Health and Gender 2007-2008 Report

Women and Men in Healthcare Professions

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The Observatory on Women's Health (OWH) has been part of the Quality Agency's Directorate General at the Ministry of Health and Social Policy since 2004. Achieving reduction of genderbased inequalities in health remains its main goal. It acts in a participative and cooperative manner in order to generate and disseminate the kind of knowledge that may enable analysis from a gender perspective and promote integration of both equity and a gender approach in health policies and systems.

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Executive summary

In recent years, progressive access of women to the work market has not subsequently brought about massive influx of a majority of men into the domestic reproduction and care realm. Along these lines, the female activity rate for 2007 was 49 % whilst that of their male counterparts was 69 % (*Encuesta de Población Activa, INE;* Active Population Survey, National Institute of Statistics) with a registered increase of 10 percentage points between 1999 and 2007 (Eurostat).

That is why women are taking on a diversity of roles and doubling or tripling their working timetables. Not only does this overload of duties take its toll on women's health (Health and Gender 2006 Report) but it also hinders their normal access to empowering and decision-making posts. This entails negative effects that are being analysed in the present report and that relate to women's professional careers, to a scant repercussion of female values in the organisation and management of the healthcare activity, to a concealed social underrating of feminised professions and to a symbolic male dominance in all sectors involved: training, research, care, management and communication in the healthcare sector.

For the time being and despite female students being majority at universities, Health Sciences specialties included, their presence in training is far apart from parity. Positions they hold rank below those held by men, even in the most feminised professions such as Nursing. Striking is the absence of female professors in Paediatrics or Gynaecology. On the other hand, their presence in university bodies of representation and management is still minority and limited to intermediate positions.

Uneven presence of women in teaching positions is recurrent in the research sphere where they most often take up lower rank occupations. They are also less represented as main researchers in publicly financed calls for research projects. If the family overload and social pressure they undergo are also to be considered, it may all well translate into a lower presence as authors in specialised reviews or as part of drafting and editing committees which in turn results in diminished professional success.

The situation in the Healthcare System runs parallel with that of universities: concentration at less valued jobs and absence from the most recognised positions and specialties. A lower presence of women in managerial and responsibility posts is also noticeable.

This situation owes partly to an array of stereotypes leading to the notion that some specialties are better adapted to women or that they are less fit to take on positions of professional responsibility due to their family responsibilities. The media most often cooperate in conveying such unfounded stereotypes thereby increasing the difficulty in challenging them.

Finally, it stands as obvious that care given by both female and male physicians is different in terms of disorders and types of diagnosis tests prescribed, communication styles, time devoted, information provided, etc., all of which translates into users' showing preferences when selecting a professional according to their sex. It also emerges that therapeutic endeavour is different when same diseases are treated in men or in women. As a result, some research and indicators reveal that female and male users' levels of satisfaction are different.

Introduction

Access of women to the work market is an unquestionable fact. Over the last decades hundreds of thousands of women have shifted from the reproductive to the productive sector without never really quitting the former. It is precisely this fact of their not having broken away from the care and reproduction tasks of the domestic sphere that has been found to be a factor limiting the full development of women's capacities.

In both the 2005 and 2006 Health and Gender Reports, some of the effects of this double timetable were confirmed in the shape of a greater probability of becoming ill or also in a lower professional category. As a matter of fact, in the last report healthcare professions were analysed in terms of age at which recognition of one's professional career is obtained. Such an analysis of healthcare professions had to be forcibly more extensive and encompass aspects related to training, promotion and recognition in this precise context of healthcare practice, but also to parity and possible differences in the health care they provide.

In recent years a number of legal provisions regulate equality between women and men in the European, nation-state and regional spheres. Examples of these are European Regulations promoting equal treatment in the educational and professional spheres and in the access to assets and services (2002/73/EC; 2004/112/EC) or Organic Act 3/2007, of March 22, for effective equality of women and men. This legal frame is central when reflecting upon some of the data and figures contained in this report and must be the impulse that may enable development of equality and parity in services relating to health.

In this sense, Education, Research and Health are referred to in various Articles of Organic Act 3/2007, of March 22, for effective equality of women and men thus setting out guidelines for integrating the principle of equal opportunities into education as well as into health policies. As far as educational administrations are concerned, actions inspired by the principle of equality shall have to be taken concerning courses and programmes for the training of teaching staff as well as learning on matters of equality between women and men. In addition it establishes the need to promote a well-balanced presence of women and men in governance and control organs of educational centres (Art. 24 and 25). With regard to the healthcare sector, it points out that Public Administrations, through the Health Services or relevant institutions, shall have to develop initiatives aimed at promoting the kind of scientific research that takes into consideration differences among women and men in terms of their health protection mostly in what concerns

access and therapeutical and diagnostic endeavour, in both their clinical trial aspect as well as in general care. Also, it reiterates the need for the principle of equality to pervade all training of personnel at the service of healthcare organisations, and for conducting actions aimed at achieving a well-balanced presence of women and men in executive and responsibility professional posts within the whole of the National Health System. All of the latter while never forgetting the importance of obtaining and processing data from records, surveys, statistics or other systems of medical and healthcare information, in a sex-disaggregated fashion (Art. 27).

Fortunately, since a few years ago and by international agreement, statistics broken down by sex are starting to become available which enables analysis from a gender perspective. Even so, a number of consulted sources do not allow sex-itemised study and hence, in these cases, the different situation of women when compared to that of men remains invisible in terms of analysis. On the contrary, not only have some institutions put into practice this kind of sex-itemisation in statistics but they have also conducted equality plans with encouraging results.

Universities: the Production and Dissemination of Knowledge

In our developed societies science is a top level productive social activity. It involves at least three interrelated and politically controlled significant activities: production, dissemination and consumption of fresh knowledge, all three occurring in an extremely competitive context also when health sciences are the case (López Piñero, 1992; Callón, 1995; Gibbons, 1997; Ridsdale, 2000; Sackett, 2000). To gain access to the system a long and complicated training process has to be undergone and completed with the eventual integration into a "scientific community" namely a community of expert individuals that in a sustained feedback endorses the knowledge, values and technology that it itself generates in an often cyclic and generally progressive process. The "actors" or "agents" of that scientific community act in accordance with regulations, fashions, traditions or customs, objectives and methodologies, even assessing ones, which are their own. That male or female culture that comes to the lab, the clinic or the assessment table in the shape of men and women, is not as neutral as it was thought to be. Until recently, scientific knowledge was believed to be neutral, free from any sort of bias or partiality but it is becoming more and more obvious that it is indeed influenced by the culture and ideology of those people who generate, convey and consume it (Laudan, 1998; Woolgar, 1991; Latour, 1992, 1995; Gibbons, 1997; Medina, 1997).

Detection of differences in the ways women and men ail and of effects in health of their different pattern of socialisation in our western developed society would not have been possible without research conducted in the last three decades in women's universities (women's studies; Ortiz, 2006). The newly published medical literature, available through well known bibliographical data-bases Medline/PubMed, Embase o Science Citatio Index, have highlighted the distortion of conventional scientific knowledge named "gender bias"¹. Gender biases have been explained as side effects

¹ See 2005 and 2006 Health and Gender Reports on this phenomenon. Among the most recent synthesis publications aimed at highlighting gender biases it is worth mentioning the *Monografía de la Sociedad Española de Epidemiología, Investigación en Género y Salud* (Monograph "Research in Gender and Health" by the Spanish Society of Epidemiology) coordinated by Carmen Borrel and Lucía Artazcoz and with the collaboration of Cascant, Cortés, et al. A highlight in the History of Medicine field is the work of Teresa Ortiz and Denise Bernuzzi: *Perspectives on Gender and Health*, with the cooperation of Cabré Flecha, et al.

(unforeseen, undesired and often unconscious) stemming from science and technology having been almost exclusively male professional activities until very recently.

Although caring for ill people has traditionally been a female activity, production and dissemination of fresh scientific knowledge within the scope of health sciences still casts an intensely male profile (Ortiz, 2001; Arrizabalaga,2005;Germán,2006,2008;González,2007).Todavitis generally considered that the feminisation of the medical profession has been a key factor for highlighting biases and differential problems ignored until very recently among health professionals (Bonder, 2008; Yago, 2008). It is thus necessary to, specifically, look into the production and dissemination of the latest knowledge in order to prevent andro-centric biases in biomedical scientific knowledge and hence be in a position to provide both female and male patients with the best, neutral and universal information available. In that kind of system we are particularly interested in analysing the making up process of new professional and scientific teams, in order to plan and secure a well-balanced presence of female scientists, doctors, chemists, biologists, psychologists, etc. It is hence significant to observe and describe the process of socialisation and the development of men and women's professional careers as well as their role, managerial or subordinate in the processes of selection and assessment within the knowledge society in the health realm.

University Alumni

Alumni's access will be discussed in the first place or in other words the way arrival occurs and at which specialties, always bearing in mind the sex variable.

Within the population sitting Exams for Admission to University (PAU Spanish acronym for reference) that represents practically 90% of admissions, women (58%) largely outnumber men (42%).

However, paths followed by either female or male students do differ according to their sex. Even though on occasion it has been claimed that a change in terms of career selection according to sex is already patently clear, when observing paths followed by different sexes, this alleged change is more than doubtful. As shown in Figure 1, from 2001 to 2007 the only

Worth drawing attention to, are two individual and widely spread monographs on gender biases approached respectively from a biomedical and psychosocial perspective: *Mujeres invisibles* by Carme Valls and *Sexos, género y salud. Teoría y métodos para la práctica clínica y programas de salud* by Sara Velasco.



study option presenting considerable increase for both women and men is Social Sciences. The increase experienced in Scientific-Technical specialties is also significant although it is only tangible among men. On the contrary, fewer women than in 2001, opted for this branch in 2007. Health Sciences are still first choice for a majority of women although contrarily to 2001 trends, these have come to be outnumbered by women opting for Social and Legal studies.

Integration in university studies practically coincides with the path followed at secondary school. Again, Figure 2 shows women's more marked inclination for Social Sciences and Health though also for Experimental Sciences.Men are more oriented to Technical Studies with an increase between years 1998 and 2007 that surpasses women's increase for the same period,



Social and Legal Sciences57.9257.0342.5039.88Source: INE, Statistics on University Education in Spain.for which a hypothetical change in this sector is wishful thinking rather than
reality. But differences not only affect the type of studies undertaken but
also the professional category accessed upon finalising the studies pursued.
As it follows from Figure 3, at the end of the 90's more than 30 % of people

reality. But differences not only affect the type of studies undertaken but also the professional category accessed upon finalising the studies pursued. As it follows from Figure 3, at the end of the 90's more than 30 % of people pursuing college studies selected a first cycle. In recent years figures reach 40 %. But on close inspection of absolute figures it emerges than less and less men commit themselves to first cycle studies whereas the amount of women has not ceased to increase year after year getting from 290,021 in 1998 to 298,992 in 2007. If the increase continues, women will end up with lower professional category than men, perpetuating the salary gap between women and men. And very often the undesired effect is a consequence of a structuring of studies from an androgenic point of view, in a way in which the importance attached to each type of studies is in accordance with whether or not they fall within stereotyped male attributions. The present reform of University degrees, to have them fit into the European context, may well



be the occasion to change certain gender values ascribed to degrees and professions (some examples are Nursing and Social Work).

Quantitative data suggest that patriarchal or pre-equalitarian society patterns have not been significantly changed but for the formal and contractual character of working activities. This alleged differentiation again carries the inheritance of the "mater familiae" traditional roles of dedication to the family, the children's education, family and/or the neighbourhood's health and the governance of the household and possessions.

What might this differentiation between careers perceived as male careers and those perceived as female ones owe to? One among other hypothesis considered within the sociology scope is that distinction is made between the field of care and that of provision. Thus, women would favour studies relating to the care and concern for people as, for instance, teaching or, in the health sphere, occupations such as nursery. On the contrary, men would embrace specialties relating to the control of the natural and social environment such as engineering sciences (Izquierdo et al, 2008). When comparing Specialties where women's presence is higher with those where men are more numerous, the hypothesis turns to be valid. So, the three degree courses with a higher percentage of men are related to technology and deal with energy sources (fig. 4). On the contrary, the most feminised careers are Nursery and Infant and Primary Teaching which reproduce the caring role of women in the domestic realm.

In actual terms, when talking specifically about health, debate usually revolves around healthcare aspects while everything concerning care is put aside. Forgetting about care is also forgetting the care provider role that women have historically assumed (Iglesias, 2003). Society labels these studies and connected professions as suited to women, which makes it difficult to overcome sexual division of work. The media are also liable for building



Source: INE, Statistics on University Education in Spain. CNED, Clasificación Nacional de Educación.

stereotypes associated to professions, not just sexual but image-related and representational. Later on, we will discuss the incidence of this categorisation in the vision of female professionals themselves who choose career paths that aprioristically are not suited to women.

Excellence achieved in studies also presents disparity. A recent study has evidenced that allocation of National Graduation Prizes is far from parity. Between years 1985-1986 and 2002-2003 women obtained 39.4 % of prizes, Technical Studies and Humanities being disciplines with the lowest women representation (between 18.8 and 45.3 %, respectively). Figure 5 shows that Humanities is the career presenting a higher disproportion between the number of enrolled female students, that for the last analysed year reached 63 %, and the percentage of prizewinning ones that stands at 42 % (Carrera et al, 2008).

It is also advisable to remember that the university stage does not end with first or second cycle studies. Part of the students, male or female, go on



to pursue doctorate studies that in turn lead into completion of a doctoral thesis and hence achievement of a higher professional category oriented to instruction or research in the university realm. Therefore analysing access to doctorate studies would enable to anticipate which cohorts will emerge as educators in universities in the near future. Although doctoral students access third cycle practically in the same male/female proportion it does have to be established that for the period considered women are majority. In the area of Experimental Sciences and Health the trend is of a more marked dissociation: In year 1998-1999 female doctoral students were already a majority and over the years this trend has continued until attaining a 60:40 proportion in favour of women (fig. 6). Therefore, in view of these data it may be confirmed that in the next years the teaching personnel in universities is most likely to be primarily made up of women, even more so in specialties related to health.

The next step, within 3rd cycle studies is the drafting and defence of a doctoral thesis. Doctoral theses gaining pass to top marks cast a more realistic picture of the future access of female and male doctoral students to teaching and research positions. The difference in data regarding third cycle alumni is remarkable: in the last ten years, theses defended by women



have increased proportionally but they still do not reach 50 % even though they account for the majority of doctoral students. However, over the years figures have progressively drawn nearer; in year 1979-1980, 26 % of passing doctoral theses were defended by women. From 1983 to 1984 they reached 39 %. Data from year 2006-2007 show that the proportion still climbed to 47.6 %. The slight improvement that may certainly be observed over the years is especially visible for the areas of Experimental and Health Sciences. In the latter, women have come to reverse the situation by getting over 50 % of passing doctoral theses (fig. 7).

In short, although for some years now women have been majority among university student populations with an average 54 % of alumni they are underrepresented when it comes to accessing third cycle studies and even more so when observing the number of their passing doctoral theses even in areas in which they constitute majority. One of the possible explanations is that doctoral studies, particularly doctoral theses, are completed over a longer period, especially by women, whereas men can more easily complete their studies. In addition, working conditions and possibility of conciliating family and professional lives cast women out (Villarroya et al, 2008). There is some evidence reinforcing this hypothesis as may be the higher percentage of men



accessing pre-doctorate scholarships (De Pablo, 2004). If this hypothesis proved true, the situation would clearly reverse in the next few years. Meanwhile, women's access to academic positions in certain specialties will continue being distinctly limited. In the areas of Experimental and Health Sciences, this change of direction may possibly influence each sex's share in teaching personnel and in professional categories in the near future.

University Personnel

For many years the role of women in Science and University has been ignored though there is proof of their sporadic and exceptional presence in universities since the 15th Century (Ministry of Education and Science, 2007). As just discussed, today, women's presence among university alumni is predominant. On the contrary when analysing positions held by women in universities the well-known "scissors-like chart" appears distinctly to show how the higher the professional category the lower the presence of women (fig. 8). The fact that women are present in highest proportion among Administrative and Services staff where they reach 58% and showing a growth trend, has definitely to be highlighted. Comparison of the two series over time, offers interesting conclusions on the increase of the proportion of momen in all categories though at a rather slow pace: If the proportion of female professors went on rising at the present rate, parity in this category would be attained in year 2656.

Differences are remarkable as it stands out in Figure 9. In 2006 there were no female Professors either in Paediatrics or in Obstetrics which for some years has been the prevailing trend (Arrizabalaga and Valls-Llobet, 2005), and in no specialty related to health did female professors percentage reach 10% in contrast with the average 14.9% of female professors in universities. On the contrary the number of female tenured lecturers and part-time senior teaching associates was higher, although always below 40% which seems to be set average for all universities. In this professional group, specialties with a higher proportion of women are Paediatrics, Preventive Medicine and Public Health.

Nursing is a good example of a highly feminised professional career (83.7% of female enrolments) with academic personnel primarily made up of women (67.8% of female teaching staff) although with all posts of highest responsibility held by men; these account for 100% of University Head Professors and 60% of Affiliated Colleges' chairs. In contrast, women represent 73% of Affiliated College Heads and 67% of Part-time Senior Teaching Associates.



According to some hypotheses the low proportion of women that reach the summit of their professional careers depends on their joining each working space late. The ratio of tenured teaching staff per chair is a reliable indicator for the probability a woman has to reach her professional peak among her sex peers, compared to her male same-year or lab partners. On average, in Health Sciences, one woman out of every 8.5 permanent professionals becomes a professor whereas one every 2.3 men achieves the same goal. Table 1: professional career for Research Teaching Personnel (PDI Spanish



corresponding acronym) reflects the ratio female/male tenured lecturers per female/male professor for some Health Sciences sector areas of knowledge. The conclusion is that if no action is taken the mass of female tenured lecturers should have to increase six fold to achieve gender parity at academic maximum responsibility level. When analysed jointly, data on women and men at the peak of their academic career and ratios of highest professional levels reveal that women's extra effort is closely related to the number of men holding those posts.

TABLE 1. Professional Galeer in Research feaching Personnel - RTP (PDI)						
Health Sciences' Area of Knowledge	Tenured professionals per female professor	Tenured professionals per male professor	% Male Professors	% Female Professors		
Ophthalmology	4.6	2.3	87.7	12.2		
Histology	5.0	2.6	72.0	28.0		
Toxicology	5.3	2.2	78.5	21.4		
Medicine	5.8	2.1	96.4	3.5		
Immunology	6.0	1.5	91.6	8.3		
Pharmacology	6.4	1.5	75.0	25.0		
Dermatology	7.0	2.7	85.7	14.2		
Microbiology	8.6	1.5	83.6	16.3		
Legal and Forensic Medicine	9.0	2.2	84.6	15.3		
Stomatology	9.2	4.0	89.4	10.5		
Human Anatomy	10.2	2.4	84.6	15.3		
Physiology	10.3	1.6	87.5	12.4		
Surgery	11.0	2.4	98.7	1.2		
Preventive Medicine and Public Health	12.6	3.0	90.3	9.6		
Radiology and Physical Medicine	24.0	2.8	96.4	3.5		
Psychiatry	29.0	3.2	95.8	4.1		
Physical and Sportive Education	-	3.5	100.0	-		
Obstetrics and Gynaecology	-	1.8	100.0	-		
Otorhinolaryngology	-	2.2	100.0	-		
Paediatrics	-	2.7	100.0	-		
Traumatology and Orthopedics	-	9.0	100.0	-		

TABLE 1. Professional Career in Research Teaching Personnel - RTP (PDI)

Source: Ministerio de Educación y Ciencia. Académicas en cifras, 2007; 128-129.

Administration and Management Executive Posts

The absence of women in administrative positions at universities mirrors inequalities of the structure itself, something more visible when it comes to posts of greater responsibility (fig. 10). To the practical absence of women Vice-Chancellors must be added a shy presence of women at Deputy Vice-Chancellor's offices that might owe to the goal of achieving parity in the composition of managerial teams within the university community, the percentage of female deputy vice-chancellors hardly reaching 30 % with significant differences among universities, that range from 0 to 69 %.

Likewise, individual commissions like Deanships of Technical Schools, Colleges or Departments Directorships are all still taken by men. This unequal distribution is quite significant in the areas of technical knowledge and also in Experimental and Health Sciences (*Ministerio de Educación y Ciencia*, 2007; Ministry of Education and Science). In the case of Health Sciences, there is a clear contrast between academic positions and distribution of alumni.



The explanation for this absence of women from high posts is complex. A number of hypotheses have been put forward complementing, to a larger or lesser extent the whole of determinant factors (García de Cortázar, Guil, Pérez Sedeño, et al, 2005; Santamarina, 2001; Miqueo, et al, 2008; Ortiz, 2005; Dio Bleichmar, 2008) Even today the situation of women at universities is far from parity especially at levels accorded the greatest recognition. Regarding this state of affairs, explanatory factors may be proposed both of a sociocultural nature as well as deriving from the effects of the andro-centric culture pervading men and women's gender socialisation. It all materialises in the absence of women from spheres of power that influence access to direct appointment, co-optation and public assessment of merits, posts. This also entails less personal gratification and lower income. Another factor is the often greater involvement and dedication to teaching than to research, or the acceptance of subordinate positions ("to stay in the background") in the research activity, fact being that the academic career favours the research curriculum over the teaching one. Scarce reconcilement of family and professional lives in the case of men has also a bearing and so has the greater dedication of women to the family that deprives them of that supplementary time demanded by management posts and that is usually taken by men. Generally, more or less visible or significant, these personal or socio-cultural factors make up the academic "glass ceiling", i.e. the obstacles in women's path to access managerial, decision-making or responsibility posts in the university realm.

Research

The Research Career

The existing breach between feminine population's progressive growth and excellence they achieve in higher education, and the subordinate role women have been cast in within the market of professional research are starting to surface in spite of the fact that leading indicators of the education system, the national system of science and technology and the healthcare system, do not yet provide sufficient data itemised by sex (ETAN, 2000, 2005).

In recent years some approaches to research from the perspective of gender have helped to, at least, clarify each sex share of research personnel (García de Cortázar, Guil, Pérez Sedeño, et al, 2005; Miqueo, et al, 2008; Pérez Sedeño, 2001, 2006; Fernández y Santesmases, 2002), as well as professional categories women an men hold globally, though we still lack minimally reliable data on productivity and impact of their work. Broadly speaking, studies are contributing more quantitative data than explanations of the phenomenon, the discovery stage still prevailing over the application or social and universal bearing of that gender studies fresh information on men and women.

It has been observed that the rhythm of integration of university educated women in the professional work market is slower than it should be expected; by way of example, in the last five-year period the general rate of female undergraduate went up by 4 % while only 1.3 % in the research sector. Secondly a traditional pattern emerges in this process as women converge in public administration spaces, universities and non-profit private institutions (fig. 11). Also, and in contrast with men, women prevail in the fields of education, and healthcare and in social and humanitarian areas, whereas men outnumber them in the engineering, technology and experimental science areas and in private firms.

Reports contributed by *Mujeres Investigadoras del Consejo Superior de Investigaciones Científicas (CSIC;* Women Researchers from the Superior Council of Scientific Research) are the most significant because of the research population it integrates and their subsequent editions issued regularly since 2005, after the initial and comprehensive study conducted by areas in 2002². Among their conclusions the inference drawn is that

² The CSIC, Institution now part of the Carlos III Health Institute is the only Spanish research organisation that relies on a unit of equality and promotion of women. The Commission "Women



presence of women in the main research system at State level is parallel with the presence/absence of women in University: in some specialties like Science and Physical Technologies, women are still minority while in others like Food Science and Technology the proportion of women and men verges on parity (CSIC, 2007; fig. 12).

Nevertheless the distribution by professional category reveals great inequities as the greater proportion of men in the highest posts of the research career. Precisely, the three most recognised categories in the CSIC are taken up in a practical majority by men and they follow the pattern previously discussed and referred to Universities. Two good examples of scissors-like

and Science at the *CSIC*" (*"Mujeres y Ciencia en el CSIC"*) has been functioning since 2001 as a work group by direct invitation of the then president Rolf Tarrach, until the *CSIC* Governing Board approved its institutional creation on 30 September, 2002. The Commission is made up by the *CSIC* President, eight members representing each one of the scientific areas and three more members appointed by its president (www.csic.es).



Figure 12. Distribution of Research Personnel by Sex and Specialties

distribution are research lecturer positions³, with hardly 20 % of women and, on the opposite side the research assistant position with more than 60 % of women (CSIC, 2007). Other attempted overviews on presence of women in research teams yield similar results: larger concentration in the technical and administrative areas and conspicuous absences in the sheer research area itself (Campabadal, 2008; Agudo and Viedma, 2008).

The whole of the Spanish scientific-technological system follows the traditional sexual segregation pattern (negative discrimination) where we

³ Officially "Senior Lecturer in Research".

can see that the Medical Sciences sector is the one where parity most occurs (fig. 13).

For analysis of those vertical and horizontal discrimination trends, age itemisation has proved to be a key factor (fig. 14), chiefly for the purpose of confirming or refuting the thesis of natural correction of unequal access of women to managerial posts. According to available data, among the youngest cohorts parity is higher, but the evolution of their full-time commitment opportunities will have to be closely watched as they grow older after they reach the age of assuming reproductive challenges.

Healthcare research at the present time depends on a series of financing mechanisms, chiefly funds to promote research granted by state



Source: INE, Encuesta sobre Recursos Humanos en Ciencia y Tecnología, 2006.



institutions. The call for financial aids from the Healthcare Research Fund (*Fondo de Investigación Sanitaria, FIS*) is a good indicator of the state of biomedical research. The call's particular structure enables these aids' sexrelated unequal distribution to emerge, as one member of the applicants team for each particular grant has to appear as "Main Researcher" (MR). It has also been possible to observe how some of the projects led by women get considerably behind the logics of prevailing biomedical priorities, although the involvement in public health is clear. No wonder in the inter-peers evaluation process these projects get rated as of minor significance within what is supposed to map up Biomedicine main agenda.

Analysis of two time-distant calls for D+R shows that women's presence in the system of promotion of research has not improved significantly over the years. If in 1995 the number of female MR (main researchers) stood at 26.1 %, recent data show that the percentage of main researchers reached 29.7 % in 2005 (fig. 15).

Participation of women as part of teams of applicants for public financing, yields slightly different data with more than 36% of participants in research projects. Close inspection of Figure 16 data shows that less than half of the women participating in 2005 Healthcare Research Fund Call for Public Financing did it as Main Researchers. The ratio Main Researchers/Associated Researchers is different among men: 60% of men apply as MR, whereas slightly over 40% do as Associated Researchers of the project.

It is besides interesting to observe the probability of obtaining financing according to the Main Researcher's sex. From data resulting from 2005 Healthcare Research Fund Call for public financing it can be concluded that of projects submitted those led by women achieve success (win financing) in a slightly lesser proportion when comparing them with projects where the Main Researcher is a man (Table 2). With the information available in hand the reasons for these differences cannot be determined. Maybe one of





Figure 16. Distribution of personnel ascribed to financed projects, category

them is that some of the proposed subjects by female main researchers may not coincide with present Biomedicine priority interest subjects or may be deemed as less interesting than the latter (García-Calvente et al, 2008).

In addition and as regards subsidies granted to the most experienced male and female researchers through the Centres Of Biomedical Research Network (Centros de Investigación Biomédica En Red - CIBER), differences emerge between grants given to female or to male researchers (Peiró-Pérez et al, 2007). Finally, further analysis of other public calls for financing does not show statistically significant differences between grants awarded to women or to men.

TABLE 2. Projects submitted to Healthcare Research Fund 2005 Call							
	Applicants	Rejected	Admitted	% Success			
Women	897	532	365	40.69			
Men	1,956	992	964	49.28			
Total	2,853	1,524	1,329	46.58			
Source: Arenas Barbero, 2005.							

Scientific Journals and Reviews

If the presence of women in responsibility posts at universities and professional societies is still minority so is their visibility in scientific production. A reliable indicator is the publishing of articles in specialised journals and reviews, something that apart from prestige may yield economic benefits, as is the case for instance, of those deriving from Research *"Sexenios"* (researchers' exclusive eligibility for six-year-period cumulative work-output supplementary payment) (Frank, 2005; Bordons, 2003; Mauleón, 2006). Specifically in the health sector there are a number of bibliometrical analyses by different publications to evaluate the importance of women's participation. Thus, in 1998 practically 70% of published articles in the most prestigious health-specialised reviews were subscribed by men. Also, in 85% of articles with more than one signatory, the first signature was a man's (Schiaffino et al, 2001). However not always can this type of studies be conducted, for many biomedical publications do not identify male or female authors by their names, thus making their sex invisible (Miqueo et al, 2008).

Other analyses at an international level establish the scarce presence of female signatures among the main scientific reviews: from 5.9% of first signatures in 1970, 29.3% is reached in 2004. Just as it also happens at university, female and male distribution by specialties is not homogeneous either. It rather concentrates at some specialties: women appear more frequently in reviews specialising in Gynaecology or Paediatrics, with around 40% of first signatures. On the contrary, articles written by women are not as visible in other specialised reviews, as for instance in Surgery, with a 16.7% of first signatures (Jagsi et al, 2006). Other sources set the percentage at 25.6% for this same specialty (Kurichi et al, 2005). In the case of leading articles in international scientific reviews the proportion of women would reach between 11 and 18% (Jagsi et al, 2006).

The presence of women in scientific reviews' editorial teams is also lower. In an article published in 2004 the percentage of women integrating the editorial teams of three public health reviews stood at between 15 and 26% (Ortiz-Gómez et al, 2004). Four years later, representation of women in editorial teams is reported to have improved for some of the publications analysed in the above mentioned article though in no case was 30% exceeded. A later report on a random sample of 2004 Spanish medical reviews, reveals that parity rates in editorial committees is inversely proportional to the review significance level (Miqueo, 2008). A different study shows that 51.17% of 2007 reviews do not allow visualising of the men and women integrating their scientific, advisory and revising committees as they only use Christian name initials, whereas this guideline does not apply to managing or editorial teams of 70 % of Spanish reviews. In these 122 reviews that fully state Christian names of those who integrate their managerial committees (fig. 17), there were 238 women versus 906 men in 2007 (many of them performing administrative tasks). This rate (20.8 %) duplicates the rates of women in committees entrusted with more scientific and assessorial functions (828 women of a total of 8807 scientists). Reviews directed by a woman are an exception (3 out of 172), but those with no women in their main executive boards are starting to be minority (25.6 %): 34 out of the122 that allow them to be visible (Miqueo y Barral, 2008, 2009).

All in all, the average participation of women in decision-making and evaluation posts in health sciences reviews (10%) is concluded to be below the number of male professors or individual posts within the academic sphere (15%), although it still outnumbers female executives in firms (5%).

The same effect surfaces in revision teams where men usually outnumber women (Davo et al, 2003). This adds to the fact that women encounter greater difficulty in overcoming the revision process, partly because some of the issues dealt with are underrated or trivialised from a biomedical viewpoint (Jiménez-Rodrigo et al, 2008).

It is, on the other hand, interesting to highlight that both multidisciplinary subjects and those relating to critical theories on women and gender studies,



get published in a different type of reviews such as Women's Studies that circulate outside more sizeable databases. This is to say marginal and nonintegrated in hegemonic knowledge sources.

Broadly speaking it could be said that men rely on more opportunities, better facilities and availability to develop a research career because of which their productive capacity in terms of publications is greater. On the other hand some research points in the direction of men being more prone to arrange to meet among themselves (Addis, 2004). To this must be added the lesser support editorial teams give research led by women precisely because of an existing underestimation of some subjects and methodologies such as qualitative ones.

Finally, the Matthew's⁴ effect coined by sociologist Robert K. Merton⁵ (1968), is worth considering in that, according to what it proclaims, an over recognition of already well placed and valued persons is a common occurrence. The gender perspective contribution was made by Margaret W. Rossiter when coining the "Matilda effect" that results when incorporating the gender perspective to the Matthew's effect (1993). Advantages accrue to men who rely on better facilities for achieving a research career, to a greater extent than to women, this being extendable to all levels.

In short, presence or absence of female signatories in specialised biomedical reviews is not attributable to a unique cause. It is rather a complex, multidimensional process with a wide variety of agents that hinder, intentionally or not, acceptance of articles subscribed by women. Figure 18 shows some of the processes just discussed.

Recommendations Jiménez-Rodrigo et al (2008) propose to reach parity in the process of publishing are worth considering.

On the other hand, scientific production determining factors must be considered bearing in mind the position and situation women and men hold in the ground of knowledge. Though we count on few data series, all studies reveal a lower participation of women as authors of scientific publications, as first signatories or top producers in the various areas, countries and specialties⁶. Socio-demographic and educational indicators seem to predict

⁴ In accordance with Mathew's Parable (13:12): "For whoever has, to him more shall be given, and he will have an abundance; but whoever does not have, even what he has shall be taken away from him".

⁵ Although a large part of the work Merton used to formulate his theory is attributed to his co-worker Harriet Zuckerman (Rossiter, 1993).

⁶ Revision of series presented at Science, Technology and Gender Latin American Congresses (1998, 2000, 2002, 2004, 2006 and 2008) reveals that productivity is the most opaque indicator of scientific activity. The latest studies of Spanish scientific production (Ministry of Science and Innovation and Autonomous Communities) offer sex-itemised data. Pioneer studies on



an equalitarian scientific production among both men and women. Family structure (partner involved or not in scientific activity, with or without children and number of children) is the factor upon which most studies, qualitative in a large proportion, have been centred, revealing generally a negative influence for women and positive for men. Structural variables are the ones to influence individuals' scientific production as shown in Figure 19. These structural variables have a strong impact on women's production in such a way that their productivity is strongly influenced by their position in Science social organisation (being part of publishing committees) Marked differences according to sex also occur for each one of the productivity indicators. International contacts (congresses, committees, projects, etc.) influence and determine the number of documents mostly among women, whereas the most significant indicator of men's productivity relates to foreign scientific conferences, their colleagues' revision and documents of an academic level.

productivity determinant factors according to gender in Spain, were those by Santesmases (2000), García de León (2002), Bordons (2003) and Pérez Sedeño (2005). In the healthcare field, sex-itemised data have been made available in specialties like History of Medicine, Public Health, Cardiology, Neurology, Primary Care and Drug-dependence (Ortiz, 2004; Colomer, 2002; Valderrama, 2007; González, 2007).


Professional and Scientific Societies

Healthcare Professions' membership is a good indicator for sex-distribution in different specialties⁷. At present, women account for 64 % of the total of collegiate healthcare professionals according to data from the National Institute of Statistics (*Instituto Nacional de Estadística*) which reflects the progressive feminisation of the whole of specialties. As it emerges from the analysis of graduate studies, women and men's distribution in different specialties is dissimilar and depends on multiple and diverse factors. The same can be said when it comes to professional associations: The proportion of women ranges from 17 % in Dentistry of Medicine to 55 % in Nursing. Figure 20 shows how composition of executive boards of Nursing and Hospital Surgical Medicine pictures the two opposite ends in such a way that in Nursing 7 out of 10 professionals are women and in Hospital Medicine they would make 1 out of 10. In the rest of specialties, the proportion of men ranges between 70 % and 75 % (Cascant et al, 2007).

Professional Associations' General Councils, PCGC (CGCP) stand out from the rest of professional organs for their being those with the lowest presence of women in their executive boards. In Biology, Medicine and Veterinary PCGCs there are no women whatsoever in their governance organs. On the contrary, specialties such as Pharmacy, Psychology and Physiotherapy exhibit a presence of women higher than in other specialties although very rarely do they go beyond the 30 % threshold.

The presence of women in directive bodies of Professional Associations and their General Councils differs greatly from their Graduation Photograph. It could be said that the approximate percentage of women on executive boards of professional healthcare societies is 33.2 %, which translates into women's underrepresentation especially in those specialties in which they are majority (figs. 21 and 22).

Obviously in less feminised specialties this percentage is lower and rises in professions like Nursing or Psychology. However, specialties' feminisation does not guarantee access to higher rank posts. Unequal distribution of leading posts repeats itself as in the case of jobs at universities so that,

⁷ Concerning this, see Section 6: "Women in the Healthcare Career" in the *Health and Gender* 2006 Report.



21.31

25.87

30.59

34.78

42.22

47.78

51.89

55.52

78.69

74.13

69.05

65.22

57.78

52.22

48.11

44.48

Figure 20. Sex and Specialty-Itemised Distribution of Executive Boards of Professional Associations' General Councils

Source: Cascant et al, 2007.

Veterinary

Optometry

Chiropody

Pharmacy

Psicología

Nursing

Physiotherapy

Biology

broadly speaking, women mostly hold inferior category jobs (spokeswomen, treasury offices and secretariats, while completely absent from presidencies (fig 23).



Figure 21. Sex and Specialty-Itemised Distribution in Executive Boards of Scientific and Professional Societies

This fact is highly conspicuous in Figure 24 where in presidencies, vicesecretaryships and vice-treasurerships of executive boards of PCGCs, there are no women holding these posts in their executive boards.

One of the most clarifying examples is the Nursing Profession. It is a highly feminised profession where 80% of associated professionals are women. Among all specialties it is the one that congregates a higher number of women at associations' executive positions, but even so the average



percentage of women Presidents of Nursing Schools stands at 36.4 %. On the contrary the percentage of women acting as spokeswomen at a Nursing School rises beyond 60 %.

Other significant cases are Physiotherapy, Medicine and Dentistry, three specialties that represent some differences of collegiate population. Physiotherapy is the most feminised of all three with a percentage of collegiate women of 67%. In contrast, only 7% of the presidencies of Physiotherapy Schools are held by women. The only post that nears parity is that of spokeswoman, 53% of which is held by women.

The same analysis can be done as regards Dentistry and Medicine, two specialties that present a similar percentage of collegiate women nearing 43 % although in representation organs women, once again, are absent. Only 4 % of Professional Societies presidencies are occupied by women. On the contrary, treasuries in Medicine at 25 % and secretariats in Dentistry at 30 % are the responsibility posts that most approach parity.

The exact opposite is the case of Midwifery, historically feminised even after being integrated in the hospital setting. Analysis of the executive boards of midwives' associations reveals a profound feminisation: 100 % of



Figure 23. Executive Boards' Sex Distribution (at Scientific and Professional Societies within the Health Sciences Sector) as per post

presidencies are in the hands of women and so are vice-presidencies and treasuries. Only one male secretary has been found out of 13 secretariats screened and seven spokesmen out of 82 spokespersons, that is, 8.5%. With a collegial representation that hardly reaches 6%, men dedicated to midwifery would be sufficiently represented in the seats they effectively retain, although they are still quite a way from achieving the representation that would correspond to today's collegiate population, especially for posts of greater significance.



0.00

12.50

14.29

17.98

20.00

100.00

87.50

85.71

82.02

80.00

Presidency

Treasurer

Vice-Presidency

Spokespersonship

Source: Cascant et al, 2007.

Secretaryship

Healthcare Services

Healthcare Personnel

The present situation at University, research or scientific publications can be compared to the existing one in healthcare services: women are a majority in healthcare services though the types of jobs they hold are less qualified than men's.

The Statistics of Healthcare Institutions under Boarding Regime (*Estadística de Establecimientos Sanitarios con Régimen de Internado, ESCRI*) has included, in its version for public access, data on male and female professionals working in public hospitals since 1996. The result is a yearly snapshot featuring changes relating to sex, produced in specialties and categories.

It follows from Figure 25 that women are majority in the Healthcare System with more than 70 % of the total personnel and that they outnumber men when it comes to non-qualified jobs in the healthcare structure. Adding up to this, is the fact that personnel hired for less than 36 hours is mostly female. Women account for 56 % of the least qualified job and for over 65 % of contracts of less than 36 hours. The clear trend since 1996 is a marked feminisation of this kind of jobs.

On the contrary, and with regard to qualified jobs it is a majority of men who have them. In recent years the percentage has risen steadily although it has never gone beyond 30 %. However and as can be seen in Figure 26, female professionals with qualified jobs but with timetables below 36 have practically increased twofold reaching maximums of 45 % in 2005. This last group totals around 600 people all in all.

Figure 27⁸ shows that in terms of specialties three big groups trace a clear outline map: In the first group a pronounced masculinisation stands out in which women hardly represent 40 % of the population. This set of specialties includes: Medicine⁹, Surgery, Orthopedics, Obstetrics and Gynaecology,

8 Calculation of percentages is made from population working over 36 hour timetables.

9 According to the definition given by the Statistics of Healthcare Institutions under Boarding Regime and up to December 31st neither housemen, residents, scholarship holders, nor voluntary assistants are entered. This kind of personnel shall be grouped as per preferential type of healthcare assistance: Internal Medicine and Medical Specialties, General Surgery and surgery specialties Orthopedics and Orthopedic specialties, Obstetrics and Gynecology, Pediatrics, Psychiatry, Physicians at Central Services (Laboratory, Radio-diagnosis, Morbid



Figure 25. Percentage of women in non-qualified jobs and working time, 1996-2006

Paediatrics, Psychiatry, Central Services, Intensive Care Unit and Casualties-On call, apart from Graduate Management and Administration¹⁰. Exception

Anatomy, Anaesthesia, Pharmacy, etc.), Specialists in Intensive Medicine, Rehab and those allocated exclusively to On-Call and Casualty Services.

10 As per definitions by *Estadística de Establecimientos Sanitarios con Régimen de Internado*, graduates (with healthcare duties) are: graduates other than GPs and Pharmacists from the Pharmacy Service working at the institution by December 31 (physicists, biologists, chemists, etc. having a healthcare function: laboratories, etc. In this computation, neither graduate residents, nor scholarship holders, voluntary assistants, clerks, equipment maintenance professionals, etc, will be entered.





made of Medicine itself they are all specialties with relatively few people employed, between 1500 and 10,000 people, of whom men are majority. It is worth pointing out that the section Management and Administration yields one of the most important figures with 26 % of positions held by women.

The second group assembles specialties in which women's representation ranges between 40 % and 60 %, and could be deemed to be the most balanced one in terms of parity (fig. 28)¹¹. Specialties are few but the clear difference with those of the previous group is that all of them are highly feminised. The exception is the post of Undergraduates Management and Administration hold by women in a 46%.

11 Percentages are calculated from population with over-36-hour-timetable occupations.



Figure 27. Distribution of Healthcare Personnel giving service at Healthcare Institutions (Women's Representation Results below 40%)

	Women	Men
Orthopaedics	8.73	91.27
Surgery	14.17	85.83
Life Support	18.24	81.76
Gynaecology-Obstetrics	21.81	78.19
Medicine	25.10	74.90
Management & Administration at Degree Level	26.90	73.10
Paediatrics	29.47	70.53
Casualty	29.81	70.19
Psychiatry	31.42	68.58
Central Services	35.24	64.76
Management & Administration	36.95	63.05

Source: MSC, Statistics of Healthcare Institutions under Boarding Regime, 1996-2006.



Finally and as reflected in Figure 29¹², jobs in which women get over 60 % are few but concentrate in hospitals a large portion of the healthcare professional population. With the only exception of midwifery, all specialties exceed 50,000 jobs, Registered Nurses being the largest. They are jobs that, as we will see further on, not only are they feminised in their training and working stages but also in the collective unconscious, as reveals the feminisation of the specialty's names some of its branches: female nurses, midwives, etc. [*Translator's Note: enfermeras*, Spanish for female nurses is by far the most, if not the only, used concept versus *enfermeros* the masculine version of the word; *matronas* (midwives) is an exclusively feminine term that lacks a masculine version].

In addition, since 2004, Primary Care Information System Databases (*SIAP*) are available, sex-itemised information having been included in 2007. These results have come to complement *ESCRI's* and again outline women's role in today's healthcare system. Women are also a majority in the Primary

¹² Percentages are calculated from population with over-36-hour-timetable occupations.



Figure 29. Distribution of Healthcare Personnel giving service in Healthcare

Care System although in a slightly lower percentage than in hospital care, roughly around 63 %. Sectors in which women obtain larger representation are Nursing, accounting for nearly 80% of professionals and non-healthcare personnel, scoring almost 70 % of female representation. Both occupations practically represent two thirds of the personnel employed in Primary Care. It can, hence, be said, that the vast majority of women in Health Centres and Doctors' Offices retain the lowest levels in the personnel structure. To this respect and according to Figure 3013, Paediatrics, less bulky in terms of employed personnel, is for its most part female with a rather-close-to-parity percentage, though. The same applies to Family Medicine that takes a third part of total personnel, although with an inversed percentage, so that it is the only specialty where men are majority.

¹³ Percentages are calculated from population with over-36-hour-timetable occupations.



All these data should be viewed bearing in mind some circumstances, for instance a greater percentage of male versus female doctors, a higher proportion of male doctors working for the private sector or making public and private compatible, in contrast with female doctors that accumulate primarily in one sector: the public one (Arrizabalaga and Valls-Llobet, 2005).

Finally, salary differences between male and female professionals must be added to all the above. A recent study concludes that differences when studying basic salary per hour are negligible although when considering annual revenue differences increase threefold in favour of healthcare college professionals. The most plausible explanation is the higher rate of female temporality: women have the most temporary contracts and a higher number of out-of-work days per annum as a result. In addition, men receive a higher number of salary complements (such as productivity or on-call shifts). In short, salary differences between women and men stand at about 38%. This difference is explained by the different distribution of men in higher category posts and higher salaries (Dolado and Felgueroso, 2007). Salary difference in salary according to the Autonomous Community one works in, should also be considered (Hidalgo and Mata, 2004). Other approaches to the subject highlight the different working precariousness that emerges in various specialties between females and males (Solsona et al, 2006).

Gender Stereotypes in the Healthcare System

A gender stereotype is a scientifically unfounded belief or opinion according to which some professional activities or attitudes are better fit for one of the two sexes. One of the main gender stereotypes occurring in the healthcare system is that which dictates that women must be devoted to care whereas men must take on the healing task. This way, men are meant to command technology and science whereas women are believed to possess a series of inborn skills and capacities that enable them to be better caregivers (Germán, 2006, 2008). This convention of labelling women as caregivers is based upon their being for others: for son and daughters, spouses and progenitors (Lagarde, 2003). For practically each figure there exists a professional profile for which women constitute a clear majority, from Midwifery to Geriatrics, Nursing or Paediatrics. It is certainly not by chance that most specialties where women are clearly a majority have a lesser qualification (undergraduate studies, college instruction cycles) than specialties where men converge.

In this regard, and from a gender perspective, the contribution of what being a doctor and a woman means in today's society is rather significant, having to confront the dilemma between the pressure from family reproduction and the need to develop professionally, a conflict not easily solved and that has consequences in the personal and professional spheres (Delgado et al, 2003). Some of the personal consequences are a reduced number of children in comparison with their male colleagues (Bowles et al, 2007) and a greater predisposition to separation or divorce (Rubin et al, 2004). It should also be highlighted that, as in all professions, Medicine has an established sexual identity through gender stereotypes that at present is still male (Ortiz, 2001, 2004). According to this professional identity female doctors may construct their gender affiliation from gender socialisation, the way to work, the way to treat, etc. If defining a type of care more likely to be provided by a woman than by a man were at all possible, that might possibly be a more focused attention on the (male/female) patient, longer consultation time, conveying more information and male/female patient participation in clinical decision-making affecting them (Delgado et al, 2003). But attention focused on the patient, be it male or female, is not always recognised among professionals; on the contrary, it rather prompts negative feelings on that kind of practice itself, partly because of the pressure the healthcare system

productivity entails. Hence, it is quite a gender stereotype to ascribe to female doctors an allegedly inborn greater development of communicative and empathic skills and to men a special aptitude for technical achievement (Delgado et al, 1999).

A way to perpetuate this gender stereotype that entails discrimination, is identified in Paediatrics where women reach lower categories than men and obtain significantly lower salaries than their male colleagues. In addition, female paediatricians spend longer time teaching and taking care of patients while male paediatricians devote longer time to research, hence being able to publish more thus reaping rewards in the form of promotions or financial aids to research (Kaplan et al, 1996). Even in as highly feminised areas as Nursing it has been detected that success among men is greater than among women (Tracey and Nicholl, 2007), something that could be sensed upon analysis of this profession academic positions as previously discussed.

Besides, women's presence in/absence from responsibility positions is associated to several factors among which some gender stereotypes are detected, for instance, that which denies authority to women (Dio Bleichmar, 2008; Yago, 2008). Authority is a quality frequently associated with male kind while traditionally the woman's role has been submission. Data analysed in previous sections suggest that women's position of majority at university and in the healthcare system, still is secondary, also on account of their being demanded to be more knowledgeable and display more skills and professional ability than their male mates. Equally, flaunting power occurs differently among women and men (Delgado et al, 2003).

Regarding the latter and tracing studies in the international sphere that intend to detect differences owing to sex within specialties themselves, it has emerged in Surgery for instance, male surgeons' greater easiness to find mentors than their female counterparts'. It has also surfaced an increased possibility of women's losing working hours due to family responsibilities in comparison with their male colleagues (Colletti et al, 2000).

Physiotherapy and Rehabilitation screenings revealed a different inclination to seek promotion between women and men, commonly more marked among men, as well as an increased possibility of men's getting more articles published than their female colleagues. Women had less contact with their superiors. These differences contributed to salary, category and leadership differences between male and female colleagues within the same specialty (Bowles et al, 2007).

A key specialty for analysing gender stereotypes in healthcare, is Nursing. The nucleus of Nursery students is made up of 80% of women which results in a similar percentage of women in the hospital environment, more than 50% collegiate. Surgery would stand at the opposite end; an area where women do not reach 20% in professional associations, hardly attain 15% in hospital centres and 10% at universities although figures suggest that the trend in the future might take a new turn (Serantes, 2007).

As mentioned throughout this report, the Nursery profession typifies a profession of "women" and hence, a feminised one. To this respect, the gender stereotype that the general public associate with the high feminisation of this collectiveness, comes to be reinforced through the media that convey a picture of Nursing based on cliché and way away from reality. Such a snapshot prevents people from considering Nursing a career that can be pursued by anyone regardless of their sex or age. In addition, the danger of a naturalised association resides in the spatial fencing in of care that may end up being perceived as linked to domestic care, even when developed in a hospital setting (Germán and Miqueo, 2008). Naturalisation of care, in itself, entails its devaluation, as long as whatever is natural does not involve effort and hence stops being valued (Alberdi, 1998).

Besides, one of the foundations of the profession practice is the care duty, which, precisely, has traditionally been undertaken by women. For many years this occupation has seized women's central role and so far, reproduction and care tasks have not ceased to fall on their shoulders with no appropriate social co-responsibility. Therefore, Nursing constitutes a sector within healthcare that might be regarded as an extension of the mother/care provider figure, along with other specialties equally feminised as Midwifery.

Perception of nursery work as a profession best suited for women reinforces the Nursing stereotype (Celma, 2007), insofar as it is regarded as a non-qualified job, which sustains the slight tendency to consider women for responsibility posts.

As previously mentioned men's presence in the Nursery profession is still scarce insofar as it continues to be considered a typical woman's job. This fact strengthens the stereotype that links care to female nurses, and renders this practice more difficult for male professionals when it comes to assuming the typical care functions of the job, and is in turn encouraged by the users' population.

Despite their being a minority in the profession, some authors maintain that men might find it easier to access Nursing responsibility posts (Evans, 1997), something on which there are no available data in our country¹⁴,

¹⁴ No data have been found on the extent to which women hold responsibility posts in public health. The *ESCRI* structure does not rely on this feature for any of the specialties and neither does the new *SIAP* database. As for the *SIAP* it only gives an account on the percentage of women for each specialty as a whole with an inter-autonomic comparison. The *ESCRI* compiles personnel itemised by sex and type of contract (<36 hours; >36 hours). Therefore, these data cannot possibly be obtained, at least with the level of itemisation customarily required for their being made public.

although an approach taking composition of executive boards as a reference clearly shows this effect with less than 40 % of female presidencies.

Finally and along the same lines, Nursery is one of the fields in which the stereotype has been recreated with the greatest assiduity. During the Spanish Civil War the female nurse figure was utilised to sing the praises of each of the camps' ideology always under the common denominator of "being for others" (Siles et al, 1998). The cliché of the female nurse attractively dressed and as sexual object has become a present ideal in the male collective imagery. In contrast, other references to the professional character and quality of care are absent from this idealisation.

At a different level, the media have acted historically, in a patent or underlying way, as conveyors of stereotypes present in society. Gender stereotypes and specifically those associated with healthcare professions have been no exception.

Irruption of TV series inspired by the medical milieu contributes to the spreading of the gender stereotype. To the overwhelming majority of females nurses appearing in these series must be added the central role that men take in them: they play the doctors and specialists and have the exclusive capacity of changing the course of events (*Instituto de la Mujer*, 2007).

In recent years some research has been conducted focusing on contents about gender and health. appeared in written media. It has revealed that not only do female editors of these articles remain invisible but so do certain issues, as for instance the risk some women run of suffering from heart failure, or the existing gender bias when it comes to the therapeutic endeavour to treat certain diseases (Ruiz et al, 2004).

A key word search through the *Quiral* reports between 1997 and 2001 shows that among the most associated concepts with women are those relating to sexuality and urogenital system, iatrogenic disease and beauty, aesthetics and fitness subjects. On the contrary concepts like Alzheimer, HIV-AIDS or cardiovascular diseases stand as the least associated with women although all of them are of proven significance for the female sex (Revuelta et al, 2003).

Different Approach to Care

Although this issue has already been referred to in this text, the different care provided by female and male doctors, arisen from gender biases present in the healthcare institution, should by no means be ignored. To this regard, differential attention is a reality and reflects society's andro-centrism. The approach, for instance, differs, in terms of codes applicable to men or women between "healing a patient" and "caring for a patient"; the first concept

requires professional performing while the second is linked to family and domestic responsibilities. What has to be avoided, hence, is naturalising this different attention or considering it a sexual ability when in fact it is nothing but a gender issue. For instance, if we consider admissions to hospital, they entail effects that differ when it is men or women who are admitted; in the case of men admission is tantamount to a sick leave and thus suspension of duties; family supplementary care is usually required during their stay in hospital, something that most times falls on their wives' shoulders and the same support will be needed during the recovery process at home. In the case of women, contrarily to that of men, there is no need for any suspension/ replacement operational device to cover for their responsibilities at a home that is left unattended unless there are other women there to hold the fort. Family support for the patient is usually provided by other women, etc.

Therefore, differential attention, at the doctor's office, when diagnosing and as regards therapeutic endeavour, has to be based upon empirical studies and be used as reference for change through training and awareness measures, in order for a quality care provided by female or male doctors, based upon quality and efficiency guidelines, to be achieved, for optimal repercussion on the satisfaction level of the end-users population.

Different care received at the doctor's office

Since the 80's the difference between care provided by female or by male doctors has been an issue of increasing interest. Already in the 90's different publications went deep into the specificity of differential attention in the international scope but also in our country. It was discovered that women tend to select a female rather than a male doctor if only they are given the choice. In the same study taking female and male Dutch professionals it emerged that female doctors' consultation times were longer especially when they were seeing a woman. It was also concluded that female doctors request more diagnostic tests but prescribe less medicaments and perform less surgical operations. The following hypothesis might thus be proposed: If female doctors ask for more diagnostic tests, prescribe fewer drugs and carry out less operations, does this mean a greater resolving capacity and a higher efficacy in their performance at Primary Care stage?

Problems associated with areas that could be identified as manhood stereotypes (genitalia and muscle-skeletal system, subjected to sport or working accidents) would be preferentially treated by male doctors, while stereotypically female medical problems (around gynaecology, family planning and pregnancy, personal relations, nutritional habits, etc.) are more often treated by female doctors, what might lead into concluding that there are she- and he-users' preferences (Bensing et al, 1993). Other studies highlight the greater disposition of women to provide information than men, at the doctor's office (Roter et al, 1991), especially that relating to prevention and counselling services, while male doctors focus on the disease itself and its treatment (Delgado, 1999; Bertakis, 2003). Apart from devoting more time to see male/ female users, female doctors' communicating style is different: they talk for longer, show a higher level of empathy and ask more, so that consultation with them turns out to be more participative and better informed than with their male colleagues (Delgado, 1999).

Differences in diagnosis and therapeutic endeavour

Different research studies have come to the conclusion that there exists a diagnosis bias according to which professionals tend to establish different diagnoses, even when faced to the same symptoms, when dealing with women or with men. In the previously mentioned Dutch study female doctors set patterns of morbidity different from those set by their male colleagues: They detect more easily than men social and endocrine problems and also diagnose more respiratory and muscle-skeletal diseases (Bensing et al, 1993). Other approaches to the subject highlight a greater tendency of male doctors, the oldest ones and specialists, to prescribe, more to women than to men, a restriction of physical activity (Gelb, 1997).

Besides, differences in diagnosis of various diseases when diagnosing men or women, are well known, even when the latter run a greater risk, as is the case of chronic obstructive pulmonary disease, or when both sexes present a similar risk as happens with Acute Myocardial Infarction (AMI). Some indicators provide hints as to a different therapeutic endeavour: hospital admission in case of AMI is lower for women than for men (31 % versus 69% of cases detected). In broad lines differences as per sex are detected. Clinical and etiologic characteristics, cardiovascular risk factor profile, diagnostic resources provision, therapeutic measures and prognosis are different for men or for women. In the case of acute coronary syndrome or heart failure, women are disadvantaged with respect to men in the adoption of recommended diagnostic and therapeutic measures which may result in a worse prognosis (Alonso et al, 2008). More treatments are given to men after an AMI than to women: thrombosis, angioplasty and catheterisation are the most frequent among the former. Likewise, the cost of treatments of processes relating to the circulatory system is 127 % higher for men than for women. On the contrary, the cost of treatments given to women for obesity is higher than those given to men even when prevalence is higher among the latter with a ratio of 1.3. On the other hand, time elapsed between the

onset of symptoms, in the case of AMI, and arrival to casualties is longer in women, which can also be detected in the number of days elapsed since the first symptoms of tuberculosis and the beginning of the treatment. From the gender perspective it is important to highlight the higher prevalence of medicament consumption among women which is key to regulate their overmedication bearing in mind that most of the medications taken are prescribed.

Differences in the level of satisfaction

Preference of female or male patients for a male or female doctor is, in principle, neutral although it changes when it comes to consultations prompted by private parts problems (breasts, genitalia, urinary system, rectum) or psychosocial or family problems (Delgado et al, 1999). Other studies point at a devaluation of the care received when the doctor in charge is a young female, which might be related to denial of authority to the female sex, with the aggravating factor of youth (Delgado et al, 1999, 2003).

One of the main contributions made by our country focuses on the level of satisfaction of users as per their sex or profession (Tomás 2006, Yago 2006). Results show a higher satisfaction among those who were treated by female doctors instead of by male ones as female doctors' professional ability is given higher scores (Delgado et al, 1993; Bertakis, 2003).

At any rate, degree of satisfaction is a subjective measurement that depends on many factors and when comparing studies divergences emerge as new variables are incorporated.

In parallel, one of the instruments that enables assessment of the healthcare system is the Healthcare Barometer. In the last two years, women's assessment on the Healthcare System differs by several points from that of men's. It is not about the level of satisfaction measured in a controlled environment but a general survey on which the satisfaction level and one's own experience have a clear influence. Results from the last two years reflect a lower level of satisfaction and a less favourable assessment of the healthcare system among women.

So, and in view of data collected in Figure 31, women value the Healthcare System less favourably than men while manifesting the need for changes. This effect was more visible in 2006 than in 2007 although it does not have to be a defined tendency, to see which, there will be opportunities in oncoming Barometer editions.

On the other hand, satisfaction with the way the Healthcare System works, also included in the Healthcare Barometer, again yields interesting results as may be seen in Figure 32. On a 1 to 10 scale in which 1 indicates a



Source: MSC and CIS, Healthcare Barometer, 2007.



high degree of dissatisfaction and 10 a high satisfaction, women declare to be in a situation worse than men's. Even when, broadly speaking, both sexes express to be fairly satisfied, above 6 actually, the average women reflect is below that of men.

Apart from valuing the sex variable, another key variable has to be considered to explain satisfaction: age, that turns out to be the main variation factor so that the older the user the higher level of satisfaction with care given. Other factors that influence satisfaction are: education level, occupation, marital status, type of centre visited and even type of consultation requested, whereas sex, both the user's and the professional's does not get to be a statistically relevant variable (Biedma and Serrano, 2007).

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Training in Gender and Health

Integration of the principle of equality in health policies requires instruction of the personnel giving service in healthcare organisations in order to guarantee their capacity to improve prevention, diagnosis and treatment of women's diseases, for detecting and addressing gender violence situations, avoid prejudices that may delay women's access to the healthcare system or that may result in their being the object of diagnostics and therapeutic endeavours poorer than those invested in men, and for correcting existing inter- and intra-professional gender disparities.

This new training of health professionals requires promoting integration of the gender perspective into the National Health System programmes of continued training of personnel, in cooperation with the Autonomous Communities, as well as, in the medium run and in a more specific and probably more effective way, in University programmes. Making future professionals, male and female, aware and training them technically in gender matters is a relevant aspect of healthcare training if structures are to be modified and changes, in accordance with the principle of equality, generated in thinking, attitudes and professional performance.

Care for the "malaise" every disease entails demands biomedical and technical resources more or less neutral and universal, but also words, concepts and values of the non andro-centric culture that fundaments itself on the systematic questioning of social representations of manhood and womanhood and relations between men and women. Professionals have to be warned, during their academic training period and in the most normalised way possible, on stereotypes' action mechanisms. Because these stereotypes will condition their opinions, values and professional expectations on key issues, as the way men and women become sick, diseases or jobs characteristic of each sex; male and female professions, the antithetical value of care and innovation, or the different use of professional time men and women will devote to research and to listening to the population in consultation.

It is worth highlighting here the training activity developed by the National Health School *Escuela Nacional de Sanidad* in agreement with the Ministry of Health and Social Policy: Master's Degree in Public Health, Master's Degree in International Public Health and the Certificate of Promotion of Health, as well as inclusion of Health and Gender symposiums at the Public Health School of the *Llatzeret de Maó* since 1996.

Secondly, from the Observatory on Women's Health of the Ministry of Health and Social Policy various training actions have been promoted in recent years, relating to sexual health (in cooperation with different organisations involved in sexual health), qualitative research or Public Health (Certificate of Specialisation in Public Health and Gender), violence (Training of Educators for Preventing and Addressing Gender Violence), and the gender perspective (Training of Educators in the Gender Perspective in Health) (Colomer, 2008; Mazarrasa, 2008; Sánchez, 2008). The aim of all these initiatives is to influence society through both health professionals and learning, facilitating integration of the gender perspective into the health sphere.

From University, training activities in gender and health have been developed for nearly all degree studies and healthcare professions' postgraduate studies, as well as for Human and Social Sciences' doctoral programmes¹⁵ (Miqueo, 2008; Barral, 2008; Ruiz, 2008).

In a context of reform of university studies for adapting Degrees to the European Higher Education Area (EHEA) (in Spanish Espacio Europeo de Educación Superior, EEES), a first national congress was held in November, 2006, where general consensus was achieved among specialists about the need to introduce a specific subject on Gender, of a compulsory or central nature, in all Health Sciences new College Degrees (Medicine, Psychology, Nursing, Phyisiotherapy)¹⁶. At this congress educational objectives were agreed for what might become in the future a mainstream subject that would be taught at first years of Health Sciences degree studies (Table 3).

On the other hand, in May 2008 it was held in Saragossa the first symposium specifically devoted to training in gender at the three usually envisaged levels: undergraduate (Miqueo, 2008; Barral, 2008), postgraduate (Ruiz,2008) and continuing training (Sánchez,2008; Colomer,2008; Mazarrasa, 2008; Cisneros, 2008 and Muñoz, 2008). The most significant conclusions or recommendations for higher education are outlined in Table 4.

This way University would meet the legal mandate to constitute itself in a space for diffusion of gender equality and non discrimination (Organic Act 1/2004, 28 December on measures for comprehensive protection against gender violence, article 4), apart from providing knowledge on gender inequalities (Organic Act amending Organic Act 6/2001, 21 December on Universities) and comply with Organic Law 3/2007 of Effective Equality between Women and Men.

16 The CD containing the Symposium outcome also provides a complete listing of subjects: *Instituto de la Mujer. Estudios de las Mujeres feministas y de Género. Ministerio de Igualdad, Instituto de la Mujer.* At present a series of subjects relating to Health and Gender are on offer although they are usually optional (http://wzar.unizar.es/siem/formativas/jornadasalud.html).

¹⁵ See Health and Gender post-graduate courses listing and their features at: www.msc.es/organizacion/sns/planCalidadSNS/pdf/equidad/genero_f_01.pdf

TABLE 3. Objectives of the Subject* Gender, Health and Society

- 1. To know and apply basic concepts of the Sex/Gender system (gender, feminism, androcentrism, patriarchy, difference, equality) and integrate the non sexist use of language
- 2. Identify andro-centred biases in Health Sciences Knowledge
- 3. To be acquainted with the influence gender exerts in the organisation of the healthcare system
- 4. Consider gender as a determinant of health or disease
- 5. Evaluate inequalities due to gender in access and care within the health system

*This subject would be common, compulsory and would win 4 ECTS (European Credit Transfer System) credits.

Source: Congress Report "Los estudios sobre las mujeres, de género y feministas. Grados y postgrados en el EEES".

TABLE 4. Recommendations issued at First Symposium specifically related to Training in Gender and Health

- 1. Issue a complete record of gender subjects currently taught in Spanish Universities, classified as per type and Degree Studies
- 2. Call annual meetings for next 5 years aimed at discussing didactic experiences, defining programme designs according to levels and degrees, centralise specialised studies, establish research or study lines and promote teaching staff and scholarship holders' exchanges
- 3. Make colleagues and students aware, which may entail observe, analyse and disseminate evaluation of manuals or teaching materials usually utilised in knowledge and related areas of educational staff concerned
- 4. Create a training network in gender and health (or scientific society with that type of section) with the aim of organising annual symposiums, attain consensus on degree teaching manuals and updates, and regulate instruction accreditation, agreeing criteria for evaluation of training programmes in gender and health's quality
- 5. Draft a report on the EHEA process of University Reform (EEES) from the viewpoint: gender and health studies in five years time

Source: Miqueo, 2008. Congress Report "Los estudios sobre las mujeres, de género y feministas. Grados y postgrados en el EEES". Zaragoza, 2008.

Conclusions

- 1. Women integrate a clear majority at the University area of healthcare studies, especially in graduate education, evening up with men at post-graduate studies.
- 2. Women have the less valued jobs in the academic structure. Their presence in the most stable posts is still minority and female professors are few. On the contrary they are clear majority in administration and services positions at universities.
- 3. With respect to individual posts at universities (government posts like vice-chancellorships, deanships, etc.) women continue to be absent. Women appear within managerial teams holding deputy vice-chancellorships , although in a proportion below 30 %.
- 4. In professional societies of the healthcare area women retain lowest rank positions (secretaryships and spokesperson's offices) even in massively feminised professions like Nursing where female presidents do not reach 40 % of total professional societies.
- 5. Women hold less recognised research positions, appear more frequently as associated to the project team whilst men take the role of leading researchers. They also encounter greater difficulties when, as project leaders, they undertake to secure financing.
- 6. Presence of women in scientific reviews is still uneven: they appear less in editorial teams and in revision groups and have more difficulties to see their articles published.
- At healthcare services a greater concentration of women in less recognised jobs can be seen while in more prestigious posts their presence is far from strong.
- 8. Gender stereotypes are still at work when it comes to perpetuating the exclusive allocation to women of some jobs as is the case of Nursing, while hindering their access to some Medicine specialties like Surgery. Likewise these stereotypes raise doubts as to women's capacity of leadership or to assume responsibility posts. Media step in to strengthen It all by, far from contributing to their defusing, spreading them throughout society.
- 9. At the doctor's office female doctors provide a kind of care that differs from their male colleagues'. Their attention focuses to a greater extent on users themselves: they devote more time to them, ask more, request more diagnostic tests, prescribe less medicaments and volunteer more information than their male counterparts. Also, and from a diagnosis viewpoint, they detect more easily social and

endocrine problems. Users rate them higher in terms of better performance and satisfaction for care received.

10. Female users are more critical in their views and rate Public Healthcare lower than male users.

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Proposals for Action

From the scope of its competences and relying on cooperation from other Ministries, autonomic institutions and public and private organisations, the Ministry of Health and Social Policy proposes the following actions and recommendations aimed at progressing in terms of parity also with regard to the publication process:

- Favour women's entry in specialties still considered male-sex territory.
- Carry out follow-up work on professional categories women have in the healthcare sector.
- Promote studies on differences between male and female doctors in the personal and professional settings.
- Revise presence of women in editorial teams of the Ministry of Health and Social Policy publications.
- Continue promoting research on health and gender, and adopting a gender approach in all lines of research and in research management processes. Especially, conduct studies on allocation of Healthcare Funds for Research from a gender perspective.
- Work on eliminating gender stereotypes especially on preventing their dissemination through the media.
- Encourage training courses addressed to professionals for their focusing on the patient avoiding gender biases when performing.
- Encourage integration of a gender approach into the Healthcare Information System, HIS (*SIS*) to enable monitoring of situations.
- Mainstream these outcomes in the National Health System, among the population, at universities, in the different Ministries (Education, Equality, Culture, etc.), in professional associations and colleges, in scientific journals, reviews, etc., all of it aiming at making visible and promote social change.
- Foster participation channels through work groups, forums, etc. with the purpose of working in line with the different Ministries (Education, Science, Equality, etc.) and with scientific reviews.

Bibliography

Addis, Elisabetta. Gender in the publication process: evidence, explanations and excellence. At: *European Comission. Gender and Excellence in the Making.* Brussels: European Comission, 2004; 93-100.

Agudo Arroyo, Yolanda; Viedma Rojas, Antonio. La investigación científica (I+D) en el sector público en España desde la perspectiva de género: situación laboral. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 209-214.

Alberdi Castell, Rosamaría. La influencia del género en la evolución de la profesión enfermera en España. *Metas de Enfermería* 1998; 11: 20-26.

Aleixandre Benavent, Rafael; Alonso Arroyo, Adolfo; Gonzalez Alcaide, Gregorio; Gonzalez de Dios, Javier; Pérez Sempere, Angel; Valderrama Zurián, Juan Carlos. Análisis de género de los artículos publicados en la Revista de Neurología durante el quinquenio 2002-2006. *Rev Neurol* 2007; 45(3): 137-143.

Alonso, Joaquín; Bueno, Héctor; Bardají, Alfredo; García-Moll, Xavier et al. Influencia del sexo en la mortalidad y el manejo del síndrome coronario agudo en España. *Rev Esp de Cardiol* 2008; 8(D): 8D-22D.

Arenas Barbero, Joaquín. Convocatoria de proyectos de investigación FIS/2005. Ponencia presentada en el II Foro Mujeres, Salud y Género. 2005 Dic 19-20; Madrid, Spain [unpublished].

Arranz, Fátima. Las mujeres y la universidad española: estructuras de dominación y disposiciones feminizadas en el profesorado universitario. *Política y Sociedad* 2004; 41(2): 223-242.

Arrizabalaga, Pilar; Valls-Llobet, Carme. Mujeres médicas: de la incorporación a la discriminación. *Med Clin (Barc)* 2005; 125(3): 103-107.

Artazcoz, Lucía; Borrell, Carme; Cortés, Inma; Escribá-Aguir, Vicenta; Cascant, Lorena. Los determinantes de la salud en una perspectiva integradora de los enfoques de género, clase social y trabajo. At: Borrell, Carmen y Artazcoz, Lucía (coords.). *Investigación en género y Salud. Sociedad Española de Epidemiología* 2007; monografía n.º 5: 21-43.

Barral Morán, M.^a José. Género y salud en los programas de grado. At: *Un Aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza.* 2008.

Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Barral Morán, M.^a José. Sesgos de género en la difusión de las funciones del cerebro humano: estudio crítico comparado de textos anatómicos y neuroanatómicos utilizados en las universidades españolas entre los años 70 a 90. At: Martínez Pérez, J. et al. (eds.). *La medicina ante el nuevo milenio: una perspectiva histórica*. Cuenca: Universidad de Castilla-La Mancha, 2004. 103-114.

Bensing, Jozien; Van Den Brink-Muinen, Atie; De Bakker, Dinny H. Gender differences in practice style: a Dutch study of general practitioners. *Med Care* 1993; 31(3): 219-229.

Bertakis, Klea D.; Franks, Meter; Azari, Rahman. Effects of Physician Gender on Patient Satisfaction. J Am Womens Assoc 2003; 58(2): 69-75.

Biedma Velázquez, Lourdes; Serrano Del Rosal, Rafael. ¿*Existe relación entre satisfacción del paciente y género del médico?* Córdoba: Instituto de Estudios Sociales Avanzados de Andalucía, 2007. Working Documents, IESA Working Paper Series, WP 0207. Available at: http://digital.csic.es/bitstream/10261/2055/1/02-07.pdf

Bonder, Gloria; Felitti, Karina. Más allá de la estadística: Análisis de situación, necesidades y capacidades de científicas iberoamericanas en el campo de la salud y recursos estratégicos. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen. *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 119-128.

Bordons, María; Morillo, Fernanda; Fernández, Teresa; Gómez, Isabel. One step further in the production of bibliometric indicators at the micro level: Differences by gender and professional. *Scientometrics* 2003; 57(2): 159-173.

Borrell, Carme; Artazcoz, Lucía. Marco conceptual. At: Borrell, Carmen y Artazcoz, Lucía (coords.). *Investigación en género y Salud*. Sociedad Española de Epidemiología 2007; monografía n.º 5: 12-20.

Bowles, Amy O.; Kevorkian, C. George; Rintala, Diana H. Gender Differences Regarding Career Issues and Promotion in Academic Physical Medicine and Rehabilitation. *Am J Phys Med Rehabil* 2007; 86(11): 918-925.

Cabré, Monserrat; Ortiz Gómez, Teresa. Relaciones entre la historia de la medicina y la investigación en salud y género. At: Campos, Ricardo; Montiel, Luis; Huertas, Rafael (coords.). *Medicina, Ideología e historia en España (siglos XVI-XXI)*. Madrid: CSIC, 2007; 627-634.

Callón, Michel; Coutial, Jean Pierre; Penan, Hervé. *Cienciometría. El estudio cuantitativo de la actividad científica: de la bibliometría a la vigilancia tecnológica*. Gijón: Trea, 1995.

Campabadal, Francesca. La participación de las mujeres en los proyectos de investigación. El caso del proyecto europeo Goodfood. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 151-157.

Carrera Fernández, María Victoria; Lameiras Fernández, María; Núñez Mangana, Ana M.^a; Rodríguez Castro, Yolanda. Evolución de los premios nacionales fin de carrera en España. Una perspectiva de género. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 587-592.

Cascant, Lorena; Cortés, Imma; Artazcoz, Lucía. *Desigualdades de género en la composición de las juntas directivas de las entidades científicas y profesionales en el ámbito de las ciencias de la salud en España*. Madrid: Observatorio de Salud de la Mujer, 2007 [unpublished].

Celma Vicente, Matilde. *Cultura organizacional y desarrollo profesional de las enfermeras* [Doctoral Thesis]; directed by: Ángel Acuña. Granada: Universidad de Granada, Departamento de Antropología Social, 2007.

Centre d'Anàlisis i Programes Sanitaris (CAPS). *Salud, estilos de vida y condiciones de trabajo de los médicos y médicas de Cataluña.* Barcelona: Fundación Galatea, 2007. Available at: www.fgalatea.org/pdf/salut_cast.pdf

Cisneros Izquierdo, Asunción. Formación en Género y salud en el Departamento de Salud y Consumo de Gobierno de Aragón: estado de la cuestión. At: Un aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza, 2008. Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html Colletti, Lisa M.; Mulholland, Michael W.; Sonnad, Seema S. Perceived obstacles to career success for women in academic surgery. *Arch Surg* 2000; 135: 972-977.

Colomer, Concha. La formación continuada en género y salud: presente y futuro. At: Un aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza, 2008.

Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Colomer, Concha; Peiró Pérez, Rosana. ¿Techos de cristal y escaleras resbaladizas?: Desigualdades de género y estrategias de cambio en SESPAS. *Gac Sanit* 2002; 16(4): 358-360.

Congress Report. Los estudios sobre las mujeres, de género y feministas. Grados y postgrados en el Espacio Europeo de Educación Superior. Madrid; 2008.

Consejo Superior de Investigaciones Científicas. *Informe Mujeres Investigadoras* 2007. Available at: www.csic.es/documentos/mujerCiencia/informe_mujeres_2007.pdf

Davo, M.^a del Carmen; Vives, Carmen; Álvarez-Dardet, Carlos. Why are women underused in the JECH peer review process? *J Epidemiol Community Health* 2003; 57: 936-937.

De Pablo, Flora. *En la ciencia todavía no existe el tanto monta-monta tanto*. Torre de los Lujanes 2004; 53: 81-90.

Delgado Sánchez, Ana. El papel del género en la relación médico-paciente. *Formación Médica Continuada en Atención Primaria* 1999; 8(6): 509-516.

Delgado Sánchez, Ana; López-Fernández, Luis Andrés; Luna, Juan de Dios. Influence of the doctor's gender in the satisfaction of the users. *Med Care* 1993; Sep 31(9): 795-800.

Delgado Sánchez, Ana; Martínez-Cañavate, T.; García, V.; Frías, J.; Rueda, T.; Morata J. Preferencias y estereotipos de los pacientes sobre el género del médico de Familia. *Aten Primaria* 1999; 23(5): 268-274.

Delgado Sánchez, Ana; Távora Rivero, Ana; Ortiz Gómez, Teresa. Las médicas, sus prácticas y el dilema con la feminidad. *Estudios de Sociolingüística* 2003; 4(2): 589-611.

Díez, Capitolina; Carantoña, Elena (eds.). *Mujeres en la alta dirección. La carrera profesional de las mujeres en la empresa, la administración y la universidad.* Madrid: Instituto de la Mujer. Ministerio de Igualdad, 2008.

Dio Bleichmar, Emilce. ¿Todas Madame curie? Subjetividad e identidad de las científicas y tecnólogas. At: Miqueo, Consuelo; Barral, M^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza, Prensas Universitarias de Zaragoza, 2008; 37-50

Dolado, Juan J.; Felgueroso, Florentino. Diferencias de género y temporalidad: El caso de los profesionales superiores en el sector sanitario en España. Documento de Trabajo 2007-24 (Series: Capital Humano y Empleo. Economía de la Salud y Hábitos de Vida, Junio). Madrid: Fundación de Estudios de Economía Aplicada (FEDEA), 2007.

ETAN expert working group on Women and Science. *Informe de 2005*. Available at: www.amit-es.org/descarg/women&science_05.pdf

ETAN expert working group on Women and Science. *Science Policy in the European Union. Promoting excellence through mainstreaming gender equality.* Informe ETAN, European Commission, 2000. Available at www.cordis.lu/etan/home.html

Evans, Joan. Men in nursing: issues of gender segregation and hidden advantage. J Adv Nurs 1997; 26: 226-231.

Fernández, Valentina y Santesmases, M.^a Jesús (ed.). Ciencia y tecnología en el CSIC: una visión de género. *Arbor* 2002; julio-agosto.

Frank Fox, Mary. Gender, family, characteristics and publication productivity among scientists. *Social Studies of Science* 2005; 35(1): 131-150.

García Calvente, M.^a del Mar; Álvarez Darnet, Carlos. Through gender parity in scientific publications. *J Epidemiol Community Health* 2008; 62: 474-475.

García Calvente, M.^a del Mar. La investigación sobre cuidados informales de salud desde una perspectiva de género. At: Borrell, Carmen y Artazcoz, Lucía (coords.). *Investigación en género y Salud. Sociedad Española de Epidemiología* 2007; monografía n.º 5: 97-118.

García Calvente, M.^a del Mar; Jiménez Rodrigo, M.^a Luisa; Martínez Morante, Emilia. *Políticas de investigación en salud. Guía de recomendaciones para la incorporación de la perspectiva de género.* Observatorio de Salud de la Mujer.

Available at: www.msc.es/organizacion/sns/planCalidadSNS/e02_t01.htm

García Calvente, M.^a del Mar; Jiménez Rodrigo, M.^a Luisa; Martínez Morante, Emilia. *Informe* de revisión de guías sobre la incorporación de la perspectiva de género a las políticas de investigación en salud. Observatorio de Salud de la Mujer. Available at: www.msc.es/organizacion/sns/planCalidadSNS/e02 t01.htm

García de Cortázar, M.^a Luisa; Arranz, Fátima; del Val, Consuelo; Aguado, Yolanda; Viedma, Antonio; Justo, Cristina; Pardo, Pilar. *Mujeres y hombres en la ciencia española. Una investigación empírica.* Madrid: Instituto de la mujer (Estudios 96), 2006.

García de Cortázar, M.^a Luisa; Guil, Ana; Pérez Sedeño, Eulalia; Bordons, María et al. *Mujer y Ciencia: La situación de las mujeres investigadoras en el sistema español de ciencia y tecnología.* Madrid: Fundación Española para la Ciencia y la Tecnología, 2005. Available at: www.amit-es.org/descarg/FECYT-2005.pdf

García de León, Antonia. *La excelencia científica (hombres y mujeres en las Reales Academias.* Madrid: Instituto de la Mujer (Estudios 88), 2005.

García de León, Antonia. *Herederas y heridas. Sobre las élites profesionales femeninas.* Madrid: Cátedra-Feminismos, 2002.

García de León, Antonia; García de Cortazar, Marisa; Alonso, M.^a José; Andino, Susana; Andreu, Silvia; Arranz, Fátima et al. *Las académicas. Profesorado universitario y género.* Madrid: Instituto de la Mujer (Estudios 72), 2001.

Gelb Safran, Dana; Rogers, William H.; Tarlov, Alvin R.; McHorney, Colleen A.; Ware, John E. Gender differences in medical treatment: the case of physician-prescribed activity restrictions. *Soc Sci Med* 1997; 45(5): 711-722.

Germán Bes, Concha. Historia de la institución de la enfermería universitaria. Análisis con una perspectiva de género. Tesis doctoral. Universidad de Zaragoza; Nov 2006.

Germán Bes, Concepción; Miqueo, Consuelo. Los estereotipos de género en los manuales de las enfermeras y ayudantes técnicos sanitarios (ATS). At: Miqueo, Consuelo; Barral, M.ª José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 413-420.

Gibbons Michael; Limoges, Camille; Nowotny, Helga, Schwartzman, Simon; Scott, Peter; Trow, Martin. La nueva producción de conocimiento. La dinámica de la ciencia y la investigación en las sociedades contemporáneas. Barcelona: Pomares, 1997.

Gil García, Eugenia. Otra mirada a la anorexia. Aproximación feminista a los discursos médicos y de las mujeres diagnosticadas. Granada: Feminae, 2007.

Gil García, Eugenia. Técnicas de investigación: Análisis del discurso de la ciencia y del enfermo. At: Tomás, C. (ed.) *Diálogos interrumpidos. Investigación en salud y práctica asistencial desde la perspectiva de género.* Zaragoza: SIEM, 2006; 27-38.

González Alcaide, Gregorio; Valderrama Zurián, Juan Carlos; Navarro Molina, Carolina; Alonso Arroyo, Adolfo; Bolaños Pizarro, Máxima; Aleixandre Benavent, Rafael. Análisis de género de la producción científica española sobre drogodependencias en biomedicina 1999-2004. *Adicciones: Revista de socidrogalcohol* 2007; (19)1: 45-50.

González Canalejo, Carmen. Cuidadoras de ayer y de hoy: discursos y aspiraciones desde una perspectiva de género. At: Blasco M. (ed.) *Actas del III Congreso Internacional y VIII Nacional de Historia de la Enfermería Cuidadoras en la historia: protagonistas de ayer y de hoy.* Zaragoza: Institución Fernando el Católico, 2007; 39-48.

Guil, Ana; Solano, Ana; Álvarez, Manuela. La situación de las mujeres en las universidades publicas andaluzas: P.D.I. y P.A.S. Sevilla: CES-A (Colección estudios), 2005.

Hidalgo Valverde, María Jesús; Matas Aguilera, Vicente. *Estudio comparativo del salario médico en España*. Granada: Sindicato Médico de Granada (SIMEG), 2004. Available at: www.aeemt.com/pdfs/estudioretribucionesmedicos.pdf

Iglesias Aparcio, Pilar. Las mujeres en la historia del cuidado de la salud. At: *Las pioneras de la medicina en Gran Bretaña* [Doctoral Thesis]; directed by Juan Jesús Zaro. Malaga: Universidad de Málaga, 2003.

Instituto de la Mujer. Tratamiento y representación de las Mujeres en las teleseries emitidas por las cadenas de televisión de ámbito nacional. Madrid: Instituto de la Mujer, 2007.

Izquierdo Benito, M.^a Jesús (dir.); Canelles Tigel, Noemí; Colldeforns Torres, Laura; Duarte Campderrós, Laura; Gutiérrez-Otero Mora, Anabel et al. *Cuidado y provisión: el sesgo de género en las prácticas universitarias y su impacto en la función socializadora de la universidad (2004-2008)*, 2008. Available at: www.migualdad.es/mujer/mujeres/estud_inves/738.pdf

Jagsi, Reshma; Guancial, Elizabeth A.; Worobey, Cynthia Cooper; Henault, Lori E.; Chang, Yuchiao; Starr, Rebeca; Tarbell, Nancy J.; Hylek, Elaine M. The "Gender Gap" in Authorship of Academia Medical Literatura – A 35-Year Perspective. *N Engl J Med* 2006; 355(3): 281-287.

Jiménez Rodrigo, María Luisa; Martínez Morante, Emilia; García Calvente, Mª del Mar; Álvarez Dardet, Carlos. Through gender parity in scientific publications. *J Epidemiol Community Health* 2008; 62: 474-475.

Kaplan, Sherrie H.; Sullivan, Lisa M.; Dukes, Kimberly A.; Phillips, Carol F.; Kelch, Robert P.; Schaller, Jane G. Sex Differences in Academic Advancement. Results of a National Study of Pediatricians. *N Engl J Med* 1996; 335(17): 1282-1289.

Kurichi, Jibby E.; Kelz, Rachel R.; Sonnad, Seema S. Women Authors of Surgical Research. *Arch Surg* 2005; 140: 1074-1077.

Lagarde, Marcela. Mujeres cuidadoras. Entre la obligación y la satisfacción. Congreso Internacional SARE 2003: Cuidar cuesta: costes y beneficios del cuidado; 2003 Oct 13-14; Vitoria-Gasteiz;

Available at: http://webs.uvigo.es/pmayobre/textos/marcela_lagarde_y_de_los_rios/mujeres_cuidadoras_entre_la_obligacion_y_la_satisfaccion_lagarde.pdf

Latour, Bruno. La vida en el laboratorio. La construcción de los hechos científicos. Madrid: Alianza Universidad, 1995.

Latour, Bruno. Ciencia en acción. Barcelona: Labor, 1992.

Laudan, Larry. *El progreso y sus problemas. Hacia una teoría del crecimiento científico.* Madrid: Encuentro ediciones, 1986.

López Piñero, José M.^a; Terrada, M.^a Luz. Los indicadores bibliométricos y la evaluación de la actividad médico-científica. *Med Clin (Barc)* 1992; 98: 64-69, 101-106, 142-148, 384-388.

Mauleón, Elba; Bordons, María. Productivity, impact and publication habits by gender in the area of Materials Science. *Scientometrics* 2006; 66(1): 199-218.

Mazarrasa, Lucía. Evaluación y propuestas del Plan de Formación de Género y Salud de la Escuela Nacional de Sanidad. At: Un Aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza, 2008. Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Medina Domenech, Rosa. La ciencia es un texto. Retórica y conocimiento científico. At: Rodríguez Alcázar et al. *Ciencia, tecnología y sociedad: contribuciones para una cultura de la paz.* Granada: Universidad de Granada, Colección Eirene, 1997; 117-147.

Merton, Robert K. The Matthew Effect in Science. Science 1968; 159(3810): 56-63.

Ministerio de Educación y Ciencia. Académicas en cifras. Madrid, 2007. Available at: www.micinn.es/ciencia/umyc/files/2007-academicas-cifras.pdf

Miqueo, Consuelo. ¿Feminismo en el mundo científico médico? Isegoría 2008. 38(I): 155-167.

Miqueo, Consuelo. El proceso enseñanza-aprendizaje de género y salud en el marco universitario. AT: Un Aprendizaje para la Igualdad. IV Jornadas Género y Salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza, 2008. Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Miqueo, Consuelo. La construcción de los saberes y androcentrismo en la "ciencia sin mujeres". At: Blasco M. (ed.). Actas del III Congreso Internacional y VIII Nacional de Historia de la Enfermería Cuidadoras en la historia: protagonistas de ayer y de hoy. Zaragoza: Institución Fernando el Católico, 2007; 5-37.

Miqueo, Consuelo. ¿Cómo ser historiadora y descubrir el androcentrismo de la ciencia médica? At: Campos, Ricardo; Montiel, Luis; Huertas, Rafael (coords.) *Medicina, Ideología e historia en España (siglos XVI-XXI)*. Madrid: CSIC, 2007; 657-667.

Miqueo, Consuelo; Barral Morán, M.ª José; Fernández-Turrado, Teresa; Germán Bes, Concepción. *Disparidad de género en los órganos de dirección de las revistas biomédicas españolas*. Madrid: Instituto de la Mujer, 2009 (no publicado).

Miqueo, Consuelo; Barral, M.^a José; Fernández Turrado, Teresa; Germán, Concha. El proceso de incorporación de las mujeres en los órganos de dirección de las revistas científicas. Comunicación. At: 10.º Congreso Internacional Interdisciplinar sobre las mujeres. Women's Worlds'08 - Mundos de Mujeres. Madrid, 3-9 July 2008.

Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen. *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008.

Miqueo, Consuelo; González Romaris, Elena; Verdú, Mayte. Participación de mujeres en los comités de dirección de las revistas científicas españolas de biomedicina y factor de impacto. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER).* Zaragoza: Prensas Universitarias de Zaragoza, 2008; 135-142.

Miqueo, Consuelo; Ortiz, Teresa; Dio Bleichmar, Emilce et al. At: 1.º Congreso. Los estudios sobre las mujeres, de género y feministas. Grados y postgrados en el Espacio Europeo de Educación Superior. Madrid, 2008.

Muñoz Jiménez, Concha. Revisión crítica de la formación continuada en género a los profesionales de la salud. At: *Un aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza,* 2008. Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Ortiz Gómez, Teresa. *Medicina, historia y género. 130 años de investigación feminista*. Oviedo: KYK, 2006.

Ortiz Gómez, Teresa. Fuentes orales e identidades profesionales. Médicas españolas de la segunda mitad del siglo XX. *Asclepio* 2005; 57(1): 75-97.

Ortiz Gómez, Teresa. El género, organizador de profesiones sanitarias. At: Miqueo, Consuelo; Tomás, Concepción; Tejero, Cruz; Barral, M.^a José; Fernández, Teresa; Yago, Teresa (eds.). *Perspectivas de género en salud*. Madrid: Minerva, 2001; 53-75.

Ortiz Gómez, Teresa; Becerra Conde, Gloria (eds.). *Mujeres de ciencias. Mujer, feminismo y ciencias naturales, experimentales y tecnológicas.* Granada: Universidad de Granada, 1996.

Ortiz Gómez, Teresa; Bernuzzi Sant'Anna, Denise. Perspectives on gender and healthy. At: Abreu, Laurinda; Bourdelais, Patrice; Ortiz Gómez, Teresa; Palacios, Guillermo (eds.). *Dynamics of Health and wellfare: texts and contexts. Dinámicas de salud y bienestar: textos y contextos.* Evora: CIDEUH-UE, 2007; 101-173.

Ortiz Gómez, Teresa; Birriel Salcedo, Johanna; Ortega Del Olmo, Rosa. Género, profesiones sanitarias y salud pública. *Gac San.* 2004; 18(supl.1): 189-194. Available at: http://scielo.isciii.es/pdf/gs/v18s1/05profesiones.pdf

Peiró Pérez, Rosana; Colomer Revuelta, Concha; Blázquez Herranz, Margarita; Gómez López, Fernando. Applications submitted and grants awarded to men and women in nationwide biomedical competitive research, in 2006, in Spain. *J Epidemiol Community Health* 2007; 61(supl. 2): 17-19.

Peiró Pérez, Rosana; Vives Cases, Carmen; Alvárez Dardet, Carlos; Mas Pons, Rosa. El análisis de políticas con enfoque de género y la salud. At: Borrell, Carmen y Artazcoz, Lucía (coords.). *Investigación en género y Salud. Sociedad Española de Epidemiología*, monografía n.º 5, 2007; 119-141.

Pérez Sedeño Eulalia; et al. *Mujer y ciencia. La situación de las mujeres investigadoras en el sistema español de ciencia y tecnología.* Madrid: FECYT, 2005. Available at: www.amit-es.org/descarg/FECYT-2005.pdf

Pérez Sedeño, Eulalia (ed.). *Las mujeres en el Sistema de Ciencia y Tecnología. Estudio de casos.* Madrid: Organización de Estados Iberoamericanos (OEI) (serie Cuadernos de Iberoamérica), 2001.

Pérez Sedeño, Eulalia; Alcalá, Paloma; González, Marta; de Villota, Paloma; Roldán, Concha; Santesmases, M.^a Jesús (eds.). *Ciencia, tecnología y género en Iberoamérica*. Madrid: CSIC (Monografías 29), 2006.

Revuelta, Gemma; Alonso, Inma; Tomás, Sonia; Guerrero, Marcela; Rohlfs, Izabella. Género y salud en la prensa diaria. *Biomedia* 2003 Available at: www.biomeds.net/biomedia/d02041103.htm

Ridsdale, Leone (dir.). *Medicina basada en le evidencia. Práctica en Atención Primaria.* Barcelona: Ediciones Mayo-semFYC, 2000.
Rohlfs, Izabella; Trigola, María. La incorporación de la perspectiva de género en las encuestas de salud de los primeros años del siglo XXI: evolución y camino a seguir. At: Borrell, Carmen y Artazcoz, Lucía (coords.). Investigación en género y Salud. Sociedad Española de Epidemiología 2007; monografía n.º 5: 44-78.

Rossiter, Margaret W. The Matthew Matilda Effect in Science. Soc Stud Sci 1993: 23(2): 325-341.

Roter, Debra; Lipkin, Mack; Korsgaard, Audrey. Sex Differences in Patients' and Physicians' Communication During Primary Care Medical Visits. Med Care 1991; 29(11): 1083-1093.

Rubin Grandis, Jennifer; Gooding, William E.; Zamboni, Beth A.; Wagener, Marilyn M.; Drenning, Stephanie D.; Miller, Lori; Doyle, Karen Jo et al. The Gender Gap in a Surgical Subspeciality. Análisis of Career and Lifestyle Factors. Arch Otolaryngol Head Neck Surg 2004; 130:695-702.

Ruiz Cantero, M.ª Teresa: Género y salud en los programas oficiales de postgrado. At: Un aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza.

Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Ruiz Cantero, M.ª Teresa. El sistema sexo-género en investigación sobre atención sanitaria. At: Borrell, Carmen y Artazcoz, Lucía (coords.). Investigación en género y Salud. Sociedad Española de Epidemiología 2007; monografía n.º 5: 79-96.

Ruiz Cantero, M.ª Teresa; Papí Gálvez, Natalia. Guía de estadísticas de salud con enfoque de género: análisis de internet y recomendaciones. Available at: www.msc.es/organizacion/sns/planCalidadSNS/pdf/equidad/guiaEstadisticasSaludEnfoqueGenero.pdf

Ruiz Cantero, M.ª Teresa; Verdú Delgado, María. Sesgo de género en el esfuerzo terapéutico. Gac San 2004; 19(supl.1): 118-125.

Ruiz Cantero, M.ª Teresa; Vives-Cases, Carmen; Artazcoz, Lucía; Delgado, Ana; García Calvente, M.ª del Mar; Miqueo, Consuelo; Montero, Isabel; Ortiz, Rocío et al. A framework to analyse gender bias in epidemiological research. J Epidemiol Community Health 2007; 61: 46-53.

Sackett, David. Medicina basada en la evidencia. Cómo practicar y enseñar la MBE. Madrid: Harcourt, 2000.

Sánchez López, Pilar; Aparicio, Marta. Criterios de acreditación docente en género y salud. Propuestas. At: Un aprendizaje para la Igualdad. IV Jornadas Género y salud. Seminario Interdisciplinar de Estudios de la Mujer de la Universidad de Zaragoza. Available at: http://wzar.unizar.es/siem/Formativas/jornadasalud.html

Santamaría, Amparo; Merino, Alberto; Viñas, Odette; Arrizabalaga, Pilar. Does medicine still show an unresolved discrimination against women? Experience in two European university hospitals. J Med Ethics 2009; 35: 104-106.

Santamarina, Cristina. Las mujeres españolas ante el conocimiento científico y tecnológico. Madrid: Instituto de la Mujer, Ministerio de Trabajo y Asuntos Sociales, 2000. Available at: www.cimop.com/pdf/cimop3.pdf

Santesmases, M.^a Jesús. Mujeres científicas en España (1940-1970): profesionalización y modernización social. Madrid: Instituto de la Mujer, 2000.

Schiaffino, Ana; García, Ana María; Fernández, Esteve. Autoría y presentación de resultados según el género en cuatro revistas biomédicas españolas. Gac San 2001; 15(3): 251-254.

Serantes Gómez, Ana. La cirugía que se avecina. La cirugía mujer. Cir Esp 2007; 81: 228.

Siles González, José.; García Hernández, Encarnación; Gallardo Frías, Yolanda. La enfermería en el cine. Imagen durante la Guerra Civil Española. *Rev Enfer* 1998; 224: 25-31.

Solsona i Pairó, Montserrat; Treviño Maruri, Rocío; Merino Tejada, Marta; Ferrer Serret, Laia. *Demografia de les professions sanitàries a Catalunya: anàlisi dels estocs actuals de professionals sanitaris.* Bellaterra, Barcelona: Centre d'Estudis Demogràfics, 2006. Available at: www.gencat.net/salut/ies/Du11/html/ca/dir1604/dn1604/estudi demografic.pdf

Tomás, Concepción; Tejero, Cruz.; Miqueo, Consuelo; Yago, Teresa; Barral, M.^a José; Fernández, Teresa (eds.). *Diálogos interrumpidos. Investigación en salud y práctica asistencial desde la perspectiva de género.* Zaragoza: SIEM, 2006.

Tomás, Concepción; Yago, Teresa. Taller. Las usuarias de los servicios de salud. At: Tomás, Concepción; Tejero, Cruz; Miqueo, Consuelo; Yago, Teresa; Barral, M^a José; Fernández, Teresa (eds.). *Diálogos interrumpidos. Investigación en salud y práctica asistencial: integración de una perspectiva de género.* Zaragoza: SIEM, 2006.

Tracey, Catherine; Nichol, Honor. The multifaceted influence of gender in career progress in nursing. *J Nur Man* 2007; 15: 677-682.

Valderrama Zurián, Juan Carlos; Gonzalez Alcaide, Gregorio; Valderrama Zurián, Francisco; Aleixandre Benavent, Rafael; Miguel Dasit, Alberto. Redes de coautorías y colaboración institucional. *Rev Esp Cardiol* 2007; 60(2): 117-130.

Valls, Carme. Mujeres invisibles. Barcelona: De Bolsillo, 2006.

Velasco Arias, Sara. Sexos, Género y Salud. Teoría y métodos para la práctica clínica y programas de Salud. Madrid: Biblioteca Nueva, Colección Minerva, 2009.

Velasco Arias, Sara. *Recomendaciones para la práctica del enfoque de género en programas de salud*. Madrid: Observatorio de la Salud de la Mujer, 2008.

Villarroya Gaudó, María; Ballester Oyarzun, Miguel Ángel; Hernández Moyés, Aurelia; Canda-Sánchez, Ana; Gutiérrez Esteban; Prudencia; Rivera Ferré, Marta; Ramos Terrado, Oriol; Cruz Fuentes, Tatiana. ¿Igualdad para tod@s en la carrera investigadora? At: Miqueo, Consuelo; Barral, M.ª José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 113-118.

Woolgar, Steve. Ciencia: abriendo la caja negra. Barcelona: Anthropos, 1991.

Yago Simón, Teresa. Incorporación de las perspectivas psicosocial y de género en la práctica profesional. At: Miqueo, Consuelo; Barral, M.^a José; Magallón, Carmen (eds.). *Estudios Iberoamericanos de género en ciencia, tecnología y salud (GENCIBER)*. Zaragoza: Prensas Universitarias de Zaragoza, 2008; 685-688.

Secondary Sources

Instituto Nacional de Estadística (INE; www.ine.es):

• Estadística de la Enseñanza Universitaria en España 1998/1999-2006/2007.

Ministerio de Sanidad y Consumo (www.msc.es):

- Estadística de Establecimientos Sanitarios con Régimen de Internado, 1996-2006.
- Sistema de Información de Atención Primaria, 2007.

Ministerio de Sanidad y Consumo y Centro de Investigaciones Sociológicas (www.msc.es, www.cis.es):

• Barómetro Sanitario, 2006-2007.

Over recent years, the progressive access of women to the work market has not brought with it a massive influx of men into the domestic reproduction and care realm.

That is why women are taking on a diversity of roles and doubling or tripling their working timetables. This 2007-2008 Health and Gender Report – Women and Men in Healthcare Professions brings to light the negative effects this unequal distribution of tasks entails for women's full professional development: lessened professional success, scant repercussion of female values in the organisation and management of the healthcare activity, concealed social contempt for feminised professions and symbolic male dominance in all affected sectors: training, research, care, management and communication in the healthcare system.

