulty of analysing and giving evidence of the effectiveness and positive outcomes of every one of these individual elements. Antenatal care as a whole may have a positive influence both on the mother during the pregnancy and labour as well as on the future growth of the baby. Langer et al (1999) supported this statement by saying that since the development of antenatal care in Europe there has been a significant improvement of perinatal mortality. The global infant mortality rate per 1,000 live births was 148 in 1955. By 1995 it was 59 per 1,000. The projected figures for 2025 are 29 deaths per 1,000 live births. (WHO Health Report 1998 Executive Summary).

Having the same opinion as Langer, Nagey (1989: 525) stated:

> "The benefits of antenatal care are clear and seem to exceed the sum of the benefits of all of the described tangible components".

However, Nagey challenges the large body of literature written on antenatal care. He states that no study has been able to prove, or at least to suggest that antenatal care is the factor improving pregnancy outcomes. Instead he suggests that it might be that women with higher chances to have good pregnancies are more compliant with the recommendation of receiving antenatal care.

The fact that the decrease in maternal mortality rates is attributable to the evolution and development of antenatal care in the last 60 years has been cited by several authors. Martin Zurro (1989) concluded that the provision of good antenatal care during pregnancy tends to improve the foetus viability, decreasing the perinatal mortality as well as the maternal mortality. Likewise, Bernard (1984) relates the decrease of maternal-infant mortality rates with the improvement of the socio-economic conditions and the changes in health care (aseptic obstetric techniques, advances in both antenatal and postnatal care, antibiotics and vaccines).

2.1.3. Effects of antenatal care on infant and maternal mortality.

The results of the advances in maternal care can be quantified by the decrease in infant and maternal mortality. Both infant and maternal mortality rates have fallen due to the improvements in maternal services. The levels of infant mortality in Europe at the end of the 19th century were high.

Statistics from the Netherlands show rates of 227 deaths out of every 1,000 live-births in 1871; by 1881 the rates fell to 182 per 1,000 live-births (Marland, 1992:75). During the 20th century the values of IMR in the Netherlands continued to decrease: 18 per 1,000 in 1960 and 5 per 1,000 in 1997 (Macfarlane et al, 2000).

In France the IMR rates were 166 per 1000 in 1871 (Marland, 1992:75), 29 per 1,000 in 1960 and 5 per 1,000 in 1997 (Macfarlane et al, 2000). The rate for England and Wales in 1871 was 130 per 1,000 (Marland, 1992:75). In 1960 the IMR for the United Kingdom was 23 per 1,000 and by 1997 it had declined to 6 per 1,000 (Macfarlane et al,

2000). In the case of Spain, the IMR was 46 per 1,000 in 1960 and 5 per 1,000 in 1997 (Macfarlane et al, 2000).

The risk of infant mortality in the last decade in Europe has fallen as much as 1 in 1,400 live-born children, as estimated by the WHO in its *Health Report 1998 Executive Summary.*

	Netherlands	**France**	**United Kingdom**	**Spain**
1871	227‰	166‰	130‰	--
1881	182‰	--	--	--
1960	18‰	29‰	23‰	46‰
1990	5‰	5‰	6‰	5‰

Table 2.1: Infant mortality rates.

The particular case of maternal mortality was the exception to the general decrease in both the general and infant mortality rates. Maternal mortality in Europe hardly varied from the end of the 19th century to the mid-1930's. Since then maternity mortality rates have decreased in a continuous curve. By 1980 the MMR (Maternal Mortality Rate) was only one fifth of the rate in 1934 (Fildes, 1992).

The figures confirm this tendency when analysing the statistic data. For example, the MMR in England and Wales between 1900-4 was 42.7 per 10,000 births; between 1915-19 was 41.2 per 10,000 and between 1930-4 was 43 per 10,000 (Macfarlane et al, 2000).

The same tendency occurred in other European countries. In Belgium, the MMR between 1900-4 was 58 per 10,000, rising to 79.8 between 1915-19; between 1930-4 it still was 51.2 per 10,000 births (Brussels, Office Central de Statistique, 1851-1951). Even in Sweden, that has one of the lowest maternal mortality rates, the situation was the same. The MMR from 1915 to 1919 was 27.3 per 10,000 births; the rate from 1930 to 1934 was higher, with 33 deaths per 10,000 (Sveriges Officiella Statistik, Stockholm, 1911-1950).

The decrease of the MMR by 1990 is as significant as 0.7 deaths per 10,000 births in Sweden and Spain and 0.9 per 10,000 in the United Kingdom (*Revised 1990 estimates of Maternal Mortality. A new approach by WHO & UNICEF. April 1996*).

	England	**Belgium**	**Sweden**	**Spain**
1900-1904	42.7	58	--	--
1915-1919	41.2	79.8	27.3	--
1930-1934	43	51.2	33	--
1990	0.9	1	0.7	0.7

Table 2.2: Maternal Mortality Rates (MMR) per 10,000 births.

2.2. Community based antenatal care

The WHO's Antenatal Care Report of a Technical Working Group (Geneva, 1999), states: "Antenatal care should address both the psychosocial and the medical needs of the woman, within the context of the health care delivery system and the culture in which she lives".

It has been suggested that antenatal care should be taken out of the hospital and located in the community. The rationale behind moving into the community was to attempt to increase the satisfaction of antenatal care. All the clinics involved in this tendency show that community antenatal care does not cause harm and the women are more satisfied with the care they receive (Taylor, 1984). This occurs specially on certain problematic common issues that emerge in studies performed in hospital clinics: the difficulty in accessing to the antenatal clinics; long waiting times; lack of privacy and poor communication between health professionals and attendees (Rajan & Oakley, 1990).

When defining the aims and objectives of community based antenatal care, the tendencies both in the English and Spanish literature are to focus on two different aspects: the physical monitoring and the psychological support.

The tension that exists between physical and psychological elements of antenatal care is due to the increasing attention being given to the technological development and medical interventions during antenatal period such as scans and genetic testing for abnormalities. Tucker and Hall (1999) assert that health professionals tend to have different emphasis on antenatal care. For example, obstetricians may emphasise more on the clinical monitoring, whereas midwifes might be more motivated on the educational and psychological aspects of antenatal care. Some of the targets of *"Changing childbirth"* (DoH, 1993) are part of an attempt to put midwives back in charge of healthy pregnant women:

1. At least 30% of women should have the midwife as the lead professional.
2. Midwives should have direct access to some beds in all maternity units.

3. At least 30% of women delivered in a maternity unit should be admitted under the management of the midwife.

(Savage, 1994b: 411).

2.2.1. Aims of community based antenatal care in England

Jacobson et al (1996) in "The nation's health: A strategy for the 1990's", outline what the antenatal care objectives should be, as recommended by the DoH's Maternity Advisory Committee:

- To reduce perinatal and neonatal mortality rates.
- To eliminate disparities in these death rates between different sections of the community.
- To minimise impairment, disability and handicap.
- To promote the social and emotional wellbeing of parents and children.

(Jacobson et al, 1990:156-157)

2.2.2. The Tower Hamlets antenatal scheme

Despite the existence of governmental and institutional policies, antenatal care patterns can vary depending on the settings where the care is provided, with differences between hospital and community based clinics. Savage (1994a) presents in her book, *"Antenatal Care in the Community. The Tower Hamlets Antenatal Scheme and Survey"*, the three most common effects of hospital based antenatal care schemes, which can influence the expectant mother's wellbeing and the emotional outcome of her pregnancy. The three effects are:

- Depersonalisation: experienced by many women exposed to rigid hospital routines and frequent changes of staff.
- Poor continuity of care: not seeing the same midwife and doctor during the pregnancy.
- Inconvenience: the frequent need to undertake long and tedious journeys and waits to be seen in hospital clinics.

(Savage, 1994a).

On the other hand, Savage (1994a) concludes that the three main advantages of community based antenatal care are:

- Convenience: GPs' surgeries are closer and the waiting times are shorter compared to hospital clinics.
- Familiarity: The women appreciate being seen by people they know in familiar surroundings.
- Continuity: Fewer staff involved in the care of women in the community compared to the hospital.

(Savage, 1994a).

The Tower Hamlets Antenatal Care Scheme was introduced in England in 1982 by Savage, having been impressed by a project started at St Thomas' Hospital. Initially it only included three general practices, by 1994 the number increased to 13.

In order to discover if women included in the Tower Hamlets scheme felt that their expectations of antenatal care had been realised, a retrospective survey was performed between 1989 and 1991. Some of the findings are:

1. The initial purpose of the scheme was that women received all care from GP's from booking-in appointment though to delivery. However, only 29% of the women accomplished the purpose. A significant 55% had received shared care, where women also required to attend pre-scheduled hospital appointment for other procedures.

2. The greatest discrepancies between the expectations and the experience of antenatal care received were two: information about baby care (63.6% of women expected it and only 23.9% received it) and seeing the same person for care (50.5% of women expected it but only 8.1% of them received it).

3. However, the likelihood of seeing the same person throughout the pregnancy is still far greater in the Tower Hamlets community based clinics. 70% of women included on the scheme saw only 1 or 2 people during pregnancy. At hospital based clinics the majority of women (60%) saw 5 or more people (Savage, 1994a).

4. A very high level of accomplishment was achieved on the issue of the convenience and the short waiting times at community based clinics. Almost 90% of the women receiving community-based care lived less than 15 minutes away from the clinic (versus 55% of those attending hospitals), and 70% of women who were cared by community midwives were seen within 15 minutes (compared to only 8% at the hospital).

As described above, the greatest discrepancy in the Tower Hamlets Scheme was the issue of seeing the same person for care. 50.5% of women in the scheme expected to see the same health professional along the pregnancy and only 8.1% did always receive it. Therefore, Savage's conviction of continuity of care as one of the main advantages of community-based clinics can be discussed.

As an example, Currell (1985) introduces a new idea about the "continuity of care" concept. The design of the study was based on non-participant observations and semi-structured interviews with a sample of 117 women and 95 midwives. The results of her study suggest that "the concept of continuity of care should be replaced by a concept of unity of care, with care centred on each woman rather than on the organisation or the providers of the service".

Savage (1994a) concludes that women would prefer, in general terms, to have their antenatal care based in the community, close to their own homes and provided by midwives and GP's. She adds that this type of care can be delivered, without increasing the risks for the mother or the baby, and with some additional advantages as it will:

- Reduce the risk of hospital admissions during pregnancy;
- Reduce the risk of developing pre-eclampsia;
- Prevent low birthweight babies.
- Prevent preterm deliveries
- Enable labour starting naturally;

(Savage, 1994a).

If introduced in the Centres for Women Care in Navarra, the Tower Hamlets Antenatal Scheme would probably obtain higher levels of

satisfaction among women, and would accomplish the three objectives stated: convenience, familiarity and continuity. The mentioned Centres for Women Care promote continuity of care, as gynaecologists have been transferred from hospitals, and midwives are assigned for working full time at one centre, being responsible and organising all the activities. There is also a multidisciplinary team. Women receive all the antenatal care at the centre, including ultrasound scans and more specific tests.

2.2.3.Health education in community based antenatal care

> "Learning is an essential human activity. It involves a change in an individual which will subsequently affect behaviour, attitude or both".
>
> (Wilson, 1990; Spanish Midwives' Association).

The aims of antenatal education as a learning process have progressively changed. The initial focus in the 19th century was to attempt to reduce the high infant mortality by instructing mothers to adopt more hygiene practices. During the course of the next hundred years, the emphasis changed into helping women to cope with labour pain.

The latest emphasis includes much broader aims like emotional factors and teaching the necessary skills to cope with life changes that motherhood involves. (Wilson, 1990).

Health education theories and practices are still developing. Different models of health education are based on different ideologies, which are

important to look at. A general view of these models applied to antenatal education, as described by Wilson (1990) is:

- The behavioural change model: Improvements in health are sought by facilitating a change in behaviour. For example, educating pregnant women to give up smoking.

- The self-empowerment model: Individuals are enabled to develop the ability to understand and control the determinants of health within possible economic or other constraints. For example, enabling women to maximise their chances of a normal and satisfying birth, taking into account both physical and emotional factors.

- The collective action model: Seeks to improve health by bringing individuals together to strive changes in environmental, social and economic factors. For example, working with the Association for Improvement in the Maternity Services (AIMS).

(Wilson, 1990:2)

Health education topics included in antenatal programmes differ slightly between England and Spain. Topics on health education should cover all the needs women have during pregnancy. The main topics that appear in the Spanish and English bibliography are:

- Nutrition education (including supplements as vitamins and minerals);
- Avoidance of harmful substances: tobacco, alcohol and drugs;
- Physical changes during pregnancy;

- Encouraging regular physical exercise and physical comfort (including breathing and relaxation exercises);
- Reducing emotional stress and frequency of sexual intercourse during pregnancy;
- Labour and birth: what happens and pain coping;
- Feeding of the baby: Breastfeeding and bottle-feeding;
- Care of the baby;
- Safety during pregnancy: home, cars, travelling;
- Rights and benefits during pregnancy and after birth.

The achievement or non-achievement of these topics can be used as a measure of the quality of the care that women receive. By contrasting these issues with the information that has been collected during fieldwork in one region in Spain (Pamplona) and another one in England (Chester-le-Street), the author will determine the strengths and weaknesses of two different systems of providing antenatal care.

2.3. Practice of antenatal care in the United Kingdom

2.3.1 Historical development of antenatal care in the United Kingdom

The development of antenatal care in UK was accompanied by a significant improvement in the perinatal indices, such as that of perinatal mortality. The infant mortality rate for England and Wales between 1901-1905 was 134.95 deaths per 1,000 births. By 1921-1925 such rate had declined to 76.05 deaths per 1,000 births (Macfarlane et al, 2000). Increases in standards of living occurring at the same time in these countries also contributed to the improvement (Langer et al, 1999).

Advances in the care of pregnant women have been so significant that it is difficult to imagine the situation as it was one hundred years ago. Women who were pregnant had to either write to or go to see their doctor or midwife to book a place for their confinement. Once this was arranged, the woman would just wait until the labour start or until any complication would befall.

As an attempt to reduce the high infant mortality voluntary funded welfare schemes were established by the beginning of the 20th century. These schemes included the visits of the health visitors to the mother's homes and the provision of cheap milk to poor mothers that could not breastfeed their own babies.

Alongside these schemes, the creation of several legislative Acts had an important impact on the development of antenatal care. The first of these Acts was the Midwives Act of 1902, which aimed to raise the standards of midwifery and nursing. After the 1902 Act came the Notification of Births Act (1907) which provided domiciliary visiting, ensuring that mothers would receive advise on infant care within days after giving birth. However, the Maternity and Child Welfare Act of 1918 was the first legislative instrument that emphasised on the mother more than on the infant. Furthermore, this Act supported local authorities to establish clinics for children through the aid of grants. The implementation of the 1918 Act varied greatly in different regions and councils, depending on factors such as socio-economic conditions, political will of councils and the action of individual personalities or agencies.

Mothercraft courses and midwifery care focused on the reduction of mothers' mortality by promoting health started immediately after the

First World War, together with the opening of antenatal and postnatal facilities. These facilities persisted and evolved through to the 1930s.

Although the development of maternal care began in the United Kingdom in 1901 in Edinburgh, the complete antenatal care, as we know it now, has only existed for around 60 years. (Bourne & Gillard, 1996:118). The actual concept of antenatal care has partly moved the responsibility of the pregnancy from the woman to the health professionals that care her for her during her pregnancy.

The changes that have occurred in maternity services since the 1950s have been caused by two main reasons: the increased medicalisation of antenatal care and the loss of the option of delivery at home (Jacoby and Cartwright, 1992). As a result of this, there has been a proliferation of pressure groups, which is a clear indicator of the need of monitoring these changes.

The report of the Maternity Services Advisory Committee (Maternity Care in Action. Part I-Antenatal Care, 1982) recognised the need to take consumer's views into account. Since then, surveys of maternity services have been undertaken by academic researchers, health authorities and expertise committees.

In 1991 the House of Commons Health Committee agreed to reconsider the provision of the maternity services in the UK. The Committee were to emphasise exclusively on the management, care and services offered to the women who experienced normal pregnancies and did not present high risks (the 80% of the total, who can be cared for in primary care settings).

In March 1992, the House of Commons Health Selected Committee published a report, which can possibly be considered the most radical

review of maternity services ever carried out. In the report "Maternity Services", the Committee reflects what some professionals and consumer groups had been requested for years.

The much publicised "Changing childbirth" report (Expert Maternity Group, Department of Health, 1993), introduces three key points: women should be the focus of maternity care (feeling that she is in control of what happens with her); maternity services should be accessible to all in the Community; and women should be involved in the monitoring and planning of the maternity services to ensure that they respond to the needs of a changing society.

The Chief Executive of the NHS Management (NHS Executive, 2000) decided to include maternity services in his priorities and planning guidance for 1994/95. As a result of this, maternity policies over the last 5 years have included an increasing emphasis on meeting women's needs, expectations and requirements from the maternity services.

2.3.2. The National Health Service (NHS)

The modernisation of the NHS has been one of the targets of the Government. It is committed to provide accessible services for patients; guarantee the achievement of a high standard of care; integrate the health care services to the patients' needs. The development in the NHS has been initiated, following the guidelines that the NHS Executive (2000) established as "Principles of good primary care".

2.3.2.1. Regional NHS offices distribution in England.

England is since 1st April 1999 divided into eight NHS Executive Regional Office Boundaries. These regions are, from North to South and East to West:

- Northern & Yorkshire RO (Regional Office).
- North West RO.
- Trent RO.
- West Midlands RO.
- Eastern RO.
- London RO.
- South East RO.
- South West RO.

The region in which the study took place is the Northern & Yorkshire RO more specifically in the County Durham Health Authority. (As explained below in 5.3.1.2.)

The extension of the Northern & Yorkshire region extend to more than 10,000 square miles, with a population of 6.3 million, principally concentrated in big urban areas as Leeds and Tyneside (As published by the NHS Executive, 10th November 1998). However, within the region there are some remote rural areas.

2.3.2.2. Health Authorities

Each of these Regional Offices is in its turn subdivided into individual Health Authorities. Responsibility for local health services rests with these Health Authorities. The function of each Health Authority is to

assess and meet the health needs of the population of its local area within the region. As mentioned before, the present study took place in the County Durham Health Authority. The urban centres of Durham City and Chester-le-Street are within this area.

2.3.2.3. Primary Care Groups and Primary Care Trusts

"Primary Care Groups are groups of local healthcare and social care professionals who together with patient and Health Authority representatives take devolved responsibility for the healthcare needs of their local community" (NHS Executive, 2000).

The Primary Care Groups intend to gather GPs, community nurses and other health professionals so that they lead the planning and development of the local health services.

Primary Care Groups (PCG) were first constituted to improve the health of the population they are allocated to, not just to provide health services. As the NHS Executive (last reviewed 27th October 2000) established, the PCG have three main functions:

- To improve the health, and address health inequalities in their communities.
- To develop primary care and community services across the PCG.
- To advise on, or commission directly, a range of hospital services for patients within their area which appropriately meets patients needs.

(http://www.doh.gov.uk/pricare/pcgs.html)

On 1st April 1999 all GPs, practice and community nurses became part of a PCG, with a total of 481 groups in England. The PCGs have been operating at two levels, 1 and 2. Those groups, which operate at higher levels, 3 and 4, are called "Primary Care Trusts". Therefore, Primary Care Trusts (PCTs) have the same general role as the PCGs, although operating at different levels.

County Durham Health Authority has established six PCGs: The Dales, Derwentside, Darlington, Sedgefield, Easington and Durham and Chester-le-Street. This last one is the PCG in which the study was developed.

The total population in the Durham and Chester-le-Street PCG is 151,449, with almost half of this concentrated in the previous mentioned urban centres (NHS Exexutive, 1998).

2.3.3. Antenatal Care organisation in Chester-le-Street.

Chester-le-Street comprises nine health practices, six of which hold antenatal clinics that the community midwives run.

The Chester-le-Street area is covered by 4 community midwives who run the health care antenatal clinics. Every health centre holds an antenatal clinic for half a day each week. Each of the four community midwives has a fixed number of antenatal clinics assigned.

The location of their central office at the Chester-le-Street Community Hospital means that they have to move from their base to the different health centres to attend the antenatal clinics. The aim is to ensure that each midwife run the same clinics every week, so that women can get to know her well throughout pregnancy.

For those pregnant women who have been identified as "low risk" the following scheduled appointments are offered by The North Durham Maternity Services guide:

- booking appointment;
- 20 weeks: midwife or GP;
- 26 weeks: midwife or GP;
- 30 weeks: hospital, midwife or GP;
- 32 weeks: midwife or GP;
- 34 weeks: midwife or GP;
- 36 weeks: hospital;
- 38 weeks: midwife or GP;
- 40 weeks: hospital.

The midwives in Chester-le-Street described their schedule of antenatal visits to the author. During the observation period, the author could verify that the schedule that was in practice, which had been described by the midwives, was slightly different from the one recommended by the Durham Health Authority. The antenatal care schedule in Chester-le-Street is:

Weeks of pregnancy	Health professional	Main content of check-up
Before 8 weeks	Midwife	Antenatal booking app. Blood taken for blood group, FBC, Rubella and TPHA.
18-20 weeks	Gynaecologist	Ultrasound scan.
26 weeks	Midwife or GP if requested by the woman	Blood pressure, urine test and evaluation of pregnancy.
30 weeks Hospital visit	Lead Professional	Full antenatal assessment, blood taken for antibody check and FBC.
32 weeks	Midwife	Birth plan at home. Blood pressure, urine test and evaluation of pregnancy.
36 weeks Hospital visit	Lead Professional	Full antenatal assessment. Blood taken for FBC. If Rh – antibody check.
38 weeks	Midwife	Blood pressure, urine test and evaluation of pregnancy.
40-41weeks (if not delivery yet)	Gynaecologist	Full antenatal assesment.

Table 2.3: Antenatal care protocol in Chester-le-Street.

Antenatal classes for parents who are interested are held once a week in the evening at one of the Chester-le-Street health centres. The classes are specially designed for those expecting their first baby; however, any women can attend, as well as partners and friends. Women can just turn up, so it is not easy to calculate the number of women constituting each group in advance. The classes are given by the same community midwives. The content of the antenatal classes is divided into 6 sessions, and the topics included are:

1. Labour;
2. Pain relief;
3. Feeding and baby care;

4. Exercising and breathing for pregnancy and labour;
5. Safety issues;
6. Hospital visit.

Once a month, on the first Monday of every month, the community midwives hold a workshop on breastfeeding for expecting mothers.

The topics discussed are:

- The benefits of breastfeeding.
- How to avoid the common problems of breastfeeding

2.4. Practice of antenatal care in Spain

2.4.1. Regional distribution of Spain

The Spanish nation is divided into 19 comunidades autónomas[4] (autonomous regions) which in its turn, are subdivided into provincias (provinces), the equivalent to the English concept of region or county.

The Spanish Royal Academy' Dictionary defines comunidad autónoma as "Territorial entity within the Spanish constitutional legislation, which is endowed with autonomy for executive competences,

[4] The 19 Comunidades Autónomas, including the islands and the territories in North Africa are: Andalucía, Aragón, Asturias, Islas Baleares, Canarias, Cantrabria, Castilla y León, Castilla-la-Mancha, Cataluña, Extremadura, Galicia, Madrid, Murcia, Navarra, País Vasco, La Rioja, Comunidad Valenciana, Ceuta and Melilla.

as well as the autonomy for being administered by its own representatives".[5]

The 1978 Spanish Constitution provides for a degree of self-government for the 19 regions, called *comunidades autónomas* or *autonomías*. Some, such as Cataluña or País Vasco (Basque Country), with their own language, history and culture, have long felt separate from the rest of Spain. This explains why some of the *autonomías* have more devolved powers than others, in all matters except foreign affairs and national defence.

The Spanish *autonomías* are divided up into *provincias.* There are 55 administrative *provincias*. Each one has a capital of *provincia*, which generally bears the same name. Some of the bigger *autonomías*, as Andalucía, include 8 provinces in their territories. However, some others have only one province. Therefore the province's geographical surface coincides with the *autonomía's* one. This is the case for Navarra.

Navarra (*or Comunidad Foral de Navarra*) is located in the north of Spain, on the west end of the Pirineos where it shares 163 kms of its border with France. It has an area of 10,421 km², commonly divided into three areas: the Mountain, the Medium Zone and the "Ribera" (South Zone). This autonomía has only got one provincia, which has the same name, Navarra.

The capital is Pamplona, with a population of 173,374 people. The first official language is Spanish, although Basque (Euskera) is also

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[5] Author's translation. Original quote: "Entidad territorial que, dentro del ordenamiento constitucional del Estado español, está dotada de autonomía en competencias ejecutivas, así como de la facultad de administrarse mediante sus propios representantes".

recognised as a second official language, due to the proximity with the Basque Country.

The present study took place in Pamplona. The division of the city, referred to Health terms, is explained later in this chapter.

2.4.2. Health policies and competencies of Navarra.

The Public Health Institute of Navarra lost the major part of its functions in the middle of the 1980's, retaining exclusively the epidemiological surveillance and the environmental hygiene control functions. Such arrangements were made in order to promote the integration of the preventive and promotional health activities in health centres based in the community.

The current tendencies in the organisation of health systems demand changes that allow the execution of an "integral health system". The Government of Navarra, inspired by these innovating trends promoted by the Alma-Ata Declaration, decided to introduce changes into the Health Organisation System of Navarra. The Ley Foral 22/1985, de 13 de noviembre (Official Act, 1995, 13th November) involved the initiation of the "Sistema de Zonificacion Sanitaria" (system based on the division of the territory into "health areas"). The new system considers Primary Care as the main nucleus and as the central function of the Health System.

Three new concepts form the basis for this system:

- *Área de Salud* (Health Area): Territorial field delimited by geographical and population criteria, which allows the decentralisation of the health activities[6]. Navarra is divided into 5 areas. Areas I, II and IV belong to the capital, Pamplona.

- *Zona Básica de Salud* (Health Basic Zone): Sub-divisions in each Área de Salud. The Zona Básica de Salud represents the geographical demarcation which is used as a territorial frame for the provision of Primary Care. It guarantees the population accessibility to the primary health services.[7]

- *Centro de Salud* (Health Centre): Constitutes the physical and functional structure of the Zona Básica de Salud.

The introduction of this new system started in 1985. Different phases have been introduced gradually. The last Zona Basica de Salud was implemented, by an Official Act the 9th December 1997.

The *"Plan de Atencion a la Mujer"* (Plan for Women Care) constitutes an important part of the new system. Its implementation is explained in detail in the next section of this chapter.

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[6] As defined in the Ley Foral 22/1985, de 13 de noviembre.

[7] As defined in the Decreto Foral 148/1986, de 30 de mayo.

2.4.3. Antenatal care organisation in Pamplona (Navarra)

The implementation of the new model of antenatal care in primary care setting, is relatively new in Spain. The implementation has occurred at different stages in different *comunidades autónomas* of the country, as some of them have got their own autonomy in health issues.

The implementation of the "Plan for Women Care" in Navarra was made effective by The "Decreto Foral 259/1997, de 22 de Septiembre" (Official Act 259/1997, 22nd September). The mentioned Official Act involved the creation and establishment of the "Centres for Women Care". These centres are based in the community setting and composed of a multi-disciplinary team comprising gynaecologists, midwives, nurses and social workers. Each Zona Basica de Salud (Health Basic Zone) has a Centre for Women Care.

The interrelation between the Centres for Women Care (primary care) and the secondary level of health care (hospitals) was a major consideration when designing the new primary care system. As a result, the coordination in practice between both levels of health care is efficient. There is also the added advantage that women in the Centres for Women Care can access other professionals at any time on site.

Moreover, the implementation of the "Plan for Women Care" means that women have the freedom of choice to decide their choice of gynaecologist, as established by The Ley Foral 10/1990, 23 Noviembre (Official Act 10/1990, 23rd November): "Women will be able to exercise their right of free election of gynaecologist in the centres for woman care located in their area of residence". This was made effective by the Decreto Foral 259/1997, de 22 de septiembre (Official Act 259/1997, 22nd September). The freedom of choice will allow a relationship of

mutual trust between the woman and her gynaecologist. It will also contribute to a more personalised and humanised care.

2.4.3.1. The functions of the centres for woman care.

The same Official Act as stated above (*Decreto Foral 259/1997, de 22 de septiembre*) describes the functions of the Centres for Women Care. The functions should include, as follows:

- Attendance to gynaecological diseases, as well as menstrual and menopause disorders;
- Diagnosis, early screening and following of pregnancies, as well as the surveillance of risk factors for the mother and the foetus;
- Distribution of a personal maternal card for the registration of periodical checks during the pregnancy;
- Maternal education, preparation for labour and information about anaesthetic techniques during labour;
- Procurement of women's informed consent for any non-strictly necessary clinical procedure or intervention which does not represent a risk for her or the foetus' health;
- Puerperium home visits;
- Information for contraceptive method election. Prescription, application and control of the different methods;
- Individual and group sexual education;
- Information, assessment psycho-socio-emotional support for pregnancy interruptions;
- Diagnosis and treatment of infertility;
- Genetic advice for risk groups;
- Prenatal diagnosis for risk groups;

- Detection of risk groups and early diagnosis of breast and cervix cancer;
- Attendance to the physiologic climacteric.

Decreto Foral 259/1997, de 22 septiembre.

2.4.3.2. Content of Antenatal Care in Navarra.

The programme of antenatal care is still not unified in the 19 autonomías of Spain (Goberna i Tricas, J; 1996). Different Areas de Salud (Health Areas) of Navarra have developed their own protocols, based on the recommendations given by the *Asociacion Española de Matronas* (Spanish Midwives' Association) and the *Sociedad Española de Ginecologia y Obstetricia or SEGO* (Spanish Society of Gynaecology and Obstetrics).

With reference to the antenatal classes programmes, the Spanish Midwives' Association bases its antenatal education programmes on the "*Psychoprophilactic Model*" developed by Lamaze and Velay in 1952. The basic idea of that the model is based on the fact that pregnancy and labour are conditioned by the woman's motherhood approach. Labour has to be understood from a much wider context than only the moment of labour itself. Becoming a mother is much more than those few hours. Antenatal education is not simply antenatal exercises.

The Phychoprophilactic Model aims:

- To take advantage of this phase in the woman's life to help her reach the psychological maturity which involves the conscious or unconscious acceptance of her femininity and maternity;

- To avoid the development of the psychic symptomatology: fears, phobias, insomnia;

- To motivate women to adopt an active role during pregnancy and during labour;

- To inculcate the "Haptonomy Science" (the science of affectiveness). The aim is to build a solid and positive relationship between the mother and the foetus. There is evidence of the existence of affective communication between mother and baby before birth, which is of great importance for the future development of the baby's personality;

- To involve the husband /partner in maternity education. He is seen as a collaborator during the pregnancy, as a support during the labour and of course, as a father, a member of the family group.

Spanish Midwives' Association (1998)

2.4.3.3. Description of the Azpilagaña health centre. Protocols and antenatal classes.

As mentioned before, the Government of Navarra has introduced changes into the Health Organisation System of Navarra.

Back in 1995, the Health Centre in Azpilagaña underwent a physical and an structural re-organisation, in order to create the new centre for woman care. The re-structuring of the health centre of the Azpilagaña area was determined by the *"Decreto Foral 70/1995, de 13 de marzo" (Official Act 70/1995, 13th March).*

All the antenatal check-ups take place in the Centre for Women Care (whose physical structure is located within the Health Centre), including the ultrasound scans. There is only one midwife working in the centre.

The application of the antenatal care protocols and programmes in the Azpilagaña Health Centre in Pamplona, as directed by the Goverment of Navarra following the advice of the Spanish Midwives Association, is the following:

Weeks of pregnancy	Health professional	Main content of check-up
7-8 weeks	Midwife	Antenatal booking app. Blood taken for FBC, blood group, Rh (Coombs if necessary), uric acid, rubella, sifilis, toxoplasmosis, HIV. Height and weight, BP, pulse, chromosome pathology screening. Dietetic habits.
10-12 weeks	Gynaecologist	Ultrasound scan. Breast check, cytology and vaginal culture in patients of high risk.
16 weeks	Midwife	Listen of foetus' heartbeat. Measurement of uterine height. Blood pressure, urine test, weight control.
20 weeks	Gynaecologist	Ultrasound scan.
26 weeks	Gynaecologist or midwife	Obstetric exam. Blood tests of 2nd term (FBC, if necessary: Coombs, rubella and toxoplasmosis, uric acid, O' Sullivan test). Injection of Gamma Globuline Anti-D to women O Rh-.
31-32 weeks	Gynaecologist	Ultrasound scan. General check.
36 weeks	Gynaecologist	Blood tests of the 3rd term of the pregnancy (FBC, coagulation tests and B Streptococus culture).
38 weeks	Midwife and Gynaecologist	Non-stressing monitor (external monitor). To be assessed by gynaecologist.
40 weeks (if not delivery yet)	Gynaecologist	Non –stressing monitor. Ultrasound scan. General and obstetric exam.
41 weeks	Gynaecologist	Non-stressing monitor. Admission in hospital for induction of labour.

Table 2.4: Antenatal care protocol from the Government of Navarra.

The antenatal classes are held in the same centre (a special class with resources for the breathing and relaxing exercises) and given by the only midwife in the centre. The groups are organised so that the maximum number of women in each group is not greater than 15. The content is divided into 9 sessions, as shown below:

1- Introduction to the course: General topics, questions about motherhood, fear of the unknown, behaviour changes, basis for maternity preparation (knowledge of pregnancy stages and training in breathing, relaxing and exercises techniques).

2- Reason for admission to hospital: recognition of signs and symptoms.

3- Labour: dilatation phase.

4- Labour: expulsive phase, pain relief.

5&6- Postnatal period: woman health and baby care in the immediate and postnatal period.

7&8- The newborn: care and feeding.

9- Review with the couples.

CHAPTER 3

METHODOLOGY

3.1. Introduction

The intention of this study was to compare the different systems of antenatal care in two countries, namely: Spain and England, focusing particularly on the health education provided by midwives.

The objectives of this study were divided in two categories. First, objectives related to the theory of antenatal care. The two objectives were to compare protocols in health centres in Pamplona and Chester-le-Street and to analyse the different roles and responsibilities of the midwives in both locations. Second, the objectives related to the practice of antenatal care were: to measure the quality of health education provided to pregnant women and to measure the knowledge acquired and the level of

satisfaction reported by women with the health education received in Pamplona and Chester-le-Street. Since one of the interests of the author was how health education is taught in practice, the most appropriate method is to see what happens in practice, by being either a participant or non-participant observer. The author chose the non-participant approach as it allowed access to people, and also provided and opportunity to record activities and interaction between different groups of people.

The choice of the most appropriate research design determines the legitimacy of the data and the extent to which conclusions and generalisations can be made.

This chapter will explain the rationale of the methods used in this study, their strengths and limitations.

3.2. Design of the study

This study was designed under the quantitative approach or research as the design of choice was the survey. However, the author considered that certain sections of the questionnaire were designed to be qualitatively analysed. Qualitative research is more appropriate when studying the experiences and perceptions of clients, nurses and others, and when the interaction between people and their environment is complex.

Different aspects of the same phenomena can be studied by either qualitative or quantitative approaches. Furthermore, the same aspect of a phenomenon can benefit from both approaches, in what is known as "method triangulation", combining two or more theories, data sources or methods in the study of a single phenomenon (Parahoo, 1997:65). The study performed by Myers and Haase (1989) can be cited as an example of

the importance of different data sources. They studied the phenomenon of bonding between mother and infant. In such a study the subjective descriptions of mothers' progressive ability to anticipate their infants' needs' was contrasted with the objective observations of the mother-infant interaction

As mentioned above, the purpose of this study was to describe and compare two systems of antenatal care in two different countries and more specifically in two different regions. At a descriptive level, research emphasises on the description of phenomena, although patterns or trends may also emerge, and it may be possible to observe links between variables (Parahoo, 1997:143). The focus of the present study's was on describing two systems, and therefore a design of choice for descriptive study had to be selected.

The randomised control trial, being an experimental method, required the random allocation of pregnant women between an experimental group, whose members receive the treatment under study or other intervention, and a control group whose members receive a standard treatment. Since the topic of study was health education during pregnancy, RCT was not considered appropriate.

Case studies focus on specific situations. They emphasise on understanding one particular case, tending to be more specific, in-depth, holistic and with less population involved. Since the intention of the author was to recruit as many subjects as possible in an attempt to use the sample for the purpose of generalising the findings, the case study design was rejected.

The survey as a research method was considered the most appropriate. Survey is a research design which aims to obtain descriptive and

correlational data usually from large populations. They are designed to obtain information about a population regarding prevalence, distribution and interrelationship of variables within that population. Surveys are therefore appropriate for descriptive and correlational studies. The main methods of data collection are questionnaires, observations and interviews, either structured of semi-structured.

There are varied sampling techniques that can be applied to the survey. The most appropriate technique was considered to be the cross-sectional survey, as the measurements on the subject studied can be achieved at one particular period of time. Therefore, women in the study were exclusively seen at one certain point of their pregnancy. The follow up of women along the 40 weeks of pregnancy would have required a different sampling technique approach such as a longitudinal or cohort study, which is suitable for phenomena that change over time and involves the same group of patients to be "followed" for a period of time.

Cross-sectional survey (Bowling, 1997) "is a descriptive study of a defined, random cross-section of the population at one particular point in time". The aim of surveys is to measure, as much accurately as possible, attitudes, knowledge and behaviour of the respondents. Studies based on surveys are performed in order to describe particular populations and to study associations between variables.

As well as being used as a research method for quantitative approaches, cross-sectional survey is commonly linked to qualitative research. The qualitative approach is often considered as a "minor methodology" (Siverman, 2000). In the health science field, qualitative research is often criticised for its lack of scientific rigour, due to the tradition of experimental and quantitative methods used in the biomedical research.

Mays & Pope (1995), in the BMJ (British Medical Journal) Education and Debate article series, describe what the most commonly heard criticisms relating to qualitative research are:

> "... Firstly, that qualitative research is merely an assembly of anecdote and personal impressions, strongly subject to researcher bias; secondly, it is argued that qualitative research lacks reproducibility....; and, finally, qualitative research is criticised for lacking of generalisability. It is said that qualitative methods tend to generate large amounts of detailed information about a small number of settings".
>
> (Mays & Pope, 1995:109).

Confronting these arguments, Mays & Pope also state the various strategies that qualitative researchers have available to safeguard their research against bias and enhance the reliability of analysis and findings.

There are as well many criticisms of the survey as a research design, as Tones et al (1990) explain:

> "There are many criticisms of surveys, ranging from their inherently deterministic nature to their role in the ideological manipulation of the public" (Tones et al, 1990:34).

Pregnant women relating their personal experiences are a potential source of valuable information. Survey studies and comparisons, as stated by Cartwright & Jacoby (1993) have shown that for the most part they report their experiences accurately:

> "For many of the events that are recorded in hospital records we know that women are a reliable source of information, and for other events not systematically recorded in the records (e.g. length of time breastfeeding), they are the only possible source"
>
> (Cartwright & Jacoby, 1993: 240).

The survey approach is also considered appropriate to monitor trends in services, in their use and the women's reactions to them. They can be carried out at a national or local scale, with wider of more particular group samples. (Cartwritght, 1996). It does not have the same statistical strength as the experiment design and it cannot make inferences about cause-effects.

Nevertheless, among its positive aspects, the cross-sectional survey can suggest possible co-relations between variables, which might either require further research or that might be not suitable for experiment. Surveys, conducted on a rigorous way, can produce results that can be replicable, removing as much bias as possible from the research process. There is a number of ways to achieve rigour in surveys, as described by May (1997:84). Three of these ways are standardisation, replicability and representativeness. Further explanation and discussion of these topics will be included in this thesis when the author explains the limits of the methodology.

As explained at the beginning of the chapter, the intention of this study was to describe and compare two different systems of providing antenatal care in two geographical locations in Spain and England, focusing on the health education that midwives are imparting in each of the practices

involved. The selected practices allowed the author to have access to the targeted population for which the study was designed.

3.3- Cross-national Comparative Studies.

Cross-national comparative research is a growing research interest, with a long established history. As May (1997) states: "Insights into our own lives are thought to be enhanced by studying the ways in which different cultures and societies organise their social and political affairs and everyday lives".

Comparing, understood in its widest sense, is the process of discovering similarities and differences among phenomena. Warwick (1973) considers comparison as fundamental operation of the human thought, and therefore, essential for any scientific analysis.

One of the main aims of comparative research is to understand and explain the ways in which different societies and cultures experience and act upon social, economic and political changes (May, 1997).

3.3.1- Core issues in comparative research

There are several core issues that arise when carrying out comparative research. The researcher ought to take into account the issues that follow, as described by Warwick & Osherson (1973:11-40):

- *Conceptual equivalence*: refers to the most basic question of the comparative analysis, this is, whether the concepts being studied have equivalent meanings in the societies considered. Although complete

equivalence is probably never possible, attempts can be made to measure equivalence if they are based on a set of indicators or observations. The researcher must attempt to reconstruct the meaning of concepts in various cultures through an empirical process.

- *Equivalence of measurement*: the researcher, beyond assuring that the variables chosen can be given comparable conceptual definitions in the societies under study, has to develop equivalent indicators for these concepts.

- *Linguistic equivalence*: the problem of achieving linguistic equivalence through translation is the aspect of cross-cultural research that has received more attention from social scientists. Some common suggestions have been made to set the problem of linguistic equivalence. The main emphasis in translation should be on conceptual similarity rather than literally translation of identical words. The fact that the researcher is familiarised with the cultures under study can avoid many problems of translation. (e.g. difficulties stemming from replicating a questionnaire designed for use in one determined culture somewhere else). A final suggestion is that conceptual and linguistic equivalence can be improved by pretesting research instruments in the local culture, asking respondents for their interpretation of the item's meaning.

Given the importance of the issues explained above the author attempted to become integrated in the two societies studied. In the case of Pamplona, being the author's city of birth, the integration process was not necessary. The author's integration process in Durham County consisted of living for 12 months in Durham City prior to the data collection phase of the study.

3.4. The sample

The sample selected for the study is a purposive sample. This type of sample "aims to sample a group of people, or settings, with a particular characteristic..." (Bowling, 1997). It is, definitively, "a means of gathering a group or groups of respondents based on selection of individual cases because they typify people in a particular category" (Tones et al, 1990).

The criteria for the selection of the sample were outlined previous to the selection of the settings and the data collection. The following criteria were applied:

- Primiparous women.
- Women with low risk pregnancies

Any women with the following conditions in table 3.1 were excluded from the study:

Low risk: Pregnant women to whom it has not been possible to identify any of the risk factors detailed below or who only present one of the factors in Grade I.

Grade I	Grade II	Grade III
-Pelvic anormalities	-Premature broken placenta	-Heart disease III-IV
-Low height	-Threaten of premature delivery	-Diabetes
-Obesity	-Heart disease II	-Uterine malformation
-Very low social class	-Anaemia	-Multiple gestation
-Multiparity	-Alcoholism	-Cervix incompatibility
-Previous caesarean	-Drug addiction	-Isoinmunity
-Diabetes A	-Twin pregnancy	-Confirmed foetal malformation
-Heart disease I	-Gestational diabetes	
-Aged under 17 or over 37	-Prolonged pregnancy	-Recurrent perinatal mortality
-Smokers	-Haemorrhages 2nd or 3rd term	
-Risk of infecctions	- Infecctions (hepatitis, rubella)	-Previous placenta
-Rh incompatibility	-Morbid obesity	-Serious preeclampsy
-Previous sterility	-Light preeclampsy	-Serious sepsis
-Uncertain EDD	-Suspicion foetal malformation	-Serious diseases associated to pregnancy
-Non accepted pregnancy	-Hydramnios	

Table 3.1: Classification of risk levels in pregnancy (SEGO, 1999)

Women who where pregnant for the first time, and attending antenatal care in the practices selected for the study and within the designed data collection period were all included in the study. Only three women were excluded in England using the criteria listed in table 3.1, as their pregnancies were not considered of "low risk" and they did not meet the criteria the researcher had established for the study. From the sample in Spain, 11 women were excluded, as they did not return the questionnaire.

The final sample size was 114 women, 55 in England and 59 in Spain.

Retrospective analysis of admission was carried out to ensure that the required number of subjects for the study can be attained. The theoretical sample size in both locations were confirmed by retrospective admission records. Once the data was gathered, the expected sample size was between 50 to 65 women in each country. To be able to reach this number in the Chester-le-Street area, the research had to be amplified to four different practices. Such decision was guided by the enrolment number of the antenatal clinics given by each practice.

Region/ Country	Sample	Frequency	Percent Included	Percent Excluded
Chester-le-Street (England) n=58	Health Centre n.1	22	95.4% (n=21)	4.6% (n=1)
	Health Centre n.2	10	100% (n=10)	0% (n=0)
	Health Centre n.3	14	100% (n=14)	0% (n=0)
	Health Centre n.4	12	83.33% (n=8)	16.66% (n=2)
Pamplona Spain n=70	Health Centre n.1	70	84.3% (n=59)	15.7% (n=11)

Table 3.2. Sample characteristics by region and health centre distribution.

The time scale for the data collection consisted of four weeks in each country. The amount of time being spent on data collection was decided to ensure that data was collected from women in all pregnancy trimesters. This was rigorously followed to allow an equal comparison between both settings.

3.5. Location

The author's decision in regard of the location for the study, both in England and Spain, was guided by the accessibility to the antenatal clinics. The accessibility in Pamplona was negotiated by common agreement, as the author's personal past working experience in the city

involved previous knowledge and contacts which facilitated the access to any of the antenatal clinics in one particular health centre. The author also obtained permission from the Coordinator for Maternal Services of Navarra, which gave her consent for this research project to be performed.

For the choice of location in England the author decided to develop the study in Chester-le-Street. The enrolment number of primiparous women in the health centres in Chester-le-Street was insufficient as to only select one practice, and the number was extended to four practices. Approval from the Durham Health Authority was obtained.

3.6. Piloting the tools

The questionnaire was piloted once. For this purpose, ten women from one of the Chester-le-Street practices, which was not selected for the study were involved in the pilot. As a result, some minor amendments were made and some questions eliminated.

The questionnaire piloted in Chester-le-Street was translated into Spanish. The Spanish version of the questionnaire included exactly the same questions as the English version. The questions were formulated in identical ways. A sample of the piloted and the amended questionnaires, in both English and Spanish are included in **Appendix A.**

The technique of non-participant observation was piloted in a health clinic where the activities of staff and interaction between staff and patients were observed. As it has been pointed out by several authors (Morse, 1994; Tones et al, 1990; Mays & Pope, 1995a) that the validity and reliability of these studies rely heavily on the researcher's

involvement and training to deal with the observation and fieldnotes production techniques, this step was considered to be fundamental.

3.7. Non-participant observations

The focus that the researcher based her observations on was the ethnographic approach. In an attempt to describe the balance between isolated scientific research approaches and the understanding of social characteristics that ethnography can provide, Agar (1980) wrote:

> "Without science, we lose our credibility. Without humanity, we lose our ability to understand others". (Agar, 1980)

Historically, ethnography evolved in cultural anthropology, but the principle and practice of ethnography has been extended to other fields of research. As Tones et al (1990) describes "The ethnographic researcher participates, overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said and asking questions. There is a commitment to attempting to understand how people live and work within their own context". Ethnography research is usually carried out in natural settings, as its central base is that people's behaviour can only be understood in their context (Morse, 1994). This involves a very close involvement between the researcher, people and the society being studied. Another characteristic of this approach is that it is generally applied for studies focused in local communities or specific groups.

Observation studies can be carried out by using participant and non-participant observations, according to the degree to which the researcher

is involved with the group of study. In this case, the researcher decided to be present in the sessions as a non-participant observer.

Participant observation has the advantage of the minimum impact that the researcher's presence causes in the group of study. However, this type of observation has other considerable disadvantages including: the possible ethical considerations that covert participant observation might involve; or the possibility of missing some of the data or activities performed during the sessions if the participant researcher is involved in some others (Mays & Pope, 1995a).

None of the observations sessions were tape recorded, as it was considered to be too obtrusive for the women involved. Verbal and written consent was obtained from all the women before the midwife allowed the researcher staying in the room. The researcher only produced notes using the scheduled plan charts she had previously designed. A sample of the scheduled charts for Chester-le-Street and Pamplona are included in **Appendix B.** These notes were systematically completed and rewritten within 24 hours after each of the sessions.

The analysis of the data gathered through non-participant observation was performed in different stages. The fieldnotes were carefully read and re-read to ensure accuracy and to look for converging themes. The themes identified will be further investigated. Overlapping themes were found and grouped together under broader headings. Statistical analysis was applied to variables to study the frequencies and possible interrelations between the categories and headings that were previously identified.

3.8. The Questionnaire

The questionnaire was based on an already validated questionnaire, "Women's experience of maternity care-a survey manual" (Mason,1989). It aimed to find out the care women received during pregnancy, the health education they were given and their opinion of the care and information received.

Moreover, the researcher produced two supplementary documents informing the volunteers about the study and seeking written consent **(Appendix C, D)**. Every woman received such documents prior to answering the questionnaire. Both documents were signed by the researcher and her contact number and address were included.

The questionnaire was divided into four sections, clearly titled and explained. The topics that different sections included were:

1- Personal data: date of birth; marital status; educational qualifications; working status.
2- Pregnancy information: stage of the pregnancy; method of confirming pregnancy; care patterns; antenatal classes attendance.
3- Healthy life style promotion: the questions were grouped in categories as diet habits, care plan for the baby, physical changes in pregnancy and advice on exercise, smoking and alcohol consumption.
4- Satisfaction levels: including questions regarding waiting times, topics for further discussion and general satisfaction grades with the care and information received.

No names were included in the questionnaires and the respondents remained anonymous. The only document that contains such data is the consent form, which all women signed. These documents will be safely

kept until the end of the study and then destroyed. Each woman was assigned a numerical code so that any information she provided remained anonymous.

For the questionnaire data analysis the SPSS (Norusis, 1999) statistical package was used. A computerised database was created creating 135 variables from the 44 questions of the questionnaire.

Open questions were codified into groups and then introduced into a second database as categories, which are groups of data which cluster together.

Graphical displays of all the data were produced and studied. Chi-square test was then used when the analysis entailed comparison of proportions.

3.9. Main data collection

Data were collected from subjects included in the study at health clinics in Chester-le-Street for a period if time of four weeks. A similar period was allocated for data collection in Pamplona, which took place during four consecutive weeks. The total period of data collection was therefore eight consecutive weeks. The reason why the particular period of four weeks was chosen was governed by the number and periodicity of antenatal clinics in each practice and the number of women attending such clinics.

Serious consideration was given to different methods of administering the questionnaire, which would offer a high response rate. It was decided that the questionnaire was given to the respondent in person by the

researcher. Consequently, a response rate of 100% in Chester-le-Street and 84.3% in Pamplona was achieved.

As Grady & Wallston (1988) described, one of the major disadvantages of postal surveys is the low response rate, which commonly involve the need of sending reminders. To avoid this problem, the researcher decided to attend all the antenatal sessions during the eight weeks when the study took place. When the session was finished, each woman was taken to a separate room and the researcher administered personally the questionnaire to all of them. The benefit from this decision is that women were able to ask any query about the questions.

The researcher was present in all the antenatal appointments that took place during the eight weeks of the data collection period as a non-participant observer. In addition, fifteen cases in each geographical area were selected to be carefully recorded by producing detailed fieldnotes. The author selected three non consecutive days in each location to record the observations, with a total of thirty cases[6] (individuals) recorded in both locations.

The researcher was present during the antenatal group classes, nine sessions in Spain and seven in Chester-le-Street. The author's initial intention to observe the group dynamics in antenatal classes was abandoned following initial pilot study as there was only one way communication, i.e. midwife talk. Antenatal classes in both settings are imparted with little feedback from the attendants. Therefore, the author decided to exclusively compare the topics that the antenatal classes cover in each setting.

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[6] Case: A single unit in a study (e.g. a person or setting, such as a clinc, hospital) (Bowling, 1997:386).

Additional education material which women receive in each country was provided to the author by the midwives involved in the study. Such material consisted of leaflets, books, guides, maternity records. The quality of the information provided to pregnant women in this particular way will also be analysed and compared.

3.10. Ethical considerations

This research study obtained the Chairman's final approval of the County Durham Health Authority Ethics Committee, dated 06 March 2000 **(Appendix E)**.

The execution of this project did not involve any additional work for the nursing/midwifery staff of the health practices involved. The department did not have any extra cost for the project. The women in the sample were not subjected to any discomfort or danger.

Confidentiality of every subject was guaranteed as each was given a unique code. Computer records and research results only used these codes, and therefore, participants remained anonymous.

Volunteers freely agreed to take part in the study. Written consent was obtained from all women in the sample who signed if prior to being involved in any activity.

3.11. Limits of the study.

Qualitative methods are widely used and increasingly accepted in health research, but there is still considerable debate over the nature of the knowledge produced by such methods and how such research should be judged. (Mays and Pope, 2000). The choice of the most appropriate design for this study determined the legitimacy and what can be concluded from the data.

Within the limitations of the questionnaire the problem of the response rate was not an issue, as the researcher distributed them personally to every woman. There is the possibility that the respondents might have felt inhibited by the researcher's presence in the room when answering the questionnaire, although she did not have access to see which their answers were.

The questionnaires were statistically analysed, by using the SPSS statistical package. Reliability in this case can be assumed to be higher as it is more likely that the same or very similar results would be obtained if the study would be repeated at other time but on the same conditions.

During the observations, the presence of the observer might have caused what is called the "Hawthorne Effect", modifications in behaviour or actions of the people being observed because of having a researcher observing actions (Mays & Pope, 1995a). The researcher had to interpret a large body of data results gathered in the fieldnotes in unknown internal validity.

CHAPTER 4

SUMMARY OF FINDINGS

4.1 Questionnaire findings

The author distributed the questionnaires personally to all the women in the study. The length in time of the data collection period was eight consecutive weeks, four in Chester-le-Street and four in Pamplona. The questionnaires were returned to the researcher immediately after completion.

As mentioned before in this thesis, the SPSS 10.0 (Norusis, 1999) statistical package was used for the analysis. A database was created with a total of 135 variables. The two open questions of the questionnaire were analysed separately, by classifying the answers into categories and then establishing frequencies.

Since the present study is a descriptive one, the author only produced tables for the analysis of frequencies, comparing percentages within the same or with other variables. However, due to the differences found among some of those variables, the author considered it interesting to further investigate and try to establish statistical inferences between certain variables, such as the number of units of alcohol consumed before and after pregnancy.

The statistical test to use regarding the comparison of proportions when variables are categorical or qualitative is the Pearson's χ^2 test. The χ^2 test is applicable to analyse data presented by a number of observations within each category (e.g. percentage of patients with a certain characteristic). Definitively, it is used to analyse qualitative or categorical variables and to compare proportions or percentages (Martínez-González, 1997:121).

Categorical or qualitative variables are those which can be *named.* They are not measured but simply counted. Although they normally consist of "either-or" type observations (e.g. dead or alive, pregnant or not pregnant) they can have more that two categories (Campbell & Machin, 1999:50). They are variables which possible values are referred to a characteristic or quality that a person possesses or not possesses.

The limitation of the χ^2 test is that it requires a large number of observations for the results to be informative.

The purpose of the test is to establish whether the distribution observed differs from the distribution expected under the null hypothesis. The test statistic formula is:

$$\chi^2 = \frac{(Obs-Exp)^2}{Exp}$$

Obs: the number of cases observed
Exp: the number of cases expected.

The χ^2 test has two conditions of application:

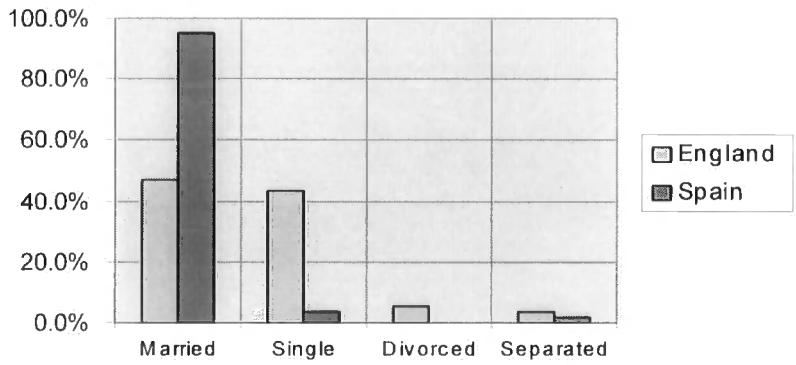
1. Variables must be qualitative and in nominal but not ordinal scale.
2. None of the expected values is less than 5.

The higher the value ofχ^2, the less evidence will exist to support the null hypothesis, and therefore the greater the statistical significance will be. A probability value p= 0.6547 corresponds to a χ^2 = 0.2 (see table attached. **Appendix F**). Therefore, it is not statistically significant and it is possible to conclude that there is no evidence to reject the null hypothesis. Would the result have been statistically significant, the null hypothesis could have been rejected, and an association between the variables analysed could have been established.

4.1.1 Section I: Personal data

The data collected under section I of the questionnaire was: date of birth, marital status, household characteristics, educational qualifications and working status.

With respect to the marital status of the respondents, 24 out of 55 women (43.6%) in Chester-le-Street clinics were single. In Pamplona the percentage is 3.4%, with only 2 out of 59 women. In contrast 94.9% of the women in the Spanish sample were married when only 47.3% of women in Chester-le-Street reported being married. There were no divorced women in the sample in Pamplona.

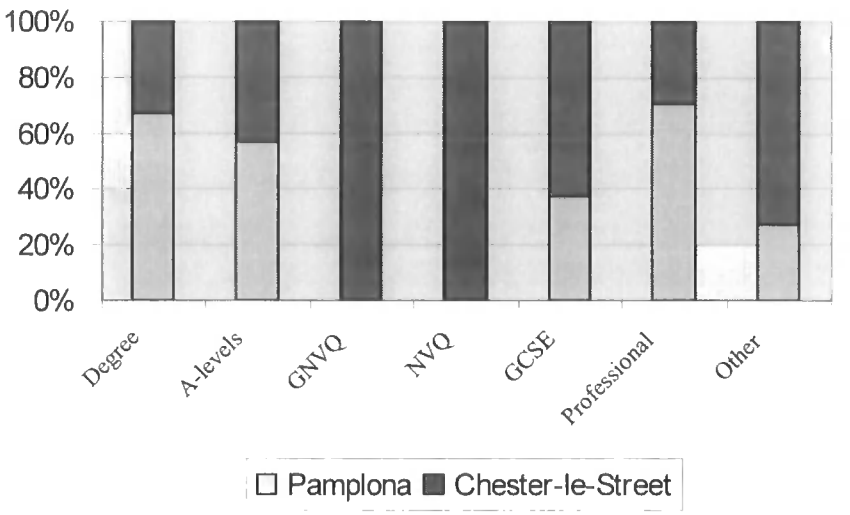


Graph 4.1. Percentages: Marital status. England & Spain.

The educational background of the women in Chester-le-Street health clinics and Pamplona follow a slightly different pattern. While in Pamplona the percentages are divided into two main categories (degree level and professional qualifications), the case of Chester-le-Street is distributed amongst all the seven categories. Pamplona has a higher percentage of women with university degrees than Chester-le-Street with 33.9% compared to 18.2% respectively; The percentages of A-levels are similar, 10.9% in Chester-le-Street and 13.6% in Pamplona.

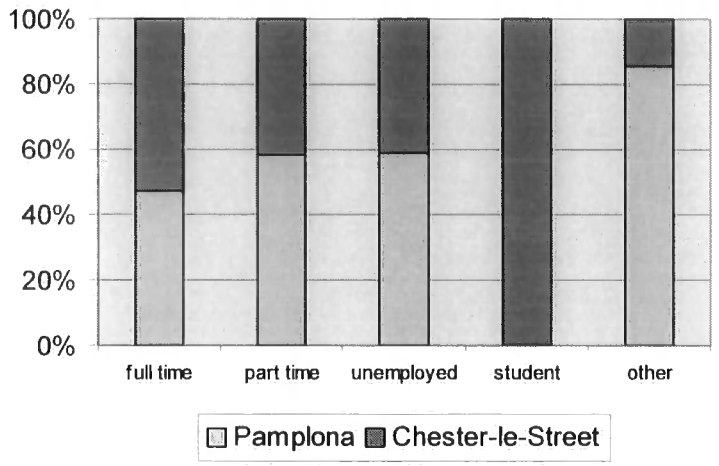
Qualifications such as GNVQ and NVQ have not got an equivalent in Spain, and are grouped into professional qualifications. Therefore, the category of "professional qualifications" in Spanish sample may include women with qualifications, which in England are clasified as GNVQ's and NVQ's.

The higher percentage of professional qualifications obtained in Pamplona (32.2% compared to 14.5% in Chester-le-Street) is therefore explained by such reason. If we add the percentages obtained in England in the categories of GNVQ, NVQ and professional qualifications the final percentage is 29%.



Graph 4.2. Percentages: Educational background.

Finally, the working status of the majority of the women in both samples is full time work (72.7% in Chester-le-Street and 61% in Pamplona). Only 9.1% of the women in Chester-le-Street and 11.9% in Pamplona work part time. The unemployment rate among women is greater in Pamplona (16.9%) if compared to Chester-le-Street (12.7%).



Graph 4.3. Frequencies: Working status.

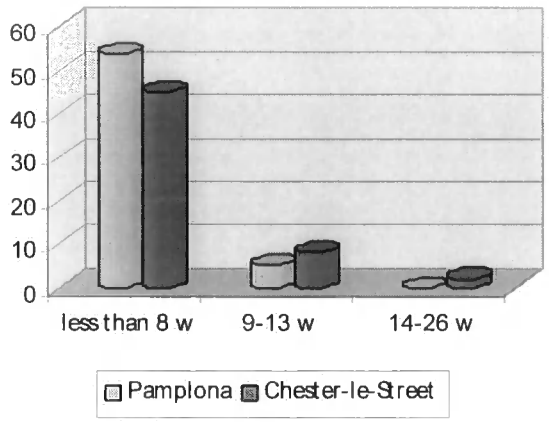
4.1.2 Section II: Details about the pregnancy

Among the subjects in the sample almost 80% of the women in Chester-le-Street obtained confirmation of their pregnancy using a home pregnancy test kit, but only 56% of the women in Pamplona used this method. In Pamplona there is a higher percentage of midwives confirming pregnancies to women. While in Chester-le-Street only 1.5% of all women saw a midwife to confirm their pregnancy, in Pamplona the percentage is 8.5%.

Pregnancies are confirmed in the majority of cases when women are 8 or less weeks pregnant, with percentages as high as 81.8% in Chester-le-Street and 91.5% in Pamplona.

In this case, it was not possible to apply the χ^2 test to this particular variable, as the number of expected cases in the category of 14-26 weeks was lower than 5 in Chester-le-Street and in Pamplona. The author also

considered to apply the Fisher's exact test, although this was discarded as it can only be applied to verify if statistical association exists between two nominal qualitative variables (tables of only 2×2 categories) (Martínez-González, 1997:136).



Graph 4.4. Frequencies: Weeks pregnant when the pregnancy was confirmed.

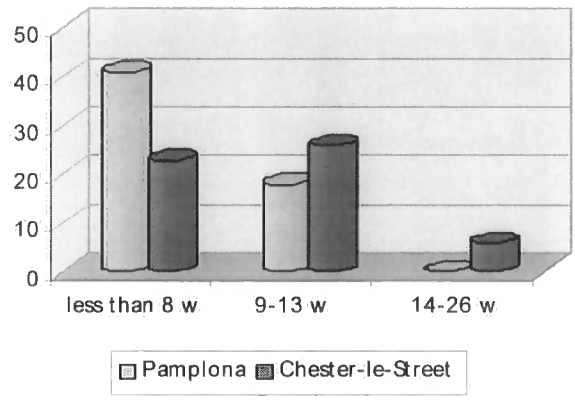
The answers to the question of how many weeks pregnant they were when they attended the 1st antenatal check, or booking appointment were not as clearly defined as in the question above regarding the number of weeks pregnant women were when their pregnancy was confirmed.

Almost three-quarters of the women in the sample in Spain (69.5%) attended the 1st antenatal appointment within the first 8 weeks of their pregnancy. In Chester-le-Street, 41.8% of women were less than 8 weeks pregnant at their 1st antenatal check

30.5% of the subjects in Spain attended the antenatal booking appointment when they were between the 9th and 13th week of the gestation. The majority of women in Chester-le-Street attended the 1st antenatal appointment between the 9th and 13th week, with a percentage

(47.3%) that is higher than those attending before the 8th week of pregnancy. There is also a significant 10.9% of women who did not attend until later than the 14th week of the pregnancy.

Women within the group of those not attending the antenatal booking appointment until later than the 14th week, the author asked about the reasons for such delay. 67% of them answered that the only reason was that they were not aware of being pregnant until a later stage, i.e. after the 14th week.



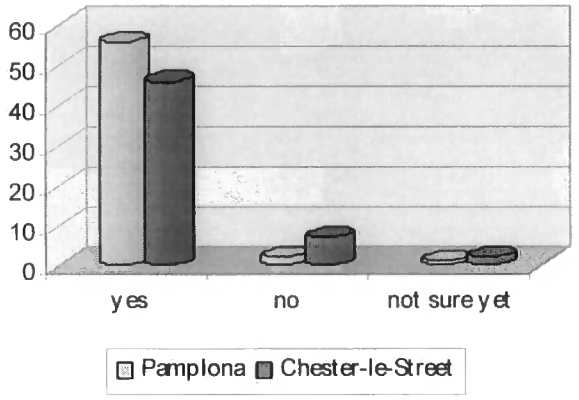
Graph 4.5. Frequencies: Weeks pregnant at the 1st antenatal appointment.

The majority of women at Chester-le-Street health clinics (89.1%) received community based care, lead by a midwife or GP but required regular visits to hospital for scans or specific tests. The remaining 1.8% received hospital-based care, 7.8% domino care and 1.8% other type of care, e.g. home based care.

In Pamplona, although the antenatal care is also community based, the women are seen by their community midwife and their gynaecologist at the same centre. There is no need for hospital visits unless

complications arise. 96.6% of the women from the Spanish sample were within this group. 1.7% received hospital based care.

The last question within this section was about the women's plans for attending antenatal classes. The percentage of women in Chester-le-Street who, at the time of the enquiry, had already decided not to attend was almost 4 times higher than in Pamplona, 12.7% compared to 3.4%. The vast majority in both countries planned to attend, 83.6% in Chester-le-Street and 94.9% in Pamplona



Graph 4.6. Plans to attend antenatal classes during pregnancy.

Among those who were not planning to attend the antenatal classes, the main reason were in order of frequency:

1. "Because it is difficult for me to get to the classes".
   42.9% of women in Chester-le-Street and 66.7% in Pamplona.

2. "Because I don't like being in a group with other women talking about their experiences".
   28.6% of the women in Chester-le-Street and none in Pamplona.

3. "Because I don't want to know too much".
   28.6% of the women in Chester-le-Street and none in Pamplona.

4.1.3 Section III: Health education. Promotion of a healthy lifestyle

The author was given all the written literature available for the women by the midwives in both settings, Pamplona and Chester-le-Street. After careful reading the author selected those topics included in antenatal care which could be grouped into categories such as diet habits, care plan for the baby and minor pregnancy physical discomforts.

The results obtained once the analysis of frequencies was made are interesting. Shown in the table below are the percentages obtained in Pamplona and Chester-le-Street to the questions of whether or not women received any information by any source on the following topics and whether or not the midwife did personally discuss or explain such topics with them at the antenatal appointments.

In all cases, the percentages of women who received information about the topics detailed in table 4.7 are higher than the percentages obtained when asked if the midwife did personally discuss the same topics with them.

Highlighted are the cases in which the percentages obtained are lower than 50%, that is cases where less than half of the women in the sample did talk to their midwives about that particular topic.

	Pamplona		Chester- le-Street	
Info given /topic discussed	**Info given**	**T.discussed**	**Info given**	**T.discussed**
-Aliments to avoid	78%	67.8%	92.7%	78.2%
-Supplements with doctor's advice	98.3%	84.7%	70.9%	58.2%
-Folic acid	98.3%	91.5%	96.4%	94.5%
-Increase intake of iron/calcium	100%	91.5%	63.6%	49.1%
-Limit the intake of caffeine	86.4%	74.6%	60%	38.2%
-Cut down fatty foods	93.2%	88.1%	56.4%	45.5%
-Breastfeeding	84.7%	79.7%	85.5%	60%
-Care of baby after birth	78%	74.6%	69.1%	47.3%
-Gum inflammation/bleeding	69.5%	59.3%	67.3%	38.2%
-Morning sickness	91.5%	83.1%	87.3%	78.2%
-Tiredness	89.8%	84.7%	87.3%	61.8%
-Aches/cramps/backpain	84.7%	76.3%	89.1%	65.5%
-Breathlessness/indigestion	89.8%	86.4%	74.5%	45.5%
-Varicose veins	84.7%	74.6%	63.6%	29.1%
-Constipation/piles	91.5%	83.1%	69.1%	38.2%
-Pass water more often	89.8%	84.7%	89.1%	65.5%
-Breast or vaginal discharge	84.7%	76.3%	72.7%	36.4%
-Oedema	74.6%	67.8%	65.5%	38.2%

Table 4.7. Comparison of percentages obtained between Chester-le-Street and Pamplona.

The χ^2 test was applied to the results obtained to the two questions explained above. The purpose of the test for the first question was to determine if there is an association between the country of residence of the women in the sample and the information they receive in their antenatal care. The null hypothesis (H_0) in all cases is that there is no relationship between the country of residence and the likelihood of receiving information on each of the topics described on table 4.7.

The question regarding whether the midwife had discussed the topics listed above with the women was analysed in the same way. The null hypothesis (H_0) consisted of the supposition of no relationship between the country of residence of the women in the sample and the probability of the midwife to discuss the topics listed above with the women.

When after the application of the test the value of the χ^2 allowed the author to discard the null hypothesis, then an association between the independent and the dependent (country of residence in this case) variables could be suggested.

The results of the χ^2 test are shown in the table below. The first column details all the different topics. The second shows the results to the χ^2 test to the first question, about the information given to the women during antenatal care. The third is a summary of the results obtained after analysing the second question, regarding the frequencies with which the midwives discussed or explained the topics on the first column with the women in the sample.

Both second and third columns also show if the results are statistically significant (ss) or not significant (ns) in which case the null hypothesis is discarded in the first case and accepted in the second.

Highlighted in bold are the cases in which the statistical significance is especially high. The higher the value of the χ^2, the lower the probability for the null hypothesis is to be true and accepted. Thus, the lower the value of p, the higher the statistical significance.

	Comparison between Pamplona - Ch-le-St	
	Information given	**Discuss with midwife**
-Aliments to avoid	χ^2=4.884; p<0.05 (ss)	χ^2=1.5506; p>0.2 (ns)
-Supplements by doctor's advice	**χ^2=16.837; p<0.001 (ss)**	χ^2=9.591; p<0.005 (ss)
-Increase intake of iron/calcium	**χ^2=26.019; p<0.001 (ss)**	**χ^2=24.92; p<0.001 (ss)**
-Limit the intake of caffeine	χ^2=10.26; p<0.005 (ss)	**χ^2= 15.38; p<0.001 (ss)**
-Cut down fatty foods	**χ^2=20.86; p<0.001 (ss)**	**χ^2=23.65; p<0.001 (ss)**
-Breastfeeding	χ^2=0.012; p>0.2 (ns)	χ^2=3.888; p<0.05 (ss)
-Care of baby after birth	χ^2=1.156; p>0.2 (ns)	χ^2=8.953; p<0.005 (ss)
-Gum inflammation/bleeding	χ^2=0.064; p>0.2 (ns)	χ^2=5.045; p<0.025 (ss)
-Morning sickness	χ^2=1.729; p<0.2 (ss low)	χ^2=0.433; p>0.2 (ns)
-Tiredness	χ^2=0.184; p>0.2 (ns)	χ^2=7.716; p<0.01 (ss)
-Aches/cramps/backpain	χ^2=0.4702; p>0.2 (ns)	χ^2=1.619; p>0.2 (ns)
-Breathlessness/indigestion	χ^2=4.597; p<0.05 (ss)	**χ^2=21.517; p<0.001 (ss)**
-Varicose veins	χ^2=6.687; p<0.01 (ss)	**χ^2=23.62; p<0.001 (ss)**
-Constipation/piles	χ^2=9.198; p<0.005 (ss)	**χ^2=24.18; p<0.001 (ss)**
-Pass water more often	(ns)	χ^2=5.717; p<0.025 (ss)
-Breast or vaginal discharge	χ^2=2.473; p<0.2 (ss low)	**$\chi^2$58.03; p<0.001 (ss)**
-Oedema	χ^2=1.131; p>0.2 (ns)	χ^2=10.035; p<0.005 (ss)

Table 4.8. χ^2 test results. Comparison between Pamplona and Chester-le-Street. Statistical significance of the results obtained.

It can be clearly seen how there is an association between residing in two different countries and the issue of the midwives discussing health education topics with the women attending antenatal care. The statistical significance is greater on those topics regarding the physical discomforts related to pregnancy as the presence of breathlessness, varicose veins, constipation and breast/vaginal discharge.

With respect to dietary habits, there is an association between residing in Pamplona and a higher likelihood of receiving information and discussing with the midwife the following topics: not to take supplements without a doctor's advice, the importance of increasing the calcium and

iron intake, limiting the intake of caffeine and the benefits of reducing the consumption of fatty foods.

However, when advising about aliments that can be dangerous for the foetus and should be avoided, the likelihood of receiving information and having a midwife explaining the reason for avoiding such aliments is higher in Chester-le-Street.

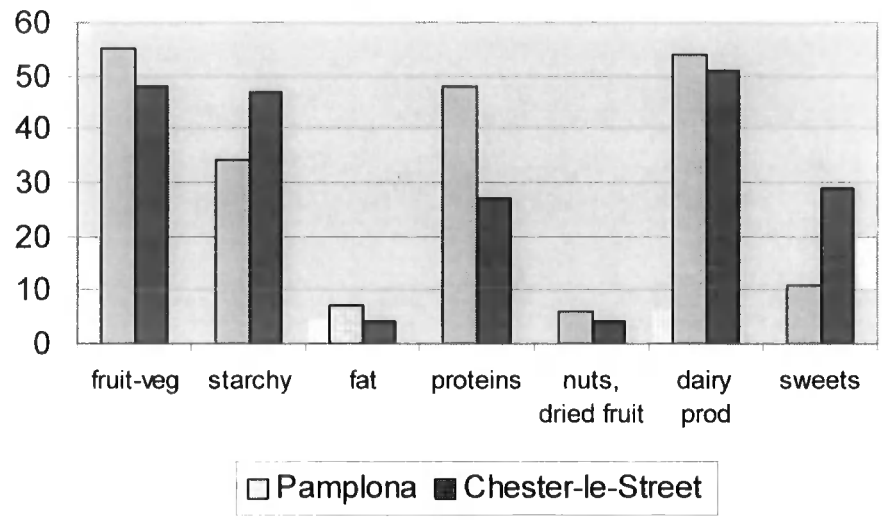
Regarding the information on folic acid, both countries have a very similar result, with percentages of 96.4% in Chester-le-Street and 98.3% in Pamplona.

The composition of the diet among the pregnant women in the sample in Pamplona and Chester-le-Street is also different. The percentage of women who eat fruit and vegetables everyday as recommended by Buss et al (1985:114) is similar: 78.2% in Chester-le-Street and 84.7% in Pamplona. The same situation can be seen with the dairy products. 83.6% and 81.4% of the pregnant women in Chester-le-Street and Pamplona respectively consume such products daily.

The main difference appears to be the percentages of starchy food (such as rice, pasta, bread) and proteins (meat, fish, eggs) in the diet. While almost 82% of the women in Pamplona consume proteins between 5 to 7 times a week, only 50% of the English women do so. To compensate so, they substitute the proteins with starchy products. Over 80% of the women in Chester-le-Street who participated in the study consumes such products daily. This compares to only 40.7% of women in Pamplona that include starch food everyday in their diets. The amount of carbohydrates in the diet of women in Chester-le-Street is higher than in Pamplona. In both locations fruits and vegetables constitute a basic pillar in the diet of the women in the sample.78.2% and 84.7% of women consume them daily in Chester-le-Street and Pamplona respectively.

The amount of sugar in the form of sweets or cakes consumed by the English women of the sample is over two times higher than by the women in Pamplona. In the latter group, 19.7% of women admitted eating sweets between 5-7 times a week whereas 52.8% of women in Chester-le-Street ate sweets for the same number of times per week.

However, the most surprising of the results was the proportion of fatty food ingested by the women in Pamplona. Despite the high percentage of women who received information about fatty food (93.2%) and were advised by their midwife (88.1%), the number of women who recognised consuming fatty foods more than 3 times per week is double of that in Chester-le-Street, where only 56.4% of the women received information about it and less than 50% of them ever had the chance to talk with their midwives about the topic.



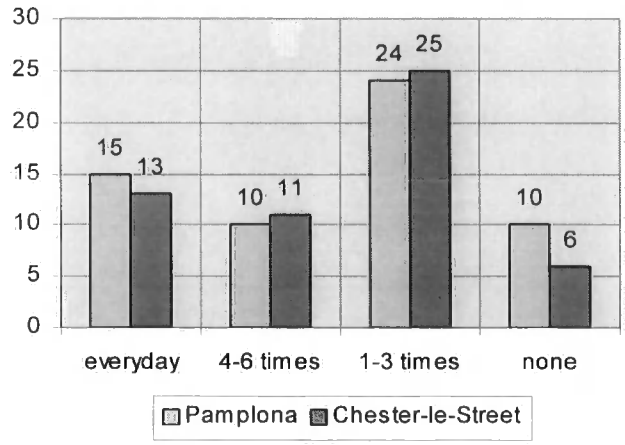
Graph 4.9. Frequencies of 5 to 7 times a week consumption of aliment groups.

The next group of questions in the questionnaire covered the topics of physical activity, alcohol and tobacco consumption.

Regarding the question that asked if they had or had not received advice of the importance of exercising during the pregnancy, 76.4% of the women in Chester-le-Street answered affirmatively compared to 93.2% in Pamplona. When the χ^2 test is applied the result shows that the probability of the null hypothesis (in this case it would be: H_0= the occurrence of receiving information on the importance of practising exercise is the same in both settings) to be true is $p<0.025$. Therefore, an association between living in Pamplona and a higher probability of receiving such information can be suggested.

The author was also interested in studying the type of exercise that pregnant women take. There were two questions for this purpose. The first one queried regarding the frequency which with they do exercise like walking or swimming. The second asked the same but about special pregnancy exercises (pelvic floor or abdomen exercises).

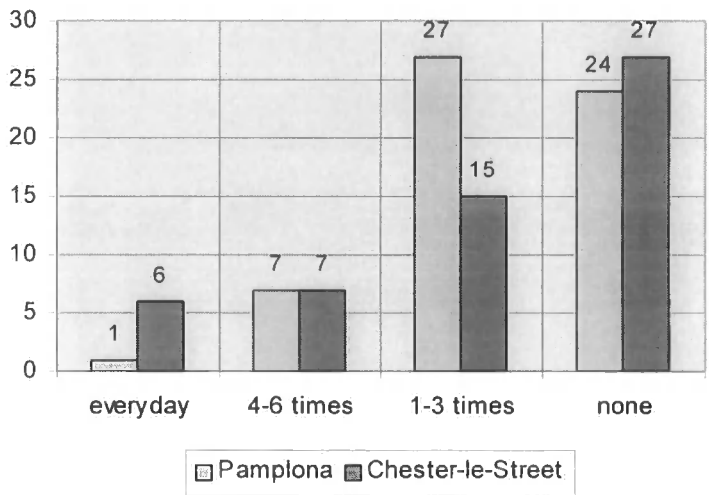
The results showed a high degree of similarity in the exercise pattern of both groups. To the first question the majority of women answered that they exercise between 1 to 3 times a week. The percentages were 45.5% in Chester-le-Street and 40.7% in Pamplona. The percentage of women exercising everyday is also parallel, 23.6% and 25.4% respectively.



Graph 4.10. Frequencies for women practising general exercise.

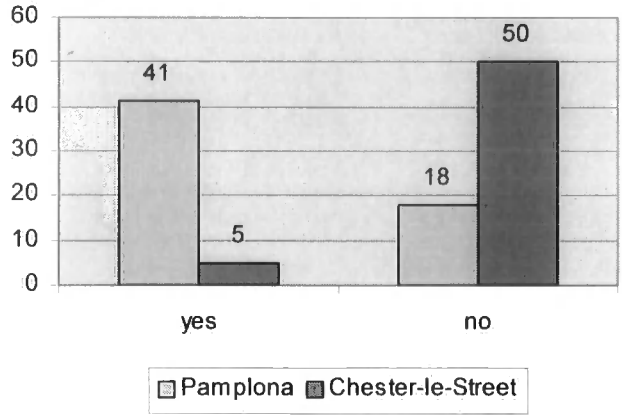
The answers to the second question are however not as similar. 45.8% of the Spanish sample declares taking pregnancy exercises (breathing, relaxation, pelvic floor exercises) between 1 to 3 times a week. The percentage in that category for the English women is lower, with only 27.3%. The reason is that the number of English women who take pregnancy exercises everyday is is seven times higher than in Pamplona (10.9% compared to 1.7%).

Consideration should also be given to the fact that almost half of the women in both settings do not take pregnancy exercises at all (49.1% in Chester-le-Street and 40.7% in Pamplona).



Graph 4.11. Frequencies for women practising special pregnancy exercises.

The percentage of smokers in Pamplona is significantly higher than in Chester-le-Street. Despite being pregnant, one third (30.5%) of the women in Pamplona admitted to smoke while only 9.1% of women smoked in Chester-le-Street.

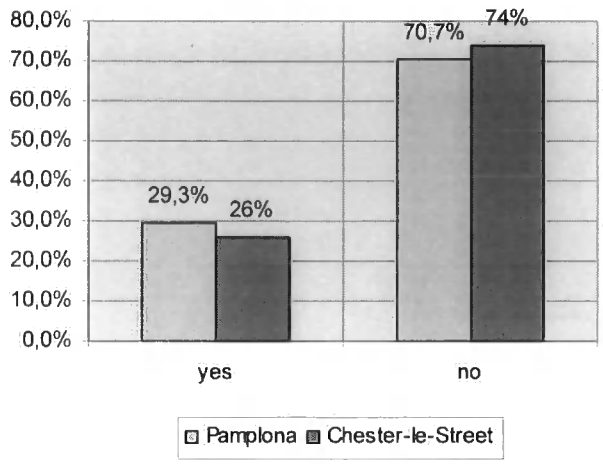


Graph 4.12. Frequencies. Do you smoke?

The above mentioned statistics can provide an explanation to the reason why midwives in Pamplona greatly insisted in the harmfulness of the smoking issue with almost 99% of the women attending antenatal care reporting having received advice on smoking cessation. Because smoking is a common habit in the Spanish society, smoking cessation programmes are a priority within antenatal care.

In Pamplona 70% of women reported not smoking. From that 70%, 30% stated that the pregnancy was the reason for having stopped. That is equivalent to a 42.15% of women who ceased smoking exclusively because of the pregnancy.

Among those who smoke in Chester-le-Street 100% reported smoking between 1-10 cigarettes per day. Among the smokers (30% of the total) in Pamplona, the percentage of women who reported smoking 1 to 10 cigarettes per day was 94.4%, and the rest 5.6% admitted smoking between 11-19 cigarettes per day.



Graph 4.13. Among women who do not smoke: percentages of women who stopped/did not stop smoking because of the pregnancy.

The prevalence of midwives giving information about alcohol consume and pregnancy was also analysed. All the women in the Spanish sample received information on alcohol consumption. In 98.3% of the cases the information was given by the midwife and only 1.7% of the women obtained such information by other health professional. In Chester-le-Street, 9.1% of the women did not receive any information at all. From the 90.9% of women who were informed about alcohol in pregnancy, 85.5% did so by their midwife and 5.5% talked to other professional about it.

The author compared the number of units [1 unit = ½ pint of lager beer or cider = a single measure of spirit = a glass of wine or sherry] of alcohol that women used to drink before the pregnancy and the number of units they drink while being pregnant. The table below shows the results obtained, comparing Pamplona and Chester-le-Street

	Before the pregnancy		During the Pregnancy	
	Pamplona	Chester-le-Street	Pamplona	Chester-le-Street
none	61%	5.5%	93.2%	76.4%
1-5 units	37.3%	54.5%	6.8%	23.6%
6-14 units	1.7%	34.5%	0%	0%
15-21 units	0%	1.8%	0%	0%
21+ units	0%	3.6%	0%	0%

Table 4.14. Percentages of alcohol consumption before and during the pregnancy.

It is very noticeable that the initial percentage of women who did not drink alcohol before the pregnancy in Pamplona is eleven times higher than in Chester-le-Street. It is an very different initial pattern in the two different countries, as the United Kingdom has got a drinking culture which is different from that of Spain. The figures prove the statement. In Chester-le-Street, 94.4% of all the women in the sample drank alcohol before getting pregnant. In Pamplona that percentage was only 39%. After the confirmation of the pregnancy and the advise of the midwives, the percentages of women who stopped consuming alcohol increased from 61% to 93.2% in Pamplona, and from 5.5% to 76.4% in Chester-le-Street.

The issue to further consideration is that after the women in the English sample confirmed their pregnancy, one quarter of them did not stop drinking, although they reduced the number of units of alcohol from as much as 21 to 1 to 5 units.

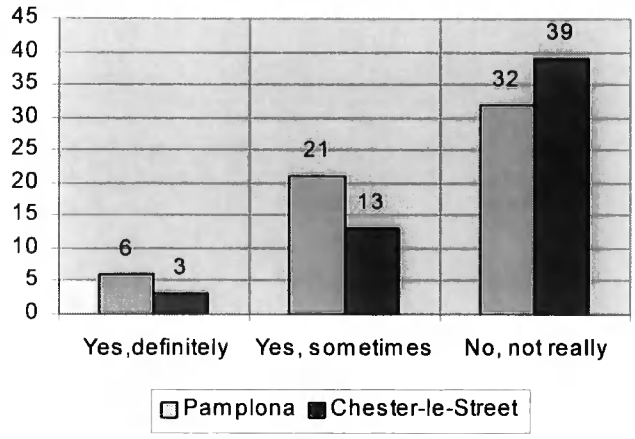
The last question within this section III that the author will analyse concerned the issue of breastfeeding after the birth of the baby. 100% of the women in Pamplona and 76.4% in Chester-le-Street were planning to breastfeed their babies. The reason offered by 8 out of the 13 women in Chester-le-Street for having decided not to breastfeed was "because bottle-feeding is easier than breastfeeding", against the popular belief of

women not breastfeeding because of incompatibility with the commitments from going back to their jobs. Only 3 women in Chester-le-Street marked this reason as the main cause for not breastfeeding.

4.1.4 Section IV: Satisfaction levels

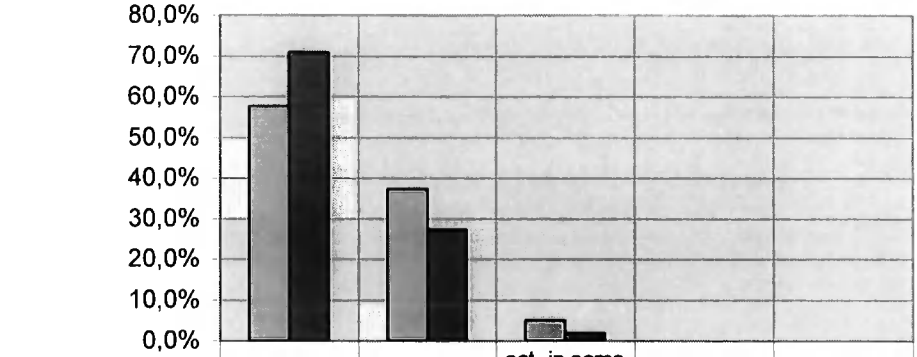
Women in the sample where asked to measure how much did they know about pregnancy and motherhood before they were actually pregnant, and how much more they did want to know. In Chester-le-Street, 58.2% of the women admitted knowing not much or basically nothing before their pregnancy. In Pamplona the percentage was 76.3%. When asked about how much more they wanted to know, 80% and 91.5% of women in Chester-le-Street and Pamplona respectively answered wanted to learn "a great deal" or "quite a lot more".

The figures below show that there is a high level of interest among women in Chester-le-Street and Pamplona in wanting to find out more about pregnancy during their antenatal care period. To the question "Have there been times when you would have liked your midwife to tell you more without you having to ask first?", 70.9% of the women in Chester-le-Street were satisfied with the information they had received and answered "no, not really". In Pamplona there were many more women who would have liked some more advice without having to take the initiative and ask first. 45.8% of the women answered "yes, definitely" or "yes, sometimes".



Graph 4.15. Frequencies: Would you like to have been told more without having to ask first?

In general terms, 70.9% and 57.6% of the women from Chester-le-Street and Pamplona respectively were very satisfied with the information and time that their midwife had given to each of them. With the term "quite satisfied" agreed 27.3% of women in Chester-le-Street and 37.3% of women in Pamplona. A small minority of 1.8% and 5.1% of women reported being satisfied in some ways, not in others. No woman answered to be not really satisfied or not satisfied at all.



	very sat.	quite sat.	sat. in some ways	disappointed	not sat. at all
Pamplona	57,6%	37,3%	5,1%	0%	0%
Chester-le-Street	70,9%	27,3%	1,8%	0%	0%

Graph 4.16. Percentages. Levels of general satisfaction.

Finally, the author would like to mention the issue of the waiting times that women have to endure each time they have an appointment before they are seen by the midwife at the antenatal check-ups. The percentages are very descriptive: 96.4% and 91.5% of women in Chester-le-Street and Pamplona had to wait less than ½ hour prior to have their antenatal appointment.

4.2 Observation sessions' findings

The detailed observation of the antenatal appointments in the two settings of study showed how similar and different certain aspects are.

Previous information about the structure of the sessions was verbally obtained from the midwives involved in the study, so that the author could prepare a pre-structured record with different categories in which to include the observation notes. Therefore, the observation sessions were based on a scheduled chart that the author had produced beforehand.

Observation notes were transcribed within 24 hours of each session. Information obtained was contrasted against the 14 topics that the author had pre-established. A check list was used for each observational sessions as Aide Memoire, which allowed the author to write additional notes of topics not included in the check list in more detail.

The data collected was analysed by gathering the total of the structured records and analysed numerically. Additional topics not originally included in the scheduled check list, were gathered and presented in narrative in the report, giving a number of verbatim excerpts from the data to illustrate or support the points made.

The principal differences found after the analysis of frequencies were as follows:

1. Length of appointment: the average time of an antenatal check-up in Chester-le-Street is 13 minutes. In Pamplona the average time is 24 minutes and 20 seconds.
2. Weight measurement: weight was not routinely checked in Chester-le-Street, where none of the sessions observed did include this issue. However, it is considered as a very important measure in Pamplona, where it was checked in 94% of the sessions observed.
3. Diet advice: only 13.3% of the sessions in Chester-le-Street included any diet advice, whereas in 73.3% of Spanish sessions diet advice was included. The last was usually linked to the measurement of the weight.
4. "Cues not picked up": the author selected this name for those cases in which she observed signs which caught her attention and which the author considered should have also caught the midwife's attention, i.e. a woman who had gained too much weight but the midwife did not check her weight or give dietary advice. If however those signs were not "picked up", then the author decided to note them and discover the frequency with which that happened. In case of Chester-le-Street it happened in 7 out of 15 sessions observed, and in Spain in 2 out of 15.

Both settings appear to deal with topics such as interest for the woman's general situation, measurement of blood pressure, urine test, palpation of the uterus and listening of the foetus' heartbeat, answering questions of concern, and issues on maternity leave.

A more detail exposition of individual cases and quotes will be included in next chapters of this thesis.

CHAPTER 5

WOMEN-CENTRED ANTENATAL CARE

5.1 Introduction

Nagey (1989), described antenatal care as a "series of interventions administered to a pregnant woman during the course of her pregnancy with the goal of improving her chances of a favourable outcome". One of its outstanding functions is to detect early any condition that might adversely affect the health of the mother or her baby.

Since there is evidence showing that the outcome of pregnancy to a large extent depend on the social policies and organisation of health care of the country in which the woman lives (Enkin et al, 1989), governments and official institutions started to suggest antenatal care as a

subject in most urgent need of consideration and establishing different "models" or "care patterns" of antenatal care.

Currell (1996) explains the extent to which pregnancy outcomes depends on the social organisation and policies of the place where each woman lives with the following statement:

> "Every maternity care service must be seen in its own social and economic setting but must also be examined in the same way as any other type of health service provision, and therefore be evaluated for its clinical effectiveness, its efficiency, its cost effectiveness, its accessibility, its acceptability and its equity".

The purpose of this chapter is to describe a theoretical model of how antenatal care and health education should be understood and provided. The construction of such model will be based on the information and data gathered by the author during the fieldwork performed in Chester-le-Street and Pamplona. The final outcome will contribute towards a more homogeneous model and will help to understand actual problems and deficiencies in the provision of antenatal care in both settings where the study was conducted.

5.2. Which resources should be available?

The quality of the antenatal care provided depends, to some extent, of the philosophy of care of the health clinic and the amount of resources available. Such resources may be classified as structural resources (facilities available in each centre, number of rooms suitable for antenatal classes), human resources (number of midwives or other health

professionals) or material resources (teaching materials, personal maternity records, medical equipment).

The fieldwork performed by the author enabled her to identify certain diverging points between the two settings. The author would therefore like to emphasise such points as guide towards the achievement of a more uniform model.

5.2.1 Centres for Women Care

Centres for Women Care (CWC) is a new concept which the author strongly agrees with, as they are specially designed to cover the special needs of women at different stages in life such as the menarche (beginning of menstruation), menopause or pregnancy.

The CWC have a multidisciplinary team, which comprises at least one gynaecologist and one midwife. Additionally, some centres also include social workers, registered general nurses and dieticians. The CWC in Pamplona did have 2 gynaecologists, one midwife and one social worker.

The positive aspect of having only one midwife is that all women get to identify her as "their midwife" and she is the only midwife that follows the evolution of their pregnancy.

However, the structure of a team of three or four midwives working on a rotation basis, as in the case of Chester-le-Street, presents other important advantages. While three midwives attend three different antenatal clinics, there is always one midwife visiting women at home. Women can call the midwife in case of any worries or complications and if necessary one midwife will be available for a home visit at any time.

The midwife in Pamplona works exclusively at the CWC, where all the antenatal clinics and classes take place. Home visits in this case would mean that the CWC would be left without any midwife for an emergency. Women in Pamplona are aware of the situation although they also know that they only need to go to their assigned CWC and the midwife or gynaecologist will be able to answer any worries or examine them in case of any alert.

It can therefore be concluded that Centres for Women Care are an excellent resource for the provision of antenatal care, although the coverage would be greatly improved by implementing a team of midwives.

5.2.2 Home birth plan

The aim of the home birth plan is to take into account women's preferences for the birth of their baby. One midwife of the community team arranges a home visit at around the 30th week of pregnancy to discuss important topics for the baby's birth.

The topics covered are labour companions, ways of coping with pain, different options for delivery, induction labour, assisted delivery, caesarean section and preferences of the woman about the baby after the birth (if she wants it handed to her straightaway or cleaned first or if she wants to breastfeed the baby right after the birth).

The author attended two birth plan visits in Chester-le-Street. She considers the birth plan as an excellent way of providing women with personalised care, giving the woman the chance of writing her preferences down and informing her of what might happen during her labour. Women are also aware that they could change their preferences at

any time if they so wished. Under the author's perception, the home birth plan gives the women the feeling of security and self-control over the birth of the baby.

At the moment of the writing of this thesis, birth plans were not being provided in Pamplona, whereas they were well settled and routinely programmed in Chester-le-Street.

5.2.3 Gyms and equipment for antenatal classes.

In addition to being a means for midwives to focus on health education issues, antenatal classes should also be an opportunity for women to take pregnancy exercises under the supervision of their midwives.

In Pamplona women are advised to attend antenatal classes with sport or comfortable clothes in order to be able to exercise during the last 30 minutes of each class. Exercises include pelvic floor, breathing, postural correction, blood circulation and relaxation exercises.

In order to provide women with a good antenatal education programme, the Centre for Woman Care in Pamplona disposes of a classroom/gym specially dedicated for the antenatal classes. The room is not only equipped with audio-visual facilities for the classes but also with inflatable mattresses for each woman to use for the exercises. The room is spacious and has no other use more than for antenatal classes.

Due to the limited number of mattresses in the room, pre-inscription for antenatal classes is required in Pamplona. Different groups are organised upon number of inscriptions with a maximum number of 15 women per group. In Chester-le-Street the antenatal classes at the time of the study were held at one of the community centres. The antenatal

classes in Chester-le-Street were held in the main hall of the centre, where chairs and a television set were prepared before each class. Since no gym was available, the breathing class was also held in the main hall with individual matresses.

5.2.4 Personal maternity records

The personal maternity record is a document that was designed for women throughout the United Kingdom based on the care that most women are likely to be offered. Women ought to carry it at all times, especially towards the end of the pregnancy.

The author considers the personal maternity record as a very effective means towards a more personalised, woman centred, care. The personal maternity record is used and completed by each midwife in each antenatal appointment. Details about the woman's personal details, health, pregnancy evolution, scans and birth preferences are recorded in the document.

The principal advantage of the maternity record is that it promotes continuity of care. In case of the woman being away during the pregnancy and therefore far from her local antenatal clinic, she would be able to receive care elsewhere, as a detailed description of her pregnancy and antenatal check-ups will be carefully explained in her personal maternity record.

Personal maternity records should be introduced in the routine practice of antenatal care in Pamplona, where at the time of the fieldwork were not being provided.

5.3. What should health professionals focus antenatal care on?

Based on the evidence obtained, it can be said that women in both settings, Pamplona and Chester-le-Street, receive an important amount of information about pregnancy from various sources. When asked, 77.8% and 50% of women in Chester-le-Street and Pamplona who had not attended antenatal classes, recognised obtaining information on pregnancy by reading from books. In Chester-le-Street 48.1% of the women stated having obtained information from other women with previous experience of pregnancy.

As stated by Cochrane (1992) while some of the information given and obtained by women will be helpful for her own education, some will arouse concern in terms of contradictory or misleading information or becoming aware of certain medical conditions related to pregnancy.

The way midwives should discuss or explain certain issues on health education should depend on the woman's past experience, seeing pregnancy within the woman's life context. When pregnancy and medical history is taken, midwives should bear in mind that previous life experiences can alter women's attitudes towards pregnancy. To illustrate this statement, women with previous miscarriages could be considered. Women under these circumstances need to be treated sensitively, and may benefit psychologically and obstetrically from an understanding and sympathetic care (Cochrane, 1992).

In the present study, the author included the issue regarding women's concerns within the pre-structured observation record. Detailed information was recorded regarding what the worries were, and how they were dealt with. The author will describe some of the cases in which

women reported having worries or in which the midwife recognised such worries to illustrate the issue.

The first case recorded was in Pamplona. The woman was 6^{+5} weeks pregnant (six weeks and five days). Towards the end of the appointment the author described the situation as follows:

> "...When, at the end, the midwife asked the woman if she had any questions or worries, she commented that she had been diagnosed with cervix ectopia. She had had a vaginal exploration two days ago and now she was bleeding. The midwife calmed her by reassuring her that that was completely normal after a vaginal test and that the bleeding would end by itself in a short while. She recommended her to use sanitary pads and to have "relative rest"..."

The second example is taken from the sample in Chester-le-Street. The woman was 20 weeks pregnant and issues of concern was raised by the midwife:

> "...Finally, when asking about worries in general, she said that last night she had bled during sexual intercourse with her partner. The midwife decided to refer her to the hospital to be re-checked to find out the reasons for the bleeding. Also, she said to her that, any bleeding during pregnancy, even the smallest, has to be well evaluated. So, in case that it happened again, she advised her to go straight to the hospital...".

The examples described above illustrate how reassurance and a "women concern" focus during antenatal appointments are useful to raise

concerns that otherwise may have not been discussed. The women themselves might not have considered as being important or might feel embarrassed to discuss certain topics, such as sexual intercourse during pregnancy.

Women's concerns and expectations should therefore be met during antenatal care. In general, women have the right to expect more from the antenatal services. Midwives and other health professionals should try to acknowledge the personal significance of pregnancy despite the existing debate of how antenatal care should be provided.

CHAPTER 6

PREPARING FOR LABOUR

6.1 Introduction

This chapter will focus on the practical reality of how women are prepared for labour during antenatal care in Pamplona and Chester-le-Street. The chapter will describe the normal schedule of the antenatal appointments and the physical examinations and tests performed during the pregnancy, i.e. laboratory tests, scans.

6.2 Preparing for labour

The components of antenatal care as Nagey (1989:517) describes

> "...include obtaining information from the patient through interview, physical examination, and/or laboratory evaluation; acting on that information or upon a standardised protocol to prescribe treatment for the patient in the way of medication, surgery, diet, or activity; and providing information to the patient with the goal of (eventually) forming, reinforcing, or modifying a behaviour...".

The elements described above form the basics of what antenatal care should be providing in practice. Standardised protocols, including the elements above, exist in both settings of this study. The author will analyse and compare the converging and diverging points of both protocols, citing examples and data collected.

6.2.1 Frequency of antenatal visits

Antenatal care patterns and their effectiveness have started to be systematically evaluated, and the statement that "more is better" is now being challenged.

There is an increasing amount of literature being written on the issue of reduced antenatal visits (Sikorski et al, 1996; Rosser, 1998; Clement et al, 1996; etc...). These studies do not provide any conclusive contributions of the reduced antenatal visits regarding women's satisfaction or implications for the midwifery practice.

In the cases of Pamplona and Chester-le-Street, the traditional antenatal schedule was followed, with eight and ten scheduled visits in Chester-le-Street and Pamplona respectively.

From the total number of visits standardised in the protocols, four of them in Pamplona and five in Chester-le-Street were led by a midwife. The rest of the visits, four in Chester-le-Street and six in Pamplona were led by either a gynaecologist or another health professional.

In the two departments involved in this study, antenatal management was found to be intensive and visits were frequent. The medically dominated model of maternity care which shaped maternity services in the UK and Spain was being substituted by the increasing importance that the role of the midwife was acquiring.

To illustrate the change, the case of Pamplona can be used. Before the new protocol explained in chapter 2 of this thesis was introduced, the midwife only saw the woman in the booking visit, at 26 weeks of pregnancy, and after the 37 week for the external non-stressing monitors until delivery.

In the UK the proposals put forward in "Changing Childbirth" are a welcoming change from the medically dominated antenatal care model. Three of the targets which are part of a drive to put midwifes back in charge of healthy or low risk pregnancies, as described by Savage (1994b) are:

1. At least 30% of women should have the midwife as the lead professional.

2. Midwives should have direct access to some beds in maternity units.

3. At least 30% of women delivered in a maternity unit should be admitted under the management of the midwife.

It can be seen that the two settings of the present study have started to introduce changes towards a more midwifery led antenatal care, however keeping the traditional antenatal care visits schedule, which seems to bring more satisfaction to women receiving antenatal care.

6.2.2 Physical examinations

6.2.2.1 Weight gain

The importance of the amount of weight gained during pregnancy cannot be overemphasised, as the welfare of both the mother and her child can be directly related to it.

The gain of weight normally follows different patterns along the pregnancy. Before the 12^{th} or 14^{th} week there is no weight gain. Weight gain starts when the woman starts feeling a sense of well being, the pregnancy is settled and the nausea and sickness have relieved. There is no great gain of weight up to the 20^{th} week either, with a total of 3 kg in average. The greatest weight gain occurs between the 20^{th} and 30^{th} week with a total of 5 kg in average. The speed of weight gain slows after the 30^{th} week until the 38^{th} week, when there is very often a decrease in weight.

There are two main reasons that justify the importance of controlling the woman's weight gain during pregnancy:

1. If between the 20th and 30th week the weight gain is more than 5 kg (in a woman of average build and height on a balanced diet. Special cases might have to be individually evaluated.) there is a predisposition for pre-eclampsia, with the resulting potential harm for the foetus and the woman.

2. The slightest loss in weight towards the end of the pregnancy, even only ½ kg, is one of the most reliable signs of full maturity of the foetus. It normally occurs after the 38th week, and labour usually follows in 7-10 days of such fall. This weight loss is due to the reduction of the secretion of hormones, which sets the onset of labour.

(Bourne, 1995).

Weight gain measurements were not checked by any of the midwives in Chester-le-Street. The reason given for such decision was that midwives did not want women to over-worry or become obsessed with their weight gain. Such measure is included in "The Pregnancy book" by the Health Education Authority (1999) in which is stated that *"...the weight will probably be checked regularly, although this is not done everywhere..."* None of the antenatal sessions observed by the author did include the weight gain measurement.

However, the situation was completely different in the sessions observed in Pamplona. The midwife believed in the importance of weight measurements as a straightforward means to avoid complications and prepare the woman for her labour as soon as a decrease in weight

happened towards the end of the pregnancy. Such measure was recorded in 14 out of 15 of the sessions observed. To illustrate the importance and advantages of a close follow up of weight gain these two cases can be mentioned.

> "...This appointment was not a booked session. The woman was 37^{+3} weeks pregnant. The woman turned up at the centre, complaining of having strong contractions since the day before. The midwife checked her BP and weighted her. The weight had decreased 1 kilo since the last visit, a clear sign of the proximity of the labour, as the midwife said. She put the woman on the monitor to see the uterus contractions. After only ten minutes on the monitor, the midwife assessed the strength and length of the contractions, showing the register to the gynaecologist. The midwife came back to the room and did a vaginal tact, to confirm that the cervix was obliterated. An ambulance was called, the woman was transferred to the hospital, where they practised a caesarean section on the same day..." (Pamplona).

> "...The woman in this case was 39 weeks pregnant. The midwife checked her BP and weighted her. She had gained weight in excess since her last visit. Her hands and feet were a bit swollen, "and it's just the morning now", added the midwife. She then recommended a 1750 kcal diet without salt. She gave her instructions to start having more meals but less copious. She also gave the woman a handout with different menus and ideas for her diet. The woman got a bit upset about it, claming that "eating is a pleasure for me. I really enjoy it". But the midwife persuaded her to follow the diet for the benefit of the baby..." (Pamplona).

6.2.2.2 Swabs for Streptococcus B

In pregnant women, Streptococcus B produces urinary infections, asymptomatic bacteriuria, amniotic liquid infections, post labour and post caesarean endometritis, bacteremia and puerperal sepsis. Among newborns, infections caused by Streptococcus B are one of the two most frequent causes of meningitis and septicaemia, which usually cause serious neurological disability and death (Dickason et al, 1995:618).

Streptococcus B can be isolated in the inferior genitals of the pregnant women, by taking samples from the perineum and rectum. Women infected by the Streptococcus B do not present any symptoms, and unless they are screened during pregnancy, the infection will not be detected before delivery.

The health of infected newborn babies deteriorates fast, ending in death or important neurological damage in almost 55% of all the babies infected, even with the administration of antibiotics (Dickason et al, 1995:618).

Nowadays, due to the seriousness of the disease, it is recommended that all pregnant women are screened for Streptococcus B in the 32nd to 36th week of gestation. Antibiotics can be administered just before the moment of labour to prevent the transmission of the infection to the baby (Servicio Navarro de Salud, 2000).

In the case of Navarra the Streptococcus B screening is included in all protocols and routinely performed. Within the 15 observation sessions performed, three of the women were in their 32nd to 36th week of gestation. All of them were screened for Streptococcus B.

The United Kingdom has not recognised yet the importance of Streptococcus B screening during pregnancy. None of the protocols studied includes such measure. The media has also echoed this matter in an attempt to obtain recognition from the National Health Service and include Streptococcus B swabs in pregnancy protocols.

While in America and other parts of Europe mothers are routinely screened for Streptococcus B and given antibiotics in labour, less than 5% of hospitals in the United Kingdom screen women routinely and less than a third give antibiotics when necessary, as reported in a new report published by the media in June 2001 (Johnston, 2001).

6.3 Laboratory tests

Every woman attending antenatal care is offered several routine tests, which will check for different conditions that may affect the woman's or foetus' health. The number and type of tests offered, although being very similar in the two settings of this study, differ in some aspects. The following table summarises all the routine blood and urine tests performed since the early pregnancy until just before labour.

Other additional tests, which require to be further discussed, are also offered in Pamplona and Chester-le-Street. Such tests include serum screening (to measure the risk of Down's syndrome and neural tube defects), sickle cell anaemia or thalassaemia and HIV.

The optional tests described above require women to sign a consent form in which they accept being tested for such diseases. Such requirement is fulfilled both in Pamplona (with a separate informative consent) and in Chester-le-Street (where the woman is asked to sign in her own personal maternity record).

Usual tests	Pamplona	Chester-le-Street
EARLY PREGNANCY		
Red blood cell count/ haemoglobin/platelet count	●	●
ABO group and Rhesus group	●	●
Coombs indirect test (if woman is Rh-)	●	○
Blood glucose and proteins	●	○
Blood uric acid and urea	●	○
Liver function tests	●	○
Iron and ferritin	●	○
Hepatitis B	●	●
Syphillis	●	●
Rubella antibodies	●	●
Toxoplasmosis	●	○
Calcium	●	○
Urinary culture and sediment	●	○
Urinary glucose	●	●
15-20 WEEKS		
Serum screening	○	○
24-26 WEEKS		
Red blood cell count / haemoglobine	●	○
O'Sullivan test	●	○
Blood uric acid	●	○
Antibodies if Rh negative	●	●
34-36 WEEKS		
Full blood count (+ clotting tests).	●	●
Streptococcus B culture	●	○
Antibodies	○	●

Table 6.1. ● Routinely done. ○ Not routinely done.

As it can be seen in table 6.1. laboratory tests required in Pamplona and Chester-le-Street differ considerably.
The number of tests that women are recommended to take in Pamplona is higher than in Chester-le-Street. The basic difference is that in Pamplona a biochemistry profile is included in the woman routine laboratory tests, which includes urea, creatinine, uric acid, glucose, calcium, total proteins, liver function tests, iron and ferritin.

Urine glucose levels were checked in every appointment both in Pamplona and Chester-le-Street. The urine test is not a precise method, but it is fast and useful to detect presence of glucose in urine, indicative of risk of gestational diabetes. The following is an example of how the glucose levels are controlled during the antenatal appointments:

> "...The midwife wrote all down in her notes, and then asked the woman if she had brought a urine sample. She had. The analysis showed a moderate amount of glucose in the urine sample. The midwife explained to the woman that she would have to do regular blood glucose measurements before and after each meal for a week, recording the results down in a special booklet that the midwife would provide. The woman was told to come back in a week to check the glucose levels' record..."

Both settings in this study, Chester-le-Street and Pamplona, offered the possibility of serum screening between the 15^{th} to 20^{th} week of pregnancy to measure the risk of Down's syndrome and neural tube defects. Such test is only performed under the mother's request after she has signed the written consent form.

Within the standard tests for pregnancy in Pamplona there are two specific tests which are only performed if the woman presents certain particularities. The indirect Coombs test is only performed if the woman is Rh negative and it is repeated after the 28th week. If the glucose levels are unstable during pregnancy the O'Sullivan test or glucose tolerance test is programmed. The latter is a test performed to measure the glucose levels in the blood for a 3 hour period by oral administration of 100 grams of glucose.

It is worth mentioning that one of the facts that most attracted the author's attention was the fact that, while blood tests in Pamplona are performed at each trimester the pregnancy, women in Chester-le-Street, (unless being Rh-) do not get any follow-up tests between the initial booking appointment tests and the final tests just before the labour. The importance of such tests is to detect well in advance any complications before the delivery, which might have not been presented at the beginning of the pregnancy, but have evolved during the pregnancy.

Toxoplasmosis is a systemic and generally asymptomatic disease, caused by the Toxoplasma gondii parasite. Cats and other felines are the usual hosts for this parasite. Toxoplasmosis can be transmitted to humans via the placenta. The effects of the disease over the foetus are strabismus, blindness, loss of audition, microcephalia, hydrocephaly, nephritic syndrome, epilepsy or neonatal death among others. The incidence of foetal infection is directly related to the moment of the pregnancy in which the maternal infection occurs. The risk of foetal infection increases as the pregnancy progresses. Therefore, the toxoplasmosis screening at the very beginning of the pregnancy is fully justified.

Despite the differences mentioned above, women in both settings receive intensive and frequent testing. The issue of the abusive

medicalisation of pregnancies has been raised (Langer et al, 1999). However, the fact that an early detection of any condition may help to minimise the hazardous effects on the woman's and the baby's health justifies the amount of tests that antenatal care services tend to recommend nowadays.

6.4 Ultrasound scans

Ultrasound assessments have become a normal practice in antenatal care in the United Kingdom as well as in Spain. The performance of routine ultrasound scans in women with low risk pregnancies has been widely discussed by several authors in an attempt to determine wheter scans represent any risk for the baby's health and if so, to what extent any possible benefits outweight the risks.

Reading et al. (1982) compared attitudes towards pregnancy among women whom he had randomly allocated in two different groups. Women in one of the groups were allowed to see the scan themselves while the other women were only given oral explanations. They found that those women who had been able to see the scans had more positive attitudes to the pregnancy and therefore they were more receptive to advice on smoking and alcohol consumption during pregnancy.

Another study by Michelacci et al. (1988) found that anxiety and depression symptoms in pregnant women after being given visual and oral feedback from the ultrasound scans significantly decreased.

Most mothers in the United Kingdom are offered a routine scan at some time between the 16^{th} and the 20^{th} week of the pregnancy. In the particular case of Chester-le-Street women are offered at least one scan to

confirm the expected delivery date (EDD) preferably before the 20th week.

Three scans are routinely performed in Pamplona: a pre-natal diagnostic scan at the 20th week of gestation, a more detailed scan between the 31st and 32nd week to determine the foetal biometry and a third one at the 40th week to assess the position of the placenta.

CHAPTER 7

LEARNING HOW TO BE A MOTHER

7.1 Introduction

The present chapter will give a description of the antenatal education programmes in Pamplona and Chester-le-Street, focusing on the practical skills that women ought to learn before the birth of the baby, and how those skills are taught. The author will analyse the aims of antenatal education before reviewing some of the studies previously published on antenatal education. Finally, the author will also point out the similarities, differences and strengths and weaknesses that both programmes presented.

7.2. Learning how to be a mother: antenatal classes

7.2.1 Aims of antenatal classes

Antenatal classes have a number of aims. Some provide what might be considered the most traditional function, which is the preparation for birth. However, classes should be structured towards the expectations and needs of the women attending the classes. Alexander et al. (1996) suggest that one of the potential of the antenatal classes is the modification of the parents' attitude towards childbirth, the increase in self-reliance and questioning and the increase in compliance with prescribed medical regimes.

It could be stated that the ultimate aim of antenatal classes is to prepare women in two aspects: the physical and the psychological, targeting issues such as anxiety reduction, positive attitudes towards pregnancy, increased knowledge and emotional support.

7.2.2 Previous studies on maternal education

Hillier and Slade (1989) tested the achievement of some particular aims of antenatal classes, measuring the effect that the attendance to antenatal classes had over the knowledge acquired, confidence and anxiety levels during pregnancy. The sample consisted of 31 women attending hospital based antenatal classes and 36 based in the community.

The results showed that the increase in knowledge in both groups was significant. The areas with the most potential for further learning were issues about smoking, benefits of breastfeeding and diet. Confidence levels regarding labour and care of the newborn showed substantial increases. The main advantage of community based classes over hospital based classes, is that more women developed friendships among the others attending.

The results obtained in Hillier and Slade's study although being very positive cannot be attributed to attendance at the classes as the design of the study did not include a control group of women who did not attend antenatal classes.

Another study performed by Guillén Rodríguez et al. (1999) included 222 pregnant women who attended maternal education at the health centre of Molino de la Vega. The study was based on a pre-test/post-test, which included the administration of three questionnaires: the first at the beginning of the maternal education, the second immediately after the completion of all the antenatal classes and the third after the labour. 211 women answered the 1st questionnaire, 145 also answered the 2nd and 113 answered the three of them.

The results showed that age, greater educational level and not being primiparous were linked to better initial knowledge. 99.5% considered the sessions very pleasant; 89% easily understandable and 100% took part freely in the discussions. 86.7% had little or no fear of giving birth, 92.8% and 69.8% found the breathing and relaxation exercises useful.

7.2.3 Antenatal classes in Pamplona and Chester-le-Street

The two settings where the study took place, Pamplona and Chester-le-Street offered antenatal classes to all women attending antenatal care, specially to those expecting their first baby, although any expectant mother was welcome.

Similarities were found in the antenatal education programmes of both settings:

1. Community midwives taught the classes in both settings. In the case of Chester-le-Street, where there are four community midwives, each midwife is responsible for two of the eight antenatal courses organised per year. Therefore, women attending any antenatal course can identify one midwife as the group leader or person of reference.

2. Some of the topics included in the content of the antenatal course such as labour, pain relief, feeding and baby care and exercising and breathing exercises are taught in a very similar way.

However, significant differences were also found between Pamplona and Chester-le-Street, not only in the contents of some of the sessions, but also in the teaching methods employed and the composition of the groups:

1. In Pamplona antenatal classes began at around the 26th week of gestation. The reason for this is that the topics discussed during antenatal classes, such as labour, pain relief, feeding and babycare all occur towards the end of the pregnancy. The midwife in Pamplona

did not agree with the idea of giving out too much information when the woman is still not ready and might see the end of the pregnancy as a distant event. In the case of Chester-le-Street, the midwives did not impose any specific time during pregnancy for women to start their antenatal education, although by average women started attending slightly earlier, anytime after the 20th week or second half of the pregnancy.

2. The composition of the groups for antenatal classes differed in Chester-le-Street and Pamplona. Pre-registration was not required in Chester-le-Street, and therefore the final size of the group was unpredictable and different in each class. The antenatal class in Pamplona was formed by a closed group (a small group of pregnant women with the midwife as their leader), while in Chester-le-Street the groups were open. One of the advantages of open groups over closed groups is that the flexibility is maximised and if a class is missed there is a chance to catch up on that topic the next class in which it arises. It suits those parents who cannot plan ahead or those who might not want too much commitment (Priest and Schott, 1991:28-31). The main disadvantage of open groups is that due to their larger size they function more as an passive audience with a teacher rather than a group with a leader, and therefore most of the benefits of group work that the closed groups present are lost. The other advantage of closed over open groups is that as trust grows members can address more emotive or difficult issues (Priest and Schott, 1991:28-31)

3. The size of the antenatal classes was different in each class in Chester-le-Street, while in Pamplona the size was stable along the nine sessions included in the antenatal education programme. Each group in Pamplona had a maximum of 15 women, in order for each

woman to have her own mattress and equipment for the breathing and relaxation exercises. In Chester-le-Street the size of the groups varied widely between sessions, although the maximum number was 42 people (including partners and mothers). Nichols and Smith Humenick (2000:569) described the importance of classes being small enough to allow group interaction. Based on group process theory and research, Nichols and Smith Humenick state that the most appropriate size for childbirth education classes is a number of 5 to 12 couples. Classes of this size promote participation and enhance learning and satisfaction levels.

4. Some of the topics included in Pamplona are not in the programme in Chester-le-Street and vice-versa. In Pamplona the visit to the labour ward at the hospital is not scheduled within the antenatal education programme. In Chester-le-Street, although breathing and relaxing exercises are taught and practised in one of the sessions, they are not included as a main part of every class as it is in Pamplona.

5. Expectant mothers in Chester-le-Street are offered to attend the breastfeeding workshops organised by the community midwives. The workshops take place monthly for two hours so that women can attend whenever it is more convenient, either closer to the birth or any other stage. The topics discussed include benefits of breastfeeding over bottle-feeding, education on how to avoid the most common problems usually related to breastfeeding, and how to position the baby to the breast properly. The workshop also includes a video and an informal discussion with the midwives.

The results of the present study showed that 83.6% and 94.9% of the women were planning to or had already attended antenatal classes. Among those who had already attended antenatal classes, the following table shows the percentages of women who recorded having received information on the topics listed in the table below:

	Chester-le-Street	Pamplona
Preparation for labour & birth	100%	100%
Woman's health after birth	53.3%	73.5%
Pain relief	100%	89.8%
Emotions in pregnancy	60%	57.1%
Care of baby after birth	80%	71.4%
Breathing/relaxation exercises	86.7%	93.9%
Feeding of the baby	86.7%	69.4%

Table 7.1. Percentages of women having received information on the topics listed above.

From the data above it could be said that apart from the preparation for labour and birth, the antenatal classes in Pamplona tend to be more focused on topics on women's health after birth and breathing and relaxation exercises. In Chester-le-Street the higher percentages correspond to pain relief, care of the baby after birth and feeding of the baby. However, these figures may not be accurate as the lower percentages in certain topics in Pamplona and Chester-le-Street may be due to the fact that no data were collected regarding the number of antenatal classes each woman had attended at the moment of answering the questionnaire. Lower percentages in certain topics might be due to the woman not having attended the classes covering those topics yet.

The author noticed the fact that issues regarding smoke cessation, alcohol intake and nutrition advice were not included in any of the antenatal education programmes.

The reasons for not including smoking, alcohol and nutrition advice in any of the antenatal programmes is unknown by the author. It might be because of the programmes are focused on issues about labour and puerperium. The fact that antenatal classes are mainly organised for women in their second or third term of pregnancy could suggest that most women might receive advice on nutrition, alcohol and smoking individually, in their antenatal visits, possibly since their fist booking appointment.

Further consideration and analysis on these three and other health issues will be presented in the next chapter.

CHAPTER 8

HEALTH ISSUES IN ANTENATAL CARE

8.1 Introduction

The present chapter will describe and analyse the advice given to pregnant women on issues related to the promotion of healthy lifestyles. The topics the author will focus on will be the advice given on physical activity, alcohol consumption, smoking cessation and dietary modification during pregnancy.

As health promotion advice should commence immediately after the pregnancy is diagnosed, this type of care does not have a direct impact on premature delivery rates, which is one of the main causes of perinatal disability and death (Enkin et al., 1989:16). However, pregnancy is a period within women and families' lives when they are particularly open to consider lifestyle changes. Furthermore, some of the topics in

childbirth education can be addressed from a lifelong approach as they are also essential components of a healthy lifestyle. Therefore, childbirth educators and midwives should be aware, and take advantage, of their position and unique opportunity to promote healthier lifestyles or habits.

8.2 Promotion of physical activity

The benefits of a physically active pregnant woman have been reported since as early as from the 3rd century BC. Aristoteles reported the importance for women to remain active during the pregnancy to avoid increased discomforts during gestation and a more difficult labour.

Research performed during the 20th century has studied the effects of the exercise on maternal weight gain and foetal birthweight. No evidence has been found of a negative association between the practice of moderate exercise during pregnancy and the outcome of that pregnancy (Clapp and Little, 1995).

The Health Education Authority in England and the Spanish Midwives Association in Spain both promote the practice of moderate physical activity during pregnancy. The guidelines of the two institutions are very similar and could be summarised as this:

> "The more active and fit women maintain themselves along the pregnancy, the easier they will find it to get adapted to their new shape and weight gain, as well as the better they will cope with labour and getting back into shape after the delivery".
>
> (The Pregnancy Book, Health Education Authority, 1999).

However, it is necessary to make a division between the type of exercises pregnant women should practice. Pregnant women are advised to keep up their normal physical activity or exercise for as long as they feel comfortable. Such exercises should not be strenuous and might involve as little as just a daily walk. Women are advised to try to keep active on a daily basis, although if the woman cannot manage to exercise everyday, any amount is better than nothing. A particular exercise that is recommended is swimming, as the water supports the woman's increased weight and deadens any brusque movement (Health Education Authority,1999; Spanish Midwives Association, 1998).

Furthermore, women are also advised to include in daily routines the so call special pregnancy exercises. The aims of such exercises are to strengthen joints, abdominal and pelvic floor muscles, improve circulation and ease backache. The Spanish Midwives Association (1998) also considers that, as important as the exercises just mentioned, pregnant women need to learn how to breath for the moment of labour and how to relax during the pregnancy in order to overcome fatigue and promote rest.

The results obtained in the present study regarding exercise were displayed in chapter four. Those results showed how the vast majority of women in Pamplona (93.2%) and Chester-le-Street (76.4%) reported having received advice on the importance of exercising during pregnancy. However, in none of the individual antenatal sessions observed by the author did the topic arise. The situation was different in the group antenatal classes observed, in which the topic of physical activity was discussed by the midwife in all classes.

The fact that almost half of all the women in the study reported to exercise one to three times a week (45.5% in Chester-le-Street and 40.7% in Pamplona) is not of such importance, as women are advised to

continue the exercise regime they followed before the pregnancy. The most surprising fact is the low percentage of women in Pamplona who practices special pregnancy exercises daily, with only a 1.7%. In this case, the proportion of English women who do exercise everyday is 10.9%.

Considering the category in which the majority of women in each setting admitted to belong, 49.1% of women in Chester-le-Street reported not doing any exercise at all and 45.8% of Spanish women admitted taking the exercises between 1 to 3 times a week. The latter might be due to the fact that women may only practice the pregnancy exercises during the weekly antenatal classes where the practice of such exercises plus relaxation and breathing exercises is included in every class.

8.3 Alcohol consumption and pregnancy

The belief that parental drinking might cause damage to the foetus in the uterus has perseveringly recurred. Many studies have been published since as early as the beginning of the eighteenth century, although the diagnosis of "Foetal alcohol syndrome" was first used by Dr. Jones in 1973 (Spanish Midwives Association, 1998).

The majority of the research on alcohol in pregnancy has shown negative effects in women who are moderate to heavy drinkers before and during the pregnancy. Alcohol consumption has also been associated with learning difficulties, low birthweight, intrauterine growth retardation or spontaneous abortion (Wright et al, 1983; Harlap and Shiona, 1980).

The Health Education Authority in the United Kingdom states that there is no evidence to suggest any association between foetal damage

and women who drink occasionally during pregnancy. It however recommends to either stop drinking alcohol or if not possible to reduce the number of units to one or two units once or twice a week. The Department of Health of the Government of Navarra does not mention a maximum safe limit of alcohol consumption in pregnant women and recommends not ingesting any alcohol during the pregnancy

Plant (1985) designed a study with the primary aim of establishing whether or not birth abnormalities can be associated with rates of alcohol consumption among pregnant women. A prospective study was designed and data was collected in four different stages of pregnancy: at 12 weeks, 34 weeks, pregnancy outcome and 12 week after labour check of surviving babies. The initial sample was 1,008 women who were divided into three different groups: high, medium and low alcohol consumption. The results obtained showed that a number of birth abnormalities and perinatal difficulties were individually significantly associated with baseline alcohol consumption measures.

In the present study, the alcohol consumption patterns in Pamplona and Chester-le-Street were found to be very different. Although 98.3% and 85.5% of women were told about the harm that alcohol consumption can have over the foetus, the researcher could not verify or certify it, as the topic was never arose in any of the individual sessions or antenatal classes observed.

The researcher realises that there is the need to consider that all the women observed in the antenatal clinics also answered the questionnaire. The results from the questionnaires show that 23.6% (13 out of 55) and 6.8% (4 out of 59) of women in Chester-le-Street stated they drank between 1 and 5 units of alcohol per day during pregnancy. Therefore, there is the possibility that a certain number of women in the sessions

observed were still drinking during the period of time they attended the antenatal clinics.

The positive aspect to mention is the important reduction, if not cessation, of alcohol consumption among the women in the sample when their pregnancies were diagnosed. The reduction is considered substantial in Chester-le-Street where the baseline measures of drinking before the pregnancy were more than ten times higher than those in Pamplona. The following case was recorded in Pamplona and was the only session in which the issue of alcohol consumption was discussed:

> "Pregnant women in her 7^{+5} week of pregnancy. This was her booking in appointment...When she was asked about her smoking and drinking habits, the woman admitted doing both, although she had stopped drinking since she found out she was pregnant. The midwife encouraged her by saying that the effects of alcohol are accumulative and any amount drank since the beginning of the pregnancy could influence the possible effects for the foetus..."

8.4 Smoking cessation benefits and antenatal care

It is well known that smoking during pregnancy has been associated with increased incidence of maternal problems and also childbirth complications. Nichols and Smith Humenick (2000) consider that the evidence found in previous research is enough to introduce smoking cessation and self-help approaches during antenatal education.

Smoking while being pregnant produces carbon monoxide and nicotine amongst other toxic substances which pass to the blood stream. These

substances also cross the placenta barrier, causing a decrease in the oxygen supply to the foetus and tachycardias.

Previous studies have shown the hazardous effects smoking has on foetal growth. Burton (1992) studied the effect of maternal smoking on the placental structure in mid to late gestation. His conclusions suggested that the decreased birthweight of the babies of smoker mothers cannot be attributed to a disruption in the placental development. However, there was evidence that smoking causes interference with the transport mechanisms of oxygen and nutrition, with its consequent effects on the baby.

Another study, by Nicholl and O'Cathain (1992), attempted to establish the relationship between sudden infant death syndrome (SIDS), smoking during pregnancy and passive smoking of babies whose parents smoke. For that purpose they designed a retrospective study with data on 988 babies who died between the ages of 1 week and 2 years and a further 773 controls. One of the findings of the study showed a significant and independent increase in the risk of SIDS in babies whose mothers' partner smoked. Therefore, the evidence strongly suggested the role that postnatal passive smoking plays in the risk of SIDS.

Other studies and have focused on different issues such as the association between smoking and pre-eclampsia (Hall and Harper, 1992) or the effects of smoking on foetal growth (Anderson et al, 1992).

The results of intervention measures in preventing smoking during pregnancy were studied by MacArthur and Knox (1992). The study took place at a hospital in Birmingham over a 12 month period. A total of 1259 women who smoked at the time of their first booking-in appointment were included and divided in two groups, intervention and

control. Women in the intervention group received specially designed supplementary anti-smoking information while the control group only received the anti-smoking advice contained within routine antenatal care. One of the study's findings was that there was a difference in the smoking behaviour of women in the two different groups with different proportions of stopping and in the average reduction in the number of cigarettes smoked per day. The greatest behaviour changes were among primiparous women in the intervention group. The final result of the trial showed that specially planned anti-smoking health education among primiparous women lead to both an alteration of their smoking behaviour as well as to an increased weight and length of the babies at birth, compared to those of the control group.

The antenatal care programmes in Pamplona and Chester-le-Street did not include any special health education for smokers. However, there was an important quantity of literature in form of leaflets and booklets available. Gillies (1992) states that randomised trials of anti-smoking cessation interventions have demonstrated that advice and booklets have failed to influence overall rates of smoking cessation., although they are effective in the reduction of tobacco consumption during pregnancy.

Among the women included in the present study the percentages of smokers was three times higher in Pamplona than in Chester-le-Street (30.5% and 9.1% respectively). In the case of Pamplona, one third of all women attending antenatal care at the time of data collection admitted smoking during pregnancy. Health professionals in Pamplona should assess the situation and recognise that smoking among pregnant women is a major widespread problem among the population. The author considers that specially designed anti-smoking health education should be implemented.

Among all the antenatal sessions observed, the author only witness one session in Pamplona during which the issue of smoking was discussed. The transcription of what was recorded by the author is as follows:

> "Pregnant women in her 7^{+5} week of pregnancy. This was her booking appointment. When asked about her smoking habits she said that now that she was pregnant she had cut down to 1 or 2 cigarettes per day (she used to smoke 10-15 cigarettes a day before the pregnancy). The midwife said that she considered that reduction as important and congratulated the woman.

In the case above the author considers that the midwife should have taken the matter to further discussion, providing more health education and trying to convince the woman to cease smoking. However, as the author did not follow up the cases observed in any posterior sessions, the matter might have been discussed further and other measures applied.

8.5 Nutritional needs in pregnancy

Pregnancy is a period during which additional nutritional demands are imposed on the woman. As Luke and Heith (1992:7) state, the final outcome of the pregnancy will not only depend on her present dietary habits, but also on her lifetime nutrition.

As an essential part of antenatal care, women should be nutritionally assessed in order to establish their nutritional health, identify risk factors and to intervene with either preventive or corrective measures that will optimise the woman's health (Luke and Heith, 1992:7).

When assessing weight gain during pregnancy the age, height and pre-pregnancy weight should be taken into account. Energy requirements during pregnancy and lactation depend on the mother's pre-conception weight. The mother's diet has to provide her with the necessary energy to sustain new placental tissue, amniotic fluid, extra breast tissue, extra maternal fat and muscle stores and increased blood volumes.

Special attention should be paid to those women whose nutritional status might depend on social, cultural or religious practices. These practices might influence women's food choices during pregnancy, which could either be favourable or unfavourable. For example, special religious restrictions may impose the woman not to eat meat or not to eat any food before midnight during the Islamic Rhamadan. Although religious practices should be respected, health professionals should also be capable of suggesting alternative foods to substitute the nutrients that such religious restrictions forbid.

The recommendations from the Health Education Authority (1999) and the Spanish Department of Health in regards to what the composition of a balanced diet should be are identical:

1. Fruit and vegetables: at least five servings a day, including fresh fruit juices.
2. Proteins: One or two servings a day. Proteins have an important role in the expansion of maternal blood volume, uterus and breasts. This group includes meat (not liver), fish, poultry, eggs, beans and nuts (not peanuts).

3. Fatty food/sugary products: the recommendation is to limit the amount from regular to occasional consumption.

4. Starchy food: To be included in every meal, trying to eat wholegrain if possible. This group includes bread, potatoes, pasta, rice, cereals.

5. Milk and dairy products: To eat between 2 to 3 servings a day, trying to use low fat varieties. This group includes milk, yoghurt, cheese, fromage frais.

The results obtained for the present study show that women in general follow a healthy diet during the pregnancy. Figures and percentages were given in chapter 4.

The other issue to consider is the advice given on food supplements, such as vitamins and minerals. Special importance has the intake of iron and folic acid. The relationship between the iron levels and foetal wellbeing is well established. The demands of iron are necessary for the formation of new red cells as the woman's blood volume increases. The foetus will also need to develop from the mother's storage, which will have to be enough iron to compensate blood loss during labour. However, this cannot be mistaken with a normal lower value of iron (or hematocrit value which is the volume percentage of erythrocytes in the blood) in the woman's blood which is normal in pregnancy (Serrano Monzo, 1996:53). The expansion of blood volume is more due to the plasmatic volume than to the globular volume. Therefore, pregnancy involves a gradual hemodilution with a decrease in the hematocrit value.

Iron absorption increases with vitamin C. Therefore women are advised to take aliments rich in iron (green leafy vegetables, lean meat, dried fruits and nuts) with good sources of vitamin C as citrus fruits, tomatoes, broccoli, blackcurrants or potatoes.

The importance of an adequate folic acid intake consists in the prevention of birth neural tube defects (Turrillas Roldán, 1995). Advice on folic acid should strictly start from the moment women start trying to conceive and up to the 12th week of pregnancy. It is therefore not only a matter of antenatal care, but should also be present in community primary care.

The results of the observation sessions showed a significant difference in the number of session during which midwives gave dietary advice. Only 2 out of 15 sessions in Chester-le-Street included nutritional advice, while the proportion in Pamplona was 11 out of 15. The reason for such difference could be linked to the close weight gain evaluation performed in Pamplona. The author noticed that in the majority of the cases in Pamplona, weight gain measurements were usually followed by dietary advice, even in the case of normality as in the following:

> "The woman was 35 weeks pregnant...The pregnancy was evolving correctly. The midwife checked BP, urine and weight and everything was within the normal limits. The only advice she gave to her was to start eating less amount of food in each meal but to eat more times during the day and also to start using less salt in her food, as the final weeks of pregnancy tend to produce swelling in legs or hands and salt promotes it".

The two cases in which dietary advice was given in Chester-le-Street involved some abnormal situations. In one of them, the woman that glucosuria (glucose in urine) and in the other case, it was a pregnant teenager whose most important worry about her pregnancy was her body shape.

" Teenage pregnancy of 34 weeks...The midwife asked the girl to lie down on the bed. Her partner stood up next to her holding her hand. The shape of her tummy looked quite small. Different questions from the midwife ended with the girl's recognition of her preoccupation about her body shape. She was cutting down some foods, and under the opinion of the midwife, she wasn't having enough nutrients for the optimum foetus development. She explained what she should eat and put responsibility on her partner to make sure she ate well".

The advice given in this case was very complete and specific. The only point to remark is that the girl was 34 weeks pregnant, only 4 to 6 weeks before labour. Further advice should have been given from the early pregnancy. However, as the author did not follow this pregnancy from the beginning, it might be the case that nutritional advice was given to her in prior occasions, without the girl accepting it.

CHAPTER 9

SOCIAL AND POLITICAL ISSUES IN ANTENATAL CARE

9.1 Women maternity rights and benefits

9.1.1. The European Union Directives

In October 1992, the Council of Ministers of the European Union produced (in response to the Social Charter agreed by all the Member States except the U.K. in 1989) a directive on the introduction on improvements of pregnant workers' safety and health measures (Collins, 1994). Some of the main issues of the directive can be outlined as:

- Maternity leave: All pregnant workers should be given at least 14 weeks of maternity leave, irrespectively of the length of service with their employer or the number of hours they work per week. These 14

weeks can be allocated either before or after confinement[7], although there is a compulsory leave of at least two weeks before the expected date of birth (EDB).

- Employers' assessment: employers must assess any activity which may involve any health risk for their pregnant workers, as exposure to physical, biological and chemical agents.

- Protection against dismissal: including the period of time from the beginning of the pregnancy to the end of the maternity leave.

- Maintenance of rights described in the employee's contract.

- Health and safety and EU guidelines: referred to any potential problem that might affect the women, as movements and postures, mental and physical fatigue, stress, etc...

- Night work: Not to be performed under provision of medical certificate.

- Maternity pay: Maintenance of a payment to an adequate allowance. All pregnant women are entitled to paid time off work for antenatal appointments.

The EU Pregnancy Directive (Collins, 1994).

[7] Confinement: The birth of a live child or the birth of a child whether living or dead after 28 weeks of pregnancy.

The guidelines described above should provide the basis for the Pregnancy and Maternity Policies of all the countries conforming the EU, although everyone has got its own particularities.

9.1.2. Statutory provision for maternity leave in Spain

The Article 48 of the 1980 Workers Statute guarantees the provision of paid maternity leave. This article was amended by law 3/1989 of 3 March 1989.

There is only one condition that is requested to qualify for maternity leave pay. This is to have been registered with the Social Security (equivalent to the NHS) 9 months before the birth and to have contributed for 180 days in the year leading up to it. There is not requirement of continuous employment for a certain period of time prior to childbirth.

The entitlements that pregnant workers in Spain benefit from are:

- Total allowance of 16 weeks of maternity leave distributed as decided by the woman, with a minimum of 8 weeks to be taken after the childbirth.

- Possibility of extension if after the 14^{th} week there is not full recovery.

- Payment of 75% of the woman's basic salary, which is equal to the benefit payable for temporary incapacity due to sickness).

- There is not paternity leave rights. Fathers are to be entitled to 2 days off work for the birth of a child.

Additionally, there is another issue of interest to mention. It is not uncommon that employers who are concerned with the maternity allowance of their employees, pay them full wages, accepting the responsibility for the 25% difference between the wage and the benefit.

9.1.3. Women maternity rights and benefits in the U.K

The right that all pregnant women have of a paid maternity leave is guaranteed under the Social Security Act 1986. The UK law requirements to qualify for this right are greater and more complex than that in Spain or the European Union. Consequently, before the recent change in the law in 1995 only 60 % of women who leave work to have children qualified for the legal protection offered by the Employment Protection Consolidation Act 1978 (EPCA) (Hanlon, 1995).

The requirements prior to the reform in the UK legislation involved a continuous period of employment of 5 years for those working between 8 to 16 hours per week to qualify for a paid maternity leave. No protection was guaranteed if the working hours per week were fewer than 8.

The House of Lords decided that there was no justification for the different thresholds established by the UK legislation for the treatment of full time and part time workers. From 6th February 1995, the law is that "wherever it is necessary to have 2 years' service to qualify for a right,

then this is so regardless of how many hours are worked each week". (Hanlon, 1995).

The three main entitlements that all pregnant women who meets the requirements explained above are as follows:

- Six weeks in total with a 90% pay, followed by up to 12 more weeks at a lower rate (not specified). A further 22 weeks (plus another 4 weeks with a medical certificate) are allowed, although the woman receives a lump-sum for the 18 first weeks, and the rest is unpaid.

- Not more than 11 weeks of the leave may be taken before the birth and not more than 29 weeks after it.

- The law allows a pregnant employee the right to reasonable time off to receive antenatal care, with no length of service qualification required.

- There are not statutory provisions for paternity or parental leave.

(Collins, 1994).

COUNTRY	MATERNITY LEAVE	MATERNITY PAY
Spain	16 weeks altogether; 6 weeks can be taken before or after the birth.	75% of earnings for 16 weeks.
England	40 weeks altogether. Can take up to 11 before the birth and 29 weeks after.	90% of earnings for 6 weeks, followed by flat rate payment for 12 weeks. The rest, unpaid.

Table 9.1: Comparison of Spanish and English Maternity Entitlements.

9.2 Social issues in antenatal care

9.2.1 Vital statistics of Pamplona and Chester-le-Street

Vital statistics, also named natural movement of the population, aims to know the number of births, deaths and marriages occurred within the Spanish territory. These statistics are elaborated from the information obtained from birth, marriage and death bulletins that are fulfilled at the Civil Register (Instituto Nacional de Estadistica, 2001).

The research undergone by the author shows that the same concept in England does not exactly involve the same parameters. Vital statistics include live birth rates, fertility rates, percentages of live births, births under 2,500 grams, death rates, mortality ratio and occasionally others, as percentages of persons with limiting long-standing illness (Office for National Statistics, 1999c).

The author has therefore gathered the parameters considered as significant for this thesis from different sources, although not all of them were found as part of the vital statistics of the population that they are referred to.

The usefulness of birth and death rates of a population is determined by the fact that both rates are given together, so that it is possible to calculate the natural change of that population. The more close these two figures are (birth and death rates), the less natural change that population has. Such growth is equal to zero (Zero Population Growth) when the population is stable, neither increasing nor diminishing. Populations with higher death rates than birth rates will have a negative natural change.

United Kingdom's birth and death rates in 1996 were 12.5‰ and 10.9‰ respectively (Office for National Statistics, 1999b). The Spanish figures of birth and death rates in 1999 were 9.58‰ and 9.4‰, in the same order as above (Instituto Nacional de Estadística, 2001). Thus the natural change rate was 1.6‰ for the United Kingdom and 0.18‰ for Spain. The conclusion is that even with a lower rate of mortality, the Spanish population is "older" that the English, as the Spanish birth rate is also lower. The table below shows these national figures along with further figures from regional populations within both countries.

	United Kingdom	Durham County	Chester-le-Street	Spain	Navarra
Birth rate per 1000	12.3	11	12.1	9.58	9.72
Death rate per 1000	10.7	11.5	10	9.4	9.61
Natural change	1.6	0.5 (-)	2.1	0.18	0.11

Table 9.2: Vital statistics.

United Kingdom in 1997 (National Office for Statistics,1999).

Spain in 1999 (Instituto Nacional de Estadística, 1999).

The author considers that it is worth mentioning that although Durham County's natural change rate is not only below the national average but with negative values. However, the same rate in Chester-le-Street is well over the national rate. The natural change rates in Spain and Navarra are very similar, with almost a zero growth of the population.

9.2.2 Differences in marital status and family composition

In relation to the marriage rates' issue, the situation in both settings of study differs greatly. While 44.8% of the population in Pamplona is married, situation which concurs with the national average rate (Instituto Nacional de Estadistica, 2001), in 1997 there were 310,200 marriages in

the United Kingdom, among the lowest annual figures recorded during the twentieth century (Office for National Statistics, 2000). The North East region, with 11,900 marriages (4.5‰ of the total population), also registered one of lowest annual figures of the country.

The reason that might explain the difference in marriage rates is undoubtedly linked with different religious beliefs. Spain being a renown Roman Catholic country means that The Catholic Church bans cohabitation before marriage, divorce and civil marital unions. However, the social stigma associated with people living together without marrying has diminished in recent years, which suggests that older people are more likely than people in younger age groups to think that living together outside marriage is always wrong.

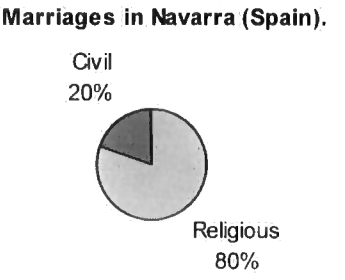
The Spanish society behaviour and lifestyle was, as recently as thirty years ago, strongly directed by the Catholic Church. Nowadays, younger generations are more relaxed towards religious beliefs. Consequently, marriage rates are experiencing a diminution. The national rate of marriages in 1997 was 5.23‰ and in Navarra the figure was 5.28‰. However, the situation is still behind when compared with other European Union countries.

The United Kingdom has experienced a shift away from religious to civil marriages. By 1997 three in five weddings in Great Britain were conducted with civil ceremonies (Office for National Statistics, 2000). Out of the total number of marriages in the UK in 1997, 41% were religious ceremonies and 59% were civil ceremonies (Office for National Statistics, 2000).

The difference with the Spanish percentages is more than considerable. The national rate of religious marriages is as high as 77%, figure that in

Navarra increases to 79.7% (Instituto Nacional de Estadistica, 1994). Civil ceremonies on the other hand are not as common, with only 22.7% in Spain and 20.3% in Navarra (Instituto Nacional de Estadistica, 1994). Furthermore, the tendency with these type of ceremonies, the civil marriages, is nor increasing neither diminishing but stable.

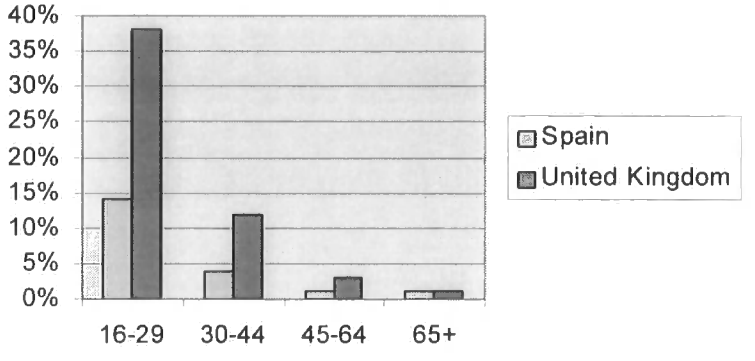
Graph 9.3. Civil/Religious marriages in the United Kingdom.



Graph 9.4. Civil/Religious marriages in Spain.

Changes in family structure still reflect the cultural traditions inherent in different countries. In the northern countries of Europe young people tend to leave home earlier, to either live alone or as unmarried couples. This is in sharp contrast to the southern countries and Ireland where the young are more inclined to live longer with their parents and usually wait until they are to marry before leaving. The Eurostat (1998) (Statistical Office of the European Communities) in its publication "Social Portrait of Europe" reports how at least 50% of young adults aged 25-29 in Spain, Italy, Greece and Portugal still live with their parents compared with 17% in the United Kingdom.

Non-marital unions is also a growing phenomenon in most European countries. Although in the Union as a whole, around 90% of the population co-habiting are married, this figure masks significant differences across countries. While 38% of couples aged 16-29 in the UK cohabit, only 6-14% of Italian, Spanish and Portuguese couples live in a consensual union (Eurostat, 1998).



Graph 9.5. Cohabitation percentages by age group. Comparison Spain/United Kingdom.

The differences in marriage rates between Chester-le-Street and Pamplona was evidenced by the author after the analysis of the data collected during the study. The percentage of married couples in Chester-le-Street was 47.3% while in Pamplona reached 94.9%.

9.2.3 Termination of pregnancy. Use of contraception

The 1967 Abortion Act, introduced in England and Wales in 1968, permitted termination of pregnancy by a registered practitioner subject to certain conditions (Macfarlane et al 2000:103). Following its introduction

the number of abortions for women of all ages resident in England and Wales rose rapidly and has since followed an upward trend through to 1990. There was a decrease in 1995 after the health warning that the Committee on safety of Medicines issued on the increased risks of thrombosis carried by the pill. After the pill scare, abortions increased in 1996, tendency that has continued up to the present. In 1998 the total number of legal abortions in England and Wales was 178,000. The number of abortions in the age group of 15-19 in 1998 was 35,892 (Macfarlane et al, 2000: 225).

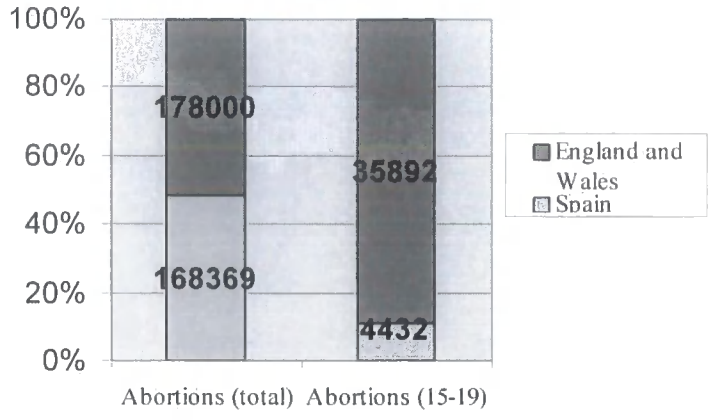
Abortion in any form was considered illegal in Spain until 1985. There were no exceptions for the prohibition for abortion. The *"Ley Orgánica 9/85 de 5 julio 1985"* modified the article 417bis of the Penal Code and introduced the partial decriminalisation of abortion. Thus, abortion can be practised in public or private hospitals with the consent of the woman if one or more of the following criteria is met:

- If abortion is necessary to avoid serious danger or damage of physical or psychological health of the woman [...].

- If the pregnancy is the result of the punishable act of rape, provided that the abortion is performed within the first 12 weeks of gestation [...].

- If it can be presumed that the foetus will be born with serious physical or psychological defects, provided the abortion is practised within the first 22 weeks of gestation [...].

The figures in Spain, although being similar to the UK figures in the total number of abortions with 168,369 abortions in 1999, only registered 4,432 legal abortions in girls aged 15 to 19 years.



Graph 9.6. Total abortions. Teenage abortions (15-19 years). Spain/England. Number of cases and percentages.

9.2.3.1 Use of contraceptive methods.

The availability and use of contraception allows people greater control over sex and when to start a family and how many children to have. In 1998-1999, 72% of 16 to 49 year old women in Great Britain used some form of contraception (ONS, 2000).

The main difference between Spain and England in use of contraceptive methods is again found in the teenage age groups. While 79.76% of Spanish girls aged 15-19 has never used any contraception ("Fertility survey", Instituto Nacional de Estadistica, 2000), 33% of girls aged 16-17 and 52% of girls aged 18-19 in Great Britain were using at least one method. Substantial imbalance can also be seen within the age group of 20-24. Whereas in Spain only 48.75% of girls of this age use contraception, 70% of women within the same age group in the UK use at least one method of contraception. The percentages within the rest of age groups are lower in Spain, although the difference is not as

substantial. The average percentage of women aged 25 to 49 using contraceptive methods is 64.68% in Spain and 75.6% in Great Britain.

The influence of the Catholic religion in Spain still plays a role when deciding for or against the use of contraception. 35.5% of practising Catholics have never used and will never use any artificial contraceptive method.

9.2.4 Teenage pregnancies[8]

Despite the overall trend towards a later motherhood, the proportion of teenage pregnancies is a rising phenomena in all Europe. On average, only 1% of girls aged 15-19 across the EU countries have children. The United Kingdom though, stands out with a fertility rate of girls between 15 and 19 over twice as high as the EU average (Eurostat, 1998).

The total teenage conceptions in England and Wales in 1997 were 93,678, of which almost 60,000 lead to maternity (Macfarlane et al, 2000:360-363). Therefore, the rate of teenage conceptions was 46 per 1000. Slightly under 2/3 of conceptions to women aged under 20 lead to maternity.

The situation in Spain is an upward tendency to abortions in teenagers who get pregnant. A study developed by the CSIC (Centro Superior de Investigaciones Científicas) in 1998 showed that four out of ten teenage conceptions terminate in abortion. In 1987, 25,435 girls under 20 became

[8] Teenage pregnancy will be considered as any pregnancy in teenage girls aged between 15 and 19 years. Ages under 15 will not be included as statistics of pregnancies under 15 are not compiled in Spain.

mothers. In 1994 that figure declined to almost one half with 13,140 teenage mothers. The fundamental reason: the resource of abortion (Centro Superior de Investiogaciones Científicas, 1998).

Macfalane et al (2000:142) states in her book "Birth Counts" that by reviewing data about teenage pregnancies, the highest rates and percentages of mortality and low birthweight belonged to babies born to teenage girls when compared with all births.

Amongst all the women in the sample who answered the questionnaires, six of them were of ages between 15 to 19. All the cases were found in Chester-le-Street and none in Pamplona. The author observed two of those six cases during the antenatal appointments. The midwife was the same in both cases. Those appointments lasted 20 and 16 minutes, which is over the 13 minutes that the average appointment lasted in Chester-le-Street. Under the author's opinion, the midwife provided the two teenagers with good advice and support, focusing more on the particular problems that they had and offering resources available for teenage mothers. As an example, the following is one of the two sessions recorded:

Date: 28/03/00
Time it lasted: 20 minutes.
Midwife: I
Weeks pregnant: 26

This appointment had been made by the woman who was taking care of a teenage pregnant girl. She was just 17 year old. The pregnancy was not planned at all, and the girl was having problems with her ex - boyfriend, the father of the baby.

The midwife asked about her general situation. She said : "I'm fine now". The midwife didn't asked what were the problems she had had before, as to say that she was fine now. The physical check up was routine. The BP, the palpation of the tummy and the baby's heartbeat were fine. When the midwife asked for a urine sample, she said she had forgotten to bring it. "Next time" she said. But the midwife explained her the importance of checking it, since she had had a bit of glucose the last time. She went to the toilet to save a sample. The results were negative.

Then, the midwife asked about any worries. The girl (although the woman that had came with her was the one that answered to almost all questions), said that they had prepared three questions to ask. The fist one was about her belly button. She wanted to know if it was going to change during the pregnancy, poking out at the end. The midwife said that there was no rule for that. "Depends on each body and woman. And besides, it doesn't mean anything if it turns out or not." The second question was about when to stop working. The midwife answered : "Listen to your own body". Finally, the girl asked information about pain coping during labour. The midwife said that during the antenatal classes everything would be explained. About this topic, the midwife started explaining that there were special classes in Stanley for teenage pregnant girls. The midwife asked for permission to give the girl's data and phone number to the midwife that organised that group. That midwife would get in contact with her to start the classes a.s.a.p.

Finally the midwife arranged the next appointment for 4 weeks.

Pregnant teenagers are more likely to smoke, use drugs, and have sexually transmitted diseases than non pregnant teenagers. They tend to gain less weight during pregnancy than adult pregnant women. All these factors lead to a higher risk of preterm labour and low birthweight babies which are the major risks associated with teenage pregnancies.

The author considers important that midwives are specially trained to take care and deal with pregnant teenagers. The health education they should provide is broader as it should include additional issues such as decision-making, legal issues, resources and support available and contraception.

CHAPTER 10

THE ULTIMATE CHOICE

The general objective of this study was to compare protocols and practices used in one health centre in Pamplona and four in Chester-le-Street. The author has also attempted to analyse the role and responsibilities of the midwives, to measure the quality of health education provided to pregnant women and to evaluate resources available in both settings.

As previous studies have shown (Mascarenhas et al, 1992) there is not a causal relationship between the antenatal care provided and the perinatal outcomes in populations which are similar to each other. Macarenhas et al focused on comparing perinatal outcomes in England and Wales with those in France. The results on two similar populations with very different systems, levels of provision of antenatal care and use of obstetric technology showed very similar perinatal outcomes.

The usefulness of the study performed by Mascarenhas et al (1992) consists on:

1. Very different patterns of antenatal care can produce similar results.

2. If the standard of perinatal outcome is very high in a particular population, it will be difficult to demonstrate any further improvement whatever change is introduced in that antenatal care model.

It was not the author's intention to measure perinatal outcomes in the two settings where the study took place. The author analysed official vital statistics from both settings at the time the study was being designed. The personal experience allowed the author to have a wide knowledge of the organisation of community antenatal care in Pamplona. Individual and personal research also provided the author with a picture of the antenatal care organisation in England.

The provision of antenatal care in Pamplona and Chester-le-Street is of the highest standard, and so the perinatal statistics show. However, the two systems have got differences that this study has pointed out.

The first aspect of antenatal care evaluated in this thesis was the resources available in the two settings of study. The author's choice in this aspect would have to be Pamplona. The Centres for Women Care were the result of a major new system that was first introduced in 1985, as part of the new "Plan de Atención a la Mujer" (Plan for Women Care). The amount of resources available is far greater than in Chester-le-Street at present. Women in Pamplona find is very convenient to be allocated to a certain centre near home and be able to have all the follow ups in the same place. Having a gynaecologist present in the same centre is also

seen as a positive aspect of the present system as it provides women direct medical access.

The fact that the Centres for Women Care (CWC) were specially designed for the provision of care to pregnant women is also reflected in the equipment available for antenatal classes, as teaching materials, gyms, inflatable mattresses.

The human resources available in the two settings differed in the number of midwives and gynaecologist in each area. While in Chester-le-Street there was no presence of gynaecologists at a community level, in Pamplona they were included as part of the staff in each CWC.

The issue of a team of community midwives was also discussed in a previous chapter. Team work has got additional advantages when providing antenatal care. Home birth plans were possible in Chester-le-Street because while three midwives work in antenatal appointments, the fourth member of the team was available for home visits to arrange birth plans.

Therefore, in regards to the human resources available, the author's choice is Chester-le-Street. After all, despite the availability of gynaecologists, community antenatal care is based on the midwives work.

The next aspect of antenatal care evaluated was the elements of routine antenatal care in the two settings. The findings of the study were:

1. The frequency of the antenatal visits was higher in Pamplona, with the role of the midwife acquiring increasing importance.

2. The length of the antenatal appointments in Pamplona was almost double, 24.2 minutes over 12.6 minutes. This is however due to the fact that some of the antenatal appointments observed included an external non-stressing monitor which was performed by the midwife on women over 36 weeks pregnant. This monitor lasted between 20 to 25 minutes.

3. No significant differences were found in the measurement of blood pressure, urine samples, palpation of the uterus and listening of the foetus' heartbeat. Issues of maternity leave and worries expressed by women were similarly dealt with.

4. Weight gain measurement was not performed in Chester-le-Street, whereas the midwife in Pamplona considered it as a fundamental issue. Reasons to justify weight measurements were given in a previous chapter of this study. The author agrees with the reasons given and is of the opinion that weight gain measurement should be introduced in Chester-le-Street.

5. Swabs for streptococcus B were not performed in Chester-le-Street. The author found this matter for the need of the most urgent consideration. Pregnant women infected by the Streptococcus B are asymptomatic, but the effects if the baby is infected are as serious as the death of the baby.

6. Women are subjects of thorough laboratory tests during pregnancy in both settings, although women in Pamplona are tested for some additional parameters that are not checked in Chester-le-Street. While some of those additional tests are not considered as strictly necessary by the author (calcium, urinary culture and sediment), some other tests should be included in the routine practice in Chester-le-Street

(toxoplasmosis, liver function tests). The statement of more is better might be challenged by certain people, but the reality is that more tests do not mean any additional inconvenience for pregnant women. In general, women in both settings are scheduled for one blood test per term of the pregnancy. Once a woman is tested for Full Blood Count (FBC), additional samples can be taken for further tests without any additional inconvenience or prick discomfort.

7. Ultrasound scans are routinely performed in the two settings of study. Women in Chester-le-Street are offered one scan while women in Pamplona are offered three. The literature reviewed by the author has not shown any evidence of scans adding any risk to the baby's health. It has though shown that anxiety and depression symptoms in pregnant women decreased after getting feedback from their scans. Therefore, the author agrees with the number of three scans performed in Pamplona.

The last issue that this study reviewed was the antenatal education provided to pregnant women. Chapter 2 included a list of topics that were discussed in the majority of the bibliography and that could be used as a guide to assess the quality of antenatal health education that women receive. Those topics were:

1. Nutrition education
2. Avoidance of harmful substances: tobacco, alcohol and drugs;
3. Physical changes during pregnancy;
4. Encouraging regular physical exercise and physical comfort (including breathing and relaxation exercises);
5. Reducing emotional stress and frequency of sexual intercourse during pregnancy;

6. Labour and birth: what happens and pain coping;
7. Feeding of the baby: Breastfeeding and bottle-feeding;
8. Care of the baby;
9. Safety during pregnancy: home, cars, travelling;
10. Rights and benefits during pregnancy and after birth.

Topics 1, 3, 4, 5, 6, 7, 8 and 10 were included in antenatal education programmes in both settings. Safety during pregnancy issues were a greater importance in Chester-le-Street, where one of the antenatal classes was dedicated to this topic.

In regards to advice given on avoidance of harmful substances (tobacco, alcohol or drugs) the author considers that, due to the results obtained for this study, when it comes to this issue, it is no so important that the advice is given, but how is given. In these cases, pregnant women who smoke, drink or consume drugs do require special attention and education from the early stages of pregnancy. Specific programmes for these women were not being offered in either of the two settings of the study.

The prevalence of smokers in Pamplona was significantly higher than in Chester-le-Street, where the prevalence of pregnant women who drink is significantly higher than in Pamplona. This was found to be a problem that the author did not expect. The design of this study did not allow the author to investigate deeper into this phenomenon, although it has identified a problem to be researched in further studies.

The final outcome in the category of health education obtained good results in Pamplona and Chester-le-Street. Women recorded having received information on all the topics selected for this study in the two settings with percentages oscillating between 60% to 100% of all cases.

When asked whether the midwife personally discussed those topics with them, the percentages decrease in all topics and in both settings. The decrease was found to be more important in ten of the topics (intake of iron, limit the intake of caffeine, cut down in fatty foods, care of the baby after the birth, gum inflammation, breathlessness and indigestion, varicose veins, constipation, breast or vaginal discharge and oedema) with the midwives in Chester-le-Street, with percentages lower than 50%. The χ^2 test was applied to these cases and in all of them the results were statistically significant. Therefore, for the ten cases mentioned it was possible to establish a relationship between living in Chester-le-Street and a lower likelihood of receiving information from the community midwife on the particular topics mentioned.

After having compiled the results obtained from this study, objective data were produced. The author put herself into the situation of being a pregnant woman in Pamplona and in Chester-le-Street and her ultimate choice for where to receive her antenatal care in such situation would have to be Pamplona. There author must also recognise that some of the elements of antenatal care being practised in Chester-le-Street, which are of the highest quality, should be introduced in Pamplona. These elements would be an organised team of community midwives and a personalised home arranged birth plan.

The author is also aware of the limitations and weaknesses of this study, mainly due to the ethnographic approach used during the observations. The heavy reliance of this approach on the researcher's involvement and skills during the fieldwork data collection might have biased the data collected, as there is no guarantee that the author's interpretations would have been similar to any other researcher's under the same circumstances.

Specific recommendations for providers of antenatal care services have been made. Although the focus of this study was on primiparous women with low risk pregnancies, future efforts should be directed towards specific problems or lacking areas identified during this study, as well as towards women with higher risk pregnancies. Only then we will be able to obtain a global picture of services offered in community antenatal care.

Finally, although national statistics have been used in this study to establish an initial comparison between the two countries, the results of this study cannot be generalised or applied to any other location apart from Pamplona and Chester-le-Street, as it was never the aim of this study to establish a national but only local comparison.

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APPENDIX A-1: NON-PILOTED QUESTIONNAIRE

Questionnaire number ☐☐

Health practice number ☐

Date __ / 03/2000

ANTENATAL CARE QUESTIONNAIRE

This questionnaire has four sections. The questions seek to find out:

a) The care you are receiving during your pregnancy.

b) The health education information that you have been given.

c) Your opinion of the care and information you have received.

Any information you provide in this questionnaire will be treated as strictly confidential.

If you need to contact me about this questionnaire, please telephone me on 0191 374 1840.

I will contact you as soon as possible.

It will take no more than 15 minutes to complete the questionnaire.

SECTION I. PERSONAL DATA:

1. Your date of birth: _____.

2. What is your marital status?

Married .....☐ Widowed.....☐ Separated.....☐

Single .....☐ Divorced.....☐

3. Who else live with you in your household?

Husband..... ☐ Other people..... ☐

Partner/boyfriend..... ☐ Nobody (I live by my own)..... ☐

Mother and /or father ..... ☐

4. Which educational qualifications have you got?

Degree..... ☐ A-Levels..... ☐

GCSE level..... ☐ GNVQ..... ☐

NVQ..... ☐ Other (please, state)_____ ☐

Professional qualifications (please, state)_____ ☐

5. Are you ..

At school?.....☐ Working (part time)?..... ☐

In full time high education?.....☐ Unemployed? .....☐

Working (full time)? .....☐ Other?_____ ☐

SECTION II: YOUR PREGNANCY

6. When is your baby due? _____/_____/ 2000.

7. How many weeks pregnant are you? _____ .

8. How was your pregnancy confirmed?

By using a home pregnancy test kit..☐ By an ultrasound scan..... ☐

By your GP at a health centre.....☐ By someone at a family planning clinic..... ☐

By a midwife.....☐ Other (please, state) _____ ☐

9. How many weeks pregnant were you when your pregnancy was confirmed?

Less than 8 weeks.....☐ 9-14 weeks...☐ 15-26 weeks.....☐

10. How many weeks pregnant were you when you attended the first check-up appointment?

Less than 8 weeks.....☐ 9-14 weeks...☐ 15-26 weeks.....☐

If any of the above is inappropriate for you, please state _____.

if the first check-up was 14 weeks or later (otherwise, go to question 11):

What was/were the reason/s why you did not have a check up before?

Because you did not know that you were pregnant until late..... ☐

Because you were too busy to get an earlier appointment

(e.g. because of work, holiday, family, etc..)..... ☐

Because the health service system was slow for getting a check-up appointment

(e.g.delays in arranging for antenatal care or booking for the birth, etc.)..... ☐

Because you did not want an earlier check-up..... ☐

Other reasons (please state)_____ ☐

11. How many antenatal check-ups have you had so far?

1-4 ....☐ 5-9....☐ 10-14....☐ 15-19 ....☐ 20 +...☐

12. How many of these check-ups have you had at each of the places listed below?

At a hospital..... ☐ (insert a number in the box)

At a GP's surgery or health centre..... ☐

At your own home..... ☐

At other place (please state where)_____ ☐

13. What antenatal care pattern is more close to the one you are currently receiving?

Care from your community GP or midwife

(you only go to the hospital to take specific tests) ..... ☐

Care based on a hospital clinic.....☐

"Domino care system" (a team of community and hospital midwives)..... ☐

Your care pattern is different (please, describe)_____

_____ ☐

14. Which health professional do you usually see in your antenatal appointments/check-ups at the places named below? (Please tick)

	Midwife	Doctor/GP	Either of them	Both of them
Hospital	☐	☐	☐	☐
Health Centre	☐	☐	☐	☐
Your home	☐	☐	☐	☐

15. Are you planning to go to any antenatal classes during this pregnancy? (If you are already attending them, answer "yes" and go to question 16).

Yes..... ☐ **[If <u>yes</u> go to question 16]**

No..... ☐

Not sure yet..... ☐

***IF <u>NO</u> OR <u>NOT SURE YET</u>**: Why don't you want to attend these classes?

It is difficult for you to get to the classes..... ☐

You consider you have enough information / knowledge from other sources or people..... ☐

You don't like being in a group with other women talking about their experiences..... ☐

You know enough from your antenatal appointments with your GP or your midwife..... ☐

You don't want to know too much..... ☐

You started attending but quit because you thought they were not worth it ☐

Other (please, state)_____ ☐

SECTION III: HEALTH EDUCATION / HEALTHY LIFESTYLE PROMOTION

16. This question deals with different aspects of **your diet habits** during your pregnancy. Please answer all questions by placing a " " in each box.

Health Topics On Diet Advice	a. Have you been given information on...?	b. Has your midwife talked directly to you about...?	c. Have you been able to ask questions about...?	d. In which trimester were you first explained...?			e. How satisfied are you with the education received on...?				
				1	2	3	0	1	2	3	4
Importance of a healthy, complete and varied diet.											
Aliments to avoid (peanuts, liver, uncooked eggs..).											
Not take supplements without your doctor's advice.											
The importance of the Folic Acid.											
Special needs for vegetarians / on low income cases.											
The need to increase the intake of iron and calcium.											
The importance to limit the intake of caffeine.											
The benefit for you if you cut down fatty foods.											

*O: very dissatisfied. 1: dissatisfied. 2: just satisfied. 3: quite satisfied. 4: very satisfied.

17. Thinking about your diet:

	Every day	5 times per week	3 times per week	Once per week	Hardly ever or never
Do you eat fruit or vegetables?					
How often do you eat starchy food (e.g. brown or white rice, pasta, bread, cereals, potatoes...)?					
How often do you eat fried and fatty food?					
How often do you eat proteins (e.g. fish, meat, eggs, beans...)?					
How often do you eat dried fruit, nuts (not peanuts)... ?					
How often do you eat dairy products (E.g. milk, cheese, yoghurts, fromage frais...)?					
How often do you eat sweets, cakes or take soft drinks?					

18. Thinking about the care plan for your baby: (Please, answer all questions by placing a " " in each box.)

Care plan for your baby	a. Have you been given information on...?	b. Has your midwife talked directly to you about...?	c. Have you been able to ask questions about...?	d. In which trimester were you first explained...?			e. How satisfied are you with the education received on...?				
				1	2	3	0	1	2	3	4
Breastfeeding											
Care of the baby after birth											

* O: very dissatisfied. 1: dissatisfied. 2: just satisfied. 3: quite satisfied. 4: very satisfied.

19. This question deals with **harmful substances** that can be a danger for you and your baby. Please answer all questions by placing a " " in each box.

Health advice on these harmful substances	**a.** Have you been given information on…?	**b.** Has your midwife talked directly to you about...?	**c.** Have you been able to ask doubts about…?	**d.** In which trimester were you first explained...?			**e.** How satisfied are you with the education received on…?				
				1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Smoking cessation											
Drugs intake											
Alcohol consume											
Take medicines without prescription											

* **O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied.

20. This questions deals with possible **minor physical discomforts** that you may experience during this pregnancy. Please answer all questions by placing a " " in each box.

Minor physical discomfort	**a.** Have you been given information on…?	**b.** Has your midwife talked directly to you about...?	**c.** Have you been able to ask doubts about…?	**d.** In which trimester were you first explained...?			**e.** How satisfied are you with the education received on…?				
				1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Gum inflammation/ bleeding											
Morning sickness											
Tiredness / fainting											
Aches in joints and muscles / Cramps											
Backpain											
Breathlessness /Indigestion											
Varicose veins											
Constipation / Piles											
Pass water more often											
Breast and / or vaginal discharge											
Oedema (swollen ankles or legs)											

***O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied.

21. This question deals with issues that ensure your **safety and comfort** during your pregnancy. Please answer all questions by placing a " " in each box.

Safety and comfort issues	**a.** Have you been given information on…?	**b.** Has your midwife talked directly to you about...?	**c.** Have you been able to ask doubts about…?	**d.** In which trimester were you first explained...?			**e.** How satisfied are you with the education received on…?				
				1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Health advice for travelling abroad											
Car seat belts											
Dressing for comfort											

* **O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied.

22. Have you receive advice on the importance of regular exercise during your pregnancy?

Yes.....☐ No.....☐

23. How often do you do exercise like walking, swimming…?

Everyday.....☐ 4 to 6 times per week..... ☐

1 to 3 times per week....☐ Don't do any..... ☐

24. How often do you do special pregnancy exercises (e.g. pelvic floor, tummy exercises)?

Everyday.....☐ 4 to 6 times per week..... ☐

1 to 3 times per week....☐ Don't do any..... ☐

25. Do you smoke? Yes.....☐ No.....☐

a) If NO: Did you quit smoking when you found out you were pregnant?

Yes.....☐ No.....☐

b) If YES: How many cigarettes do you smoke per day?

1-10 cigarettes..... ☐ 11-19 cigarettes..... ☐

20-29 cigarettes..... ☐ 30 or more cigarettes..... ☐

26. a) How many units of alcohol did you usually drink per week before your pregnancy?

[1 unit = 1/2 pint of lager beer or cider = a single measure of spirit = a glass of wine or sherry]

None..... ☐ 1-5..... ☐ 6-14.....☐

15-21..... ☐ 21 +..... ☐

b) How many units of alcohol do you now drink per week?

None..... ☐ 1-5..... ☐ 6-14.....☐

15-21..... ☐ 21 +..... ☐

27. Do you plan to breastfeed your baby? Yes.....☐ No.....☐

* **IF NO**: Why not?

You will go back to work in a few weeks and don't have time.....☐

You have it contraindicated for health reasons.....☐

You think that bottle-feeding is easier than breastfeeding.....☐

You think that the baby will be better fed with bottle-feeding.....☐

Other (please, state)_____☐

28. a) Which of the following topics were covered in the antenatal classes (parentcrafts) you have attended? Please, tick as many answers as appropriate.

Preparation for labour and birth.....	☐	Care of the baby after the birth.....	☐
Your health after birth.....	☐	Breathing and relaxation exercises..	☐
Information about labour pain relief.....	☐	Feeding of your baby.....	☐
Emotions surrounding pregnancy.....	☐	Other (state)_____	☐

b) If you haven't attended antenatal classes, have you been given any information about the topics listed above?

Yes.....☐ *If **YES**: How?

No.....☐

- Your midwife discussed them with you..... ☐
- You had to ask your midwife..... ☐
- You have read about them in books..... ☐
- Asking women with previous pregnancies..... ☐
- Other (please, state)_____ ☐

29. How much did you already know about pregnancy and childbirth <u>before</u> this pregnancy?

A great deal.....	☐	Quite a lot.....	☐
Not much.....	☐	Basically nothing....	☐

30. During this pregnancy, how much <u>more</u> did you want to know about pregnancy and childbirth?

A great deal.....	☐	Quite a lot.....	☐
Not much.....	☐	Basically nothing....	☐

SECTION IV. HOW SATISFIED ARE YOU?

31. If you think back to the beginning of your pregnancy, which of the following listed below would you have liked to have had the opportunity to talk more about?

- The choice of who you could have for your check-ups..... ☐
- Your choice to have a home birth..... ☐
- Some health topics you were specially interested in..... ☐
- Your choice of hospital to have your baby..... ☐
- Infant feeding..... ☐
- Other (please, state)_____ ☐

32. **a)** Have there been times when you would have liked your GP/doctor/midwife to tell you more without you having to take the initiative and ask first?

Yes, definitely..... ☐ Yes, sometimes..... ☐ No, not really..... ☐

b) What would you have liked to know more? _____

_____.

33. In your local check-ups: How long have you had (by average) to be waiting before seeing the doctor / midwife?

Less than ½ hour....☐ ½ hour up to 1 hour... ☐

1 to 2 hours.....☐ 2 hours or more..... ☐

34. How satisfied, in general terms, are you with the information and time that your midwife has given to you?

Very much satisfied..... ☐

Quite satisfied..... ☐

Satisfied just in some ways, not in others..... ☐

Not really satisfied, a bit disappointed..... ☐

Not satisfied at all..... ☐

Thank you very much for your time and assistance.

SC, February 2000

APPENDIX A-2: PILOTED QUESTIONNAIRE (ENGLISH).

Questionnaire number ☐☐

Health practice number ☐

Date __ / 03/2000

ANTENATAL CARE QUESTIONNAIRE

This questionnaire has four sections. The questions seek to find out:

a) The care you are receiving during your pregnancy.

b) The health education information that you have been given.

c) Your opinion of the care and information you have received.

Any information you provide in this questionnaire will be treated as strictly confidential.

If you need to contact me about this questionnaire, please telephone me on 0191 374 1840. I will contact you as soon as possible.

It will take no more than 15 minutes to complete the questionnaire.

SECTION I. PERSONAL DATA:

1. Your date of birth: _____.

2. What is your marital status?

Married ..... ☐ Widowed..... ☐ Separated..... ☐

Single ..... ☐ Divorced..... ☐

3. Who else live with you in your household?

Husband..... ☐ Other people..... ☐

Partner/boyfriend..... ☐ Nobody (I live by my own)..... ☐

Mother and /or father ..... ☐

4. Which educational qualifications have you got?

Degree..... ☐ A-Levels..... ☐

GCSE level..... ☐ GNVQ..... ☐

NVQ..... ☐ Other (please, state)_____ ☐

Professional qualifications (please, state)_____ ☐

5. Are you ..

At school?..... ☐ Working (part time)?..... ☐

In full time high education?..... ☐ Unemployed? ..... ☐

Working (full time)? ..... ☐ Other?_____ ☐

SECTION II: YOUR PREGNANCY

6. When is your baby due? _____/_____/ 2000.

7. How many weeks pregnant are you? _____ .

8. How was your pregnancy confirmed?

By using a home pregnancy test kit.. ☐ By an ultrasound scan..... ☐

By your GP at a health centre..... ☐ By someone at a family planning clinic..... ☐

By a midwife..... ☐ Other (please, state) _____ ☐

9. How many weeks pregnant were you when your pregnancy was confirmed?

Less than 8 weeks.....☐ 9-13 weeks...☐ 14-26 weeks.....☐

10. How many weeks pregnant were you when you attended the first check-up appointment?

Less than 8 weeks.....☐ 9-13 weeks...☐ 14-26 weeks.....☐

If any of the above is inappropriate for you, please state _____.

If the first check-up was 14 weeks or later (otherwise, go to question 11):

What was/were the reason/s why you did not have a check up before?

Because you did not know that you were pregnant until late..... ☐

Because you were too busy to get an earlier appointment

(e.g. because of work, holiday, family, etc..)..... ☐

Because the health service system was slow for getting a check-up appointment

(e.g.delays in arranging for antenatal care or booking for the birth, etc.)..... ☐

Because you did not want an earlier check-up..... ☐

Other reasons (please state)_____ ☐

11. How many antenatal check-ups have you had so far?

1-4 .....☐ 5-9.....☐ 10-14....☐

15-19 ....☐ 20 +....☐

12. What antenatal care pattern is more close to the one you are currently receiving?

Care from your community GP or midwife

(you only go to the hospital to take specific tests) ..... ☐

Care based on a hospital clinic..... ☐

"Domino care system" (a team of community and hospital midwives)..... ☐

Your care pattern is different (please, describe)_____

_____ ☐

13. Are you planning to go to any antenatal classes during this pregnancy? (If you are already attending them, answer "yes" and go to question 14).

Yes.....☐ **[If yes go to question 14]**

No.....☐

Not sure yet.....☐

***IF NO OR NOT SURE YET**: Why don't you want to attend these classes?

It is difficult for you to get to the classes..... ☐

You consider you have enough information / knowledge from other sources or people..... ☐

You don't like being in a group with other women talking about their experiences..... ☐

You know enough from your antenatal appointments with your GP or your midwife..... ☐

You don't want to know too much..... ☐

You started attending but quit because you thought they were not worth it ☐

Other (please, state)_____ ☐

SECTION III: HEALTH EDUCATION / HEALTHY LIFESTYLE PROMOTION

14. This question deals with different aspects of **your diet habits** during your pregnancy. Please answer all questions by placing a "✓" in each box.

Health Topics On Diet Advice	**a.** Have you been given information on...?	**b.** Has your midwife talked directly to you about...?	**c.** In which trimester were you first explained...?			**d.** How satisfied are you with the education received on...?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Aliments to avoid (peanuts, liver, uncooked eggs..).										
Not take supplements without your doctor's advice.										
The importance of the Folic Acid.										
The need to increase the intake of iron and calcium.										
The importance to limit the intake of caffeine										
The benefit for you if you cut down fatty foods.										

***O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied

15. Thinking about your **diet:**

	Every day	5 or 6 times per week	3 or 4 times per week	1 or 2 times per week	Hardly ever or never
Do you eat fruit or vegetables?					
How often do you eat starchy food (e.g. brown or white rice, pasta, bread, cereals, potatoes…)?					
How often do you eat fried and fatty food?					
How often do you eat proteins (e.g. fish, meat, eggs, beans…)?					
How often do you eat dried fruit, nuts (not peanuts)… ?					
How often do you eat dairy products (E.g. milk, cheese, yoghurts, fromage frais…)?					
How often do you eat sweets, cakes or take soft drinks?					

16. Thinking about the **care plan for your baby**:

(Please, answer all questions by placing a "✓" in each box.)

Care plan for your baby	**a.** Have you been given information on…?	**b.** Has your midwife talked directly to you about...?	**c.** In which trimester were you first explained...?			**d.** How satisfied are you with the education received on…?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Breastfeeding										
Care of the baby after birth										

* **O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied.

17. This questions deals with possible **minor physical discomforts** that you may experience during this pregnancy. Please answer all questions by placing a "✓" in each box.

Minor physical discomforts	**a.** Have you been given information on…?	**b.** Has your midwife talked directly to you about...?	**c.** In which trimester were you first explained...?			**d.** How satisfied are you with the education received on…?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Gum inflammation/ bleeding										
Morning sickness										
Tiredness / fainting										
Aches in joints and muscles / Cramps / Backpain										
Breathlessness /Indigestion										
Varicose veins										
Constipation / Piles										
Pass water more often										
Breast and / or vaginal discharge										
Oedema (swollen ankles or legs)										

***O**: very dissatisfied. **1**: dissatisfied. **2**: just satisfied. **3**: quite satisfied. **4**: very satisfied.

18. Have you receive advice on the importance of regular exercise during your pregnancy?

Yes.....☐ No.....☐

19. How often do you do exercise like walking, swimming…?

Everyday.....☐ 4 to 6 times per week..... ☐

1 to 3 times per week....☐ Don't do any..... ☐

20. How often do you do special pregnancy exercises (e.g. pelvic floor, tummy exercises)?

Everyday.....☐ 4 to 6 times per week..... ☐

1 to 3 times per week....☐ Don't do any..... ☐

21. Have you been given advice on the importance of smoking cessation?

Yes, by my midwife....☐ Yes, by other health professional....☐

No.....☐

22. Do you smoke? Yes.....☐ No.....☐

a) If NO: Did you quit smoking when you found out you were pregnant?

Yes.....☐ No.....☐

b) If YES: How many cigarettes do you smoke per day?

1-10 cigarettes..... ☐ 11-19 cigarettes..... ☐

20-29 cigarettes..... ☐ 30 or more cigarettes..... ☐

23. Have you been information about alcohol consume and pregnancy?

Yes, by my midwife....☐ Yes, by other health professional....☐

No.....☐

24. a) How many units of alcohol <u>did</u> you usually drink per week <u>before your pregnancy</u>?

[1 unit = 1/2 pint of lager beer or cider = a single measure of spirit = a glass of wine or sherry]

None..... ☐ 1-5..... ☐ 6-14.....☐

15-21..... ☐ 21 +..... ☐

b) How many units of alcohol do you <u>now</u> drink per week?

None..... ☐ 1-5..... ☐ 6-14.....☐

15-21..... ☐ 21 +..... ☐

25. Do you plan to breastfeed your baby? Yes..... ☐ No..... ☐

* **IF NO**: Why not?

You will go back to work in a few weeks and don't have time..... ☐

You have it contraindicated for health reasons..... ☐

You think that bottle-feeding is easier than breastfeeding..... ☐

You think that the baby will be better fed with bottle-feeding..... ☐

Other (please, state)_____ ☐

26. a) If you have attended antenatal classes: Which of the following topics were covered in the antenatal classes (parentcrafts) you have attended? Please, tick as many answers as appropriate.

Preparation for labour and birth.....	☐	Care of the baby after the birth.....	☐
Your health after birth.....	☐	Breathing and relaxation exercises..	☐
Information about labour pain relief.....	☐	Feeding of your baby.....	☐
Emotions surrounding pregnancy.....	☐	Other (state)_____	☐

b) If you haven't attended antenatal classes: Have you been given any information about the topics listed above?

Yes..... ☐ *If **YES**: How?

No..... ☐

Your midwife discussed them with you..... ☐

You had to ask your midwife..... ☐

You have read about them in books..... ☐

Asking women with previous pregnancies..... ☐

Other (please, state)_____ ☐

27. How much did you already know about pregnancy and childbirth before this pregnancy?

A great deal.....	☐	Quite a lot.....	☐
Not much.....	☐	Basically nothing....	☐

28. During this pregnancy, how much more did you want to know about pregnancy and childbirth?

A great deal.....	☐	Quite a lot.....	☐
Not much.....	☐	Basically nothing....	☐

SECTION IV. HOW SATISFIED ARE YOU?

29. a) Have there been times when you would have liked your GP/doctor/midwife to tell you more without you having to take the initiative and ask first?

Yes, definitely..... ☐ Yes, sometimes..... ☐ No, not really..... ☐

b) What would you have liked to know more? _____

_____.

30. In your local check-ups: How long have you had (by average) to be waiting before seeing the doctor / midwife?

Less than ½ hour....☐ ½ hour up to 1 hour...☐

1 to 2 hours.....☐ 2 hours or more..... ☐

31. How satisfied, in general terms, are you with the information and time that your midwife has given to you?

Very much satisfied..... ☐

Quite satisfied..... ☐

Satisfied just in some ways, not in others..... ☐

Not really satisfied, a bit disappointed..... ☐

Not satisfied at all..... ☐

-if you are very or quite satisfied: Why? _____

-if you are just satisfied, not really satisfied or not satisfied at all : Why?

_____

Thank you very much for your time and assistance.

SC, February 2000

APPENDIX A-3: PILOTED QUESTIONNAIRE (SPANISH).

Cuestionario n°: ☐☐☐

Centro n° : ☐

Fecha: __/04/2000

CUESTIONARIO SOBRE ATENCIÓN PRENATAL

Este cuestionario tiene cuatro secciones. Las preguntas que contiene han sido diseñadas para averiguar:

a) La atención sanitaria que recibe durante su embarazo.

b) Qué educación sanitaria ha recibido de los profesionales de salud.

c) Su opinión sobre la atención y la educación sanitaria que ha recibido.

Toda información recogida en este cuestionario será tratada de forma estrictamente confidencial.

Rellenar el cuestionario no le llevará más de 15 minutos.

SECCIÓN I: DATOS PERSONALES:

1. Fecha de nacimiento: _____.

2. Estado marital:

Casada..... ☐ Viuda..... ☐ Separada..... ☐

Soltera..... ☐ Divorciada..... ☐

3. ¿Con quién vive Vd.?

Su marido..... ☐ Otras personas..... ☐

Su compañero / novio..... ☐ Nadie (vive sola)..... ☐

Su madre y / o padre..... ☐

4. ¿Qué estudios ha realizado? (señale únicamente el más reciente).

Título universitario..... ☐ BUP/COU (Educación secundaria)..... ☐

REM..... ☐ EGB (Educación primaria)..... ☐

Formación profesional..... ☐ Otros (indica, por favor)_____ ☐

5. En cuanto a su situación profesional: ¿Está Vd...?

estudiando (en el colegio)?..... ☐ trabajando a tiempo parcial?..... ☐

estudiando (estudios superiores)?.... ☐ en el paro (desempleada)?..... ☐

trabajando a jornada completa?..... ☐ en otra situación? _____ ☐

SECCIÓN II: SU EMBARAZO:

6. ¿Cuál es su fecha estimada de parto? ____/____/2000.

7. ¿De cuántas semanas está embarazada? _____.

8. ¿Cómo fue confirmado su embarazo?

Usando un kit de embarazo en casa.... ☐ Por una ecografía..... ☐

Por su médico de cabecera..... ☐ En un centro de planificación familiar. ☐

Por una matrona..... ☐ De otra forma (diga cuál)_____ ☐

9. ¿De cuántas semanas estaba cuando su embarazo fue confirmado?

De menos de 8 .....☐ De entre 9-13 .....☐ De entre 14-26.....☐

10. ¿De cuántas semanas estaba cuando acudió a la primera consulta prenatal?

De menos de 8 .....☐ De entre 9-13 .....☐ De entre 14-26.....☐

Si ninguna opción es apropiada para Vd., por favor diga cuando: _____

<u>Si su primera consulta fue en la 14 semana o más tarde</u>: (si no, vaya a la pregunta 11)

¿Cuál fue la razón (o las razones) por la (las) que no fue a una consulta antes?

Porque no sabía que estaba embarazada hasta más tarde..... ☐

Porque tenía demasiadas cosas que hacer como para acudir a una consulta antes (ej. por su trabajo, familia, vacaciones....)..... ☐

Porque no pudo obtener una cita antes (por razones administrativas del servicio de salud)..... ☐

Porque no quiso tener ninguna consulta prenatal antes..... ☐

Por otra /s razón /es (por favor, explique cuál / es)_____

_____ ☐

11. ¿Cuántas revisiones / consultas prenatales ha tenido hasta ahora?

1-4..... ☐ 5-9.....☐ 10-14..... ☐

15-19..... ☐ 20+.....☐

12. ¿Qué modelo de atención es el que más se parece al que actualmente está recibiendo?

Seguimiento de su embarazo por su matrona y ginecólogo en su centro de atención a la mujer (tan sólo acude al hospital para ecografías y pruebas específicas).....☐

Seguimiento de su embarazo basado en el hospital.....☐

"Sistema Dominó" (un mismo equipo de matronas sigue su embarazo, le atiende durante el parto, y le visita a domicilio tras el nacimiento del bebé).....☐

Su modelo de atención es diferente (por favor, describe) _____

_____ ☐

13. ¿Tiene intención de acudir a clases prenatales durante este embarazo? (En caso de que ya esté acudiendo, conteste "sí" y vaya a la pregunta 14).

Sí..... ☐ **[Ve a la pregunta 14]**

No..... ☐

No está segura todavía..... ☐

*** Si ha respondido que <u>NO</u> o que <u>NO ESTÁ SEGURA</u>:**

¿Por qué no piensa acudir a estas clases?

Le resulta difícil poder asistir (horarios, distancia...)..... ☐

Considera que tiene suficiente información / conocimiento por otras fuentes o personas..... ☐

No le gusta estar en un grupo con otras mujeres hablando de sus experiencias..... ☐

Sabe suficiente por sus revisiones prenatales con su ginecólogo o matrona..... ☐

No quiere saber demasiado ..... ☐

Empezó a ir pero lo dejó porque consideraba que no eran útiles..... ☐

Otra razón (por favor, diga cual) _____ ☐

SECCIÓN III: <u>EDUCACIÓN Y PROMOCIÓN PARA LA SALUD</u>

14. Esta pregunta trata sobre distintas **<u>precauciones / recomendaciones alimentarias</u>** a seguir durante el embarazo. Por favor, conteste a las preguntas colocando un " " en las casillas.

Temas de educación dietética	**a.** ¿Ha recibido informacion sobre...?	**b.** ¿Ha hablado tu matrona con Vd. directamente sobre...?	**c.** ¿En qué trimestre se le explicó por primera vez ....?			**d.** ¿Cuál es su grado de satisfacción con la educación recibida sobre.....?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Alimentos a evitar (cacahuetes, hígado....)										
No tomar suplementos sin receta médica.										
La importancia del Ácido Fólico										
Necesidad de aumentar la ingesta de calcio y hierro										
La importancia de reducir la ingesta de cafeína										
Los beneficios de disminuir comidas altas en grasa..										

***O**: muy insatisfecha. **1**: insatisfecha. **2**: satisfecha. **3**: bastante satisfecha. **4**: muy satisfecha

15. Si piensa sobre su dieta..

	Todos los días	5 ó 6 veces por semana	3 ó 4 veces por semana	1 ó 2 veces por semana	Casi nunca o nunca
¿Come frutas y verduras...?					
¿Con qué frecuencia come hidratos de carbono (ej.arroz, pasta, pan, cereales...)?					
¿Con qué frecuencia come frituras y grasas?					
¿Con qué frecuencia come proteínas (ej. pescado, carne, huevos, legumbres...)?					
¿Con qué frecuencia come frutos secos (evitando los cacahuetes)?					
¿Con qué frecuencia come productos lácteos (ej. leche, queso, yogur...)					
¿Con qué frecuencia come dulces, pasteles, bebidas azucaradas...?					

16. Pensando en el **plan de cuidado de su bebé**: (por favor, conteste a las preguntas colocando un " " en las casillas).

Cuidado del bebé	**a.** ¿Ha recibido información sobre…?	**b.** ¿Ha hablado su matrona con Vd. directamente sobre...?	**c.** ¿En qué trimestre se le explicó por primera vez...?			**d.** ¿Cuál es su grado de satisfacción con la educación recibida sobre…?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Lactancia materna										
Cuidado del bebé después del nacimiento										

***O**: muy insatisfecha. **1**: insatisfecha. **2**: satisfecha. **3**: bastante satisfecha. **4**: muy satisfecha

17. Esta pregunta trata sobre posibles **síntomas y molestias** que toda mujer puede experimentar durante su embarazo. Por favor, conteste a las preguntas colocando un " " en las casillas.

	a. ¿Ha recibido información sobre…?	**b.** ¿Ha hablado su matrona con Vd. directamente sobre...?	**c.** ¿En qué trimestre se le explicó por primera vez...?			**d.** ¿Cuál es su grado de satisfacción con la educación recibida sobre…?				
			1	**2**	**3**	**0**	**1**	**2**	**3**	**4**
Inflamación / sangrado de encías										
Náuseas por las mañanas										
Cansancio / Agotamiento										
Dolor en articulaciones y músculos / Dolor de espalda / Calambres										
Acidez / dificultad para respirar										
Varices										
Estreñimiento / hemorroides										
Necesidad de orinar más frecuentemente										
Flujo vaginal, presencia de calostro										
Edema (en piernas, tobillos..)										

***O**: muy insatisfecha. **1**: insatisfecha. **2**: satisfecha. **3**: bastante satisfecha. **4**: muy satisfecha

18. ¿Ha recibido información sobre la importancia del ejercicio regular durante el embarazo?

Sí..... ☐ No..... ☐

19. ¿Con qué frecuencia hace algún tipo de ejercicio, tal como andar, nadar...?

Todos los días..... ☐ De 4 a 6 veces por semana..... ☐

De una a tres veces por semana..... ☐ No hace nada de ejercicio..... ☐

20. ¿Con qué frecuencia hace ejercicios específicos del embarazo (ej. ejercicios de músculos del suelo pélvico, músculos abdominales...)?

Todos los días..... ☐ De 4 a 6 veces por semana..... ☐

De una a tres veces por semana..... ☐ No hace éstos ejercicios..... ☐

21. ¿Ha recibido información sobre los beneficios de no fumar durante el embarazo?

Sí..... ☐ No..... ☐

22. ¿Fuma? Sí..... ☐ No..... ☐

a) Si **NO FUMA**: ¿Lo dejó a causa de este embarazo?

Sí..... ☐ No..... ☐

b) Si **SÍ FUMA:** ¿Cuántos cigarrillos fuma al día?

De 1 a 10..... ☐ De 11 a 19..... ☐

De 20 a 29.... ☐ 30 o más..... ☐

23. ¿Ha recibido información sobre consumo de alcohol y embarazo?

Sí..... ☐ No..... ☐

24. a) ¿Cuántas unidades de alcohol por semana solía beber antes de quedarse embarazada?

[1 unidad = 1 vaso de cerveza = 1 vaso de vino = 25 cl de licor]

Ninguna..... ☐ De 1 a 5..... ☐ De 6 a 14..... ☐

De 15 a 21..... ☐ Más de 21..... ☐

24. b) ¿Cuántas unidades de alcohol bebe ahora a la semana?

Ninguna..... ☐ De 1 a 5..... ☐ De 6 a 14..... ☐

De 15 a 21..... ☐ Más de 21..... ☐

25. ¿Tiene pensado dar lactancia materna a su bebé? Sí..... ☐ No..... ☐

* Si ha contestado **NO**: ¿Por qué no?

Va a volver a trabajar en pocas semanas y no tiene tiempo..... ☐

Lo tiene contraindicado por razones de salud..... ☐

Cree que la lactancia artificial es más fácil que la lactancia materna..... ☐

Cree que el bebé estará mejor alimentado con la lactancia artificial..... ☐

Otra razón (por favor, diga cuál) _____ ☐

26. a) Si ya ha estado en clases prenatales: ¿Cuáles de estos temas han sido tratados en las clases? Señale todas las respuestas que sean apropiadas.

Preparación para el parto..... ☐ Cuidado del bebé tras el nacimiento.... ☐

Su salud después del parto..... ☐ Ejercicios de respiración y relajación.. ☐

Control del dolor durante el parto..... ☐ Alimentación del bebé..... ☐

Emociones durante el embarazo..... ☐ Otros (diga cuáles)_____ ☐

b) Si todavía no ha estado en clases prenatales: ¿Ha recibido información sobre alguno de los temas nombrados en la sección anterior?

Sí..... ☐ * Si la respuesta es **SÍ**: ¿Cómo?

No.... ☐

Su matrona trató los temas con Vd..... ☐

Tuvo que preguntar a su matrona..... ☐

Ha leído sobre ellos en libros..... ☐

Preguntando a otras mujeres ..... ☐

De otra forma (diga cuál)_____ ☐

27. ¿Cuánto diría que ya sabía sobre embarazo y nacimiento <u>antes</u> de este embarazo?

Mucho..... ☐ Bastante..... ☐

Un poco..... ☐ Prácticamente nada... ☐

28. Durante este embarazo, ¿Cuánto <u>más</u> ha querido saber sobre embarazo y nacimiento?

Mucho..... ☐ Bastante..... ☐

Un poco..... ☐ Prácticamente nada... ☐

SECCIÓN IV: ¿CUÁL ES SU GRADO DE SATISFACCIÓN?

29. a) ¿Han habido ocasiones en las que le hubiese gustado que su ginecólogo / matrona hubiese hablado más con Vd. sobre algunos temas, sin que Vd. tuviese que tomar la iniciativa y preguntar primero?

Sí, definitivamente..... ☐ Sí, a veces..... ☐ No, la verdad es que no..... ☐

b) ¿Sobre que temas le hubiese gustado saber más?_____

_____.

30. Antes de las revisiones prenatales en su centro de atención a la mujer, ¿Cuánto tiempo tiene que esperar (en términos medios), antes de ser vista por el ginecólogo / matrona?

Menos de ½ hora..... ☐ Entre ½ y 1 hora..... ☐

Entre 1 y 2 horas..... ☐ Dos horas o más..... ☐

31. En términos generales, ¿hasta qué punto está satisfecha con la información recibida y el tiempo que u matrona le ha dedicado?

Muy satisfecha..... ☐

Bastante satisfecha..... ☐

Satisfecha con algunas cosas, no con otras..... ☐

No realmente satisfecha, un poco desilusionada..... ☐

No estás satisfecha en absoluto..... ☐

-si está muy o bastante satisfecha: ¿Por qué?_____

_____

-si sólo está satisfecha con algunas cosas, no realmente satisfecha, o no satisfecha en absoluto: ¿Por qué? _____

_____

Muchas gracias por su tiempo y su colaboración.

SC, Marzo 2000.

APPENDIX B-1: Checklist for observation sessions in Chester-le-Street

- Date:_____
- Time appointment starts:_____
- Time appointment finishes:_____
- Health Practice number:_____
- Midwife:_____
- Patient's code for the study:_____
- Weeks pregnant:_____
- Antenatal visit number:_____
- Resources during the clinic: _____

Activity	Done	Time st.	Time fin.	Routine	Health education	Problems	Solutions
General situation							
Hospital appointments							
Check BP							
Check urine							
Palpation of the tummy							
Listen baby's heartbeat							
Take blood sample							
Give results back							
Maternity rights/benefits							
Ask about worries							
Other situations							
Comments							

APPENDIX B-2: Checklist for observation sessions in Pamplona

- Fecha: _____
- Hora de comienzo: _____
- Hora en que termina: _____
- Matrona: _____
- Semanas de embarazo: _____

Actividad	Hecho	Rutinario	EpS	Problemas	Soluciones
Situación general					
Citas en el hospital					
Toma de TA					
Examen de orina					
Peso					
Palpación					
Escucha del latido fetal					
Análisis de sangre / Dar resultados					
Baja por maternidad					
Preguntar sobre preocupaciones / dudas					
Otras situaciones					
Comentarios					

APPENDIX C-1: PATIENT' INFORMATION LETTER (English)

Durham, ___/___/2000
Version number _____

Dear Patient,

The nurses and midwives of this General Practice are collaborating with a research project that is being undertaken by me. I am a postgraduate student (a Spanish qualified nurse) in the Centre for Health Studies at the University of Durham. This project will be the basis for an M.Sc. thesis that will be finished by October 2000. The title of this study is: *What health education is provided to first time pregnant women during antenatal care in two locations, Pamplona (Spain) and City of Durham (England).*

You are invited to take part in this study. Please, take your time to read carefully the information provided before you take your decision. Taking part is entirely voluntary. If you decide to give your consent you are still free to withdraw at any time and without giving a reason. Your decision, of course, will not affect the care you receive.

If you participate, it will not involve any increase in the number of times you will have to go to the GP or any other change. This study involves:

- Possibly you and your midwife being observed during one antenatal clinic or, if you attend antenatal classes, during some of these sessions. I will produce only written notes for my own use.
- You will be given a questionnaire asking about what health education you have been given and including some questions about how satisfied you are with it.

The information you give may help the practice to meet your needs.

The information you provide is treated as strictly confidential. Your information will be given a code, so that you will remain anonymous. No names will be recorded in computer records. Once the research is finished all personal data will be destroyed.

I will be grateful if you would agree to collaborate in this project. If so, please sign the attached written consent form. Please, use the enclosed self-addressed and stamped envelope to return this consent form to me as soon as possible. For further information do not hesitate to contact me at the address given below.

Thank you for your help.

Yours sincerely

Miss. Susana Cerdán.
Research Postgraduate Student.
Centre for Health Studies. University of Durham.
32, Old Elvet. DH1 3HN, Durham.
Tel: 0191 374 1844
Fax: 0191 374 1843
e-mail: Susana.Cerdan@durham.ac.uk

APPENDIX C-2: PATIENT INFORMATION LETTER (Spanish)

Pamplona, ___/___/2000
Numero de control_____

Estimada paciente:

Las matronas de su Centro de Atención a la Mujer están colaborando en un proyecto de investigación que se ha desarrollado como base para mi tesis de investigación. El título de dicho proyecto es: *Educación y promoción de salud que se imparte a mujeres embarazadas durante el periodo prenatal. Un estudio comparativo de protocolos y procedimientos entre España (Pamplona) e Inglaterra (Chester-le-Street).*

Se pide su colaboración para tomar parte en el proyecto. Por favor, tómese su tiempo para leer la información que se le da antes de tomar una decisión, pero recuerde que colaborar en el estudio es completamente voluntario. Si decide dar su consentimiento al estudio, todavía es completamente libre de abandonarlo en cualquier momento sin dar ningún motivo. Su decisión, por supuesto, no afectará en absoluto a la atención que usted recibe en su centro.

En caso de participar, no tendrá que modificar ni el número de visitas prenatales ni habrá ningún otro cambio. El hecho de participar únicamente implica:

- La posibilidad de que alguna de sus consultas con la matrona o alguna de sus clases prenatales sea observada por mí. No se grabará nada y solo tomaré notas.
- Recibirá un cuestionario con preguntas acerca de la educación prenatal que recibe durante su embarazo y sobre lo satisfecha que está con la atención recibida.

La información que dé será estrictamente confidencial. Se le otorgará un código numérico que garantiza el anonimato. De esta forma cualquier información suya no podrá ser identificada con usted, ya que se habrán eliminado sus datos personales y se habrán sustituido por un número.

Además, el proyecto ha sido revisado y aprobado por el Comité Ético del Servicio Nacional de Salud (Inglaterra).

Le estaría muy agradecida si decidiese colaborar en este estudio y para ello firmase el documento de consentimiento adjunto a esta carta. Para más información, no dude en consultar conmigo personalmente.

Gracias por su colaboración

Atentamente.

Susana Cerdán Sanz. (Enfermera. Col. Num 6846)

APPENDIX D-1: WRITTEN CONSENT (ENGLISH)

Centre Number:
Patient Identification Number for this trial:

CONSENT FORM

PROJECT TITLE: What health education is provided for first time pregnant women during antenatal care? A comparative study of protocols and health promotion practices in Pamplona (Spain) and City of Durham (England).

NAME OF THE RESEARCHER: Susana Cerdan (BSc in Nursing, RGN in Spain)
Research Postgraduate Student.
Centre for Health Studies. University of Durham.

(Please tick box)

☐ 1.- I confirm that I have read the information sheet dated ..... (Version.....) for the above study and have been given the opportunity to ask questions.

☐ 2.- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

☐ 3.- I know that my data will be treated as strictly confidential and that my name will not be used or included in any computer record.

☐ 4.- I agree to take part in the above study.

Name of Patient	Date	Signature

Researcher	Date	Signature

APPENDIX D-2: WRITTEN CONSENT (SPANISH)

Numero de identificación:_____

HOJA DE CONSENTIMIENTO

TITULO DEL PROYECTO: Educación y promoción de salud que se imparte a mujeres embarazadas durante el periodo prenatal. Un estudio comparativo de procedimientos y protocolos entre España (Pamplona) e Inglaterra (Chester-le-Street).

NOMBRE DE LA RESPONSABLE: Susana Cerdán Sanz (Diplomada en Enfermería)
Centro de Estudios Sanitarios. Universidad de Durham

(marque con una cruz)

1.- Confirmo que he leído la carta informativa con fecha.....(Num. Control.....) para el estudio indicado arriba.

2.- Entiendo que mi participación en este estudio es voluntaria y que soy libre de abandonarlo en cualquier momento sin dar ningún motivo, sin que ello afecte en absoluto la atención sanitaria que reciba.

3.- Sé que mis datos serán tratados bajo estricta confidencialidad, y que mi nombre no será utilizado ni incluido en ninguna base de datos electrónica.

4.- Doy mi consentimiento para participar en este estudio.

Nombre del paciente	Fecha	Firma
Nombre de la investigadora	Fecha	Firma

Direct Line: *0191 333 3274*
Email *Lianne.Sunter@qual-perf.durham-HA.northy.nhs.uk*

Date: Monday, 06 March 2000

Our Ref : ethics/03-00/64/Dec99

Please reply to:
County Durham Health Authority
Appleton House
Lanchester Road
Durham DH1 5XZ
Tel: (0191) 333 3232
Fax: (0191) 333 3233

Miss Susana Cerdan
Research Postgraduate Student
Centre for Health Studies
University of Durham
32 Old Elvet
Durham
DH1 3HN

Dear Miss Cerdan

Study 64/Dec99: **What health education is provided to pregnant women during antenatal care? A comparative study of Spanish and English protocols and practices. Miss S Cerdan**

(Please quote 64/Dec99 on all correspondence)

Thank you for your letter of 21 February 2000, enclosing the amended Patient Information Sheet as requested by the Committee at their meeting on 07 February 2000.

We are now pleased to give Chairman's approval to the above numbered study, subject to minor amendments sent out on the enclosed Patient Information Sheet. Otherwise would you please ensure that each patient's general practitioner/hospital consultant, is notified of the fat that the patient is taking part in your study to enable this information to be recorded in the patient's notes.

I shall write to you once a year for a progress review. Otherwise, I would be grateful if you could forward a report to this office on completion of the project.

Yours sincerely

pp Lianne Sunter

Mrs Jo Turnbull
Chairman - County Durham Local Research Ethics Committee

APPENDIX F: Table for χ^2 values.

TABLA DE LA χ^2

g.l.	1	2	3	4	5	6	7	8
0,10	2,706	4,605	6,251	7,779	9,236	10,645	12,017	13,362
0,05	3,841	5,991	7,815	9,488	11,070	12,592	14,067	15,507
0,025	5,024	7,378	9,348	11,143	12,833	14,449	16,013	17,535
0,01	6,635	9,210	11,345	13,277	15,086	16,812	18,475	20,090
0,005	7,879	10,597	12,838	14,860	16,750	18,548	20,278	21,955
0,001	10,828	13,816	16,266	18,467	20,515	22,458	24,322	26,124
g.l.	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
0,10	14,684	15,987	17,275	18,549	19,812	21,064	22,307	23,542
0,05	16,919	18,307	19,675	21,026	22,362	23,685	24,996	26,296
0,025	19,023	20,483	21,920	23,337	24,736	26,119	27,488	28,845
0,01	21,666	23,209	24,725	26,217	27,688	29,141	30,578	32,000
0,005	23,589	25,188	26,757	28,300	29,819	31,319	32,801	34,267
0,001	27,877	29,588	31,264	32,909	34,528	36,123	37,697	39,252
g.l.	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
0,10	24,769	25,989	27,204	28,412	29,615	30,813	32,007	33,196
0,05	27 587	28 869	30,144	31,410	32,671	33,924	35,172	36,415
0,025	30,191	31,526	32,852	34,170	35,479	36,781	38,076	39,364
0,01	33,409	34,805	36,191	37,566	38,932	40,289	41,638	42,980
0,005	35,718	37,156	38,582	39,997	41,401	42,796	44,181	45,559
0,001	40,790	42,312	43,820	45,315	46,797	48,268	49,728	51,179
g.l.	**25**	**26**	**27**	**28**	**29**	**30**	**40**	**50**
0,10	34,382	35,563	36,741	37,916	39,087	40,256	51,805	63,167
0,05	37,652	38,885	40,113	41,337	42,557	43,773	55 758	67 505
0,025	40,646	41,923	43,195	44,461	45,722	46,979	59,342	71,420
0,01	44,314	45,642	46,963	48,278	49,588	50,892	63,691	76,154
0,005	46,928	48,290	49,645	50,993	52,336	53,672	66,766	79,490
0,001	52,620	54,052	55,476	56,892	58,301	59,703	73,402	86,661
g.l.	**60**	**70**	**80**	**90**	**100**			
0,10	74,397	85,527	96,578	107,565	118,498			
0,05	79,082	90,531	101,87	113,145	124,342			
0,025	83,298	95,023	106,629	118,136	129,561			
0,01	88,379	100,425	112,329	124,116	135,807			
0,005	91,952	104,215	116,321	128,299	140,169			
0,001	99,607	112,317	124,839	137,208	149,449			

En **negrita**, a principio de cada casilla, se indican los grados de libertad. El error alfa corresponde al indicado en la primera columna (0,10; 0,05; 0,025; etc.).