## Gender and Health

## INTRODUCTION

In this part of the toolkit, we take a closer look at how gender is relevant in the specific field of Health in FP7.

A first section briefly points out the broad relevance of gender within the field. The toolkit continues with a more specific discussion of the topics which have been put forward by the European Commission in the field's work programme. This is followed by suggestions regarding gender-relevant issues which may be taken up by the research teams.

To illustrate how planned research in the field of Health can be made gendersensitive, three real-life examples of projects are included. Each case consists of a short text presenting the project and a discussion of the gender-relevant issues in relation to the planned work, both in terms of equal opportunities and in terms of the content of the work. These examples are based on project summaries as they can be found on the CORDIS FP7 website ${ }^{1}$ and relate to different topics within the field's work programme.

Finally, a selection of useful references dealing with gender in the field of Health is provided.


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# gENDER AND THE HEALTH RESEARCH FIELD 

## FP7 Health objective


#### Abstract

The overall objective of the Health theme is to improve the health of European citizens and increase the competitiveness and boost the innovative capacity of European health-related industries and businesses, while addressing global health issues including emerging epidemics. Emphasis will be put on traditional research (translation of basic discoveries into clinical applications includingscientific validation of experimental results), the development and validation of new therapies, strategies for health promotion and prevention, child health and healthy ageing, diagnostic tools and medical technologies, as well as sustainable and efficient healthcare systems. ${ }^{2}$


## How is gender relevant to this field?

In activities under this theme, applicants should consider the possibility of gender/sex differences in risk factors, biological mechanisms, causes, timing, clinical manifestation, consequences and treatment of disease and disorders.

## Health work programme

In FP7 the research field of health will concentrate on biotechnology, translating research for human health and optimising the delivery of healthcare to European citizens through health policy-driven research.

The initiatives undertaken in this field will provide support to:
Biotechnology, generic tools and medical technologies for human health:
Developing and validating tools and technologies that will enable the production of new knowledge and its translation into practical applications in the area of health and medicine.

[^1]Translating research for human health: increasing knowledge of biological processes and mechanisms involved in normal health and in specific disease situations, and transposing this knowledge into clinical applications including disease control and treatment:

- integrating biological data and processes: large-scale data gathering, systems biology
- research on the brain and related diseases, human development and ageing
- translational research in major infectious diseases, to confront major threats to public health, e.g. HIV
- translational research in other major diseases such as cancer, cardiovascular diseases, diabetes and obesity

Optimising the delivery of healthcare to European citizens:
Developing new research methods and generating the necessary scientific basis to underpin informed policy decisions on health systems and more effective and efficient evidence-based strategies of health promotion, disease prevention, diagnosis and therapy.

## How is gender relevant to these topics?

Biotechnology, generic tools and medical technologies for human health

- The necessity when conducting clinical research to take sex differences into account in the research protocols, methodologies and analysis of results: this is important owing to the differences in the male and female body, for example the levels and composition of the hormonal system. Drugs can influence these systems quite differently.
- Addressing the gender balance in the research population: research into human health and the optimisation of healthcare can only be done effectively when taking the diversity of the European population into account.


## Translating research for human health

- Distinguishing between sex and gender and investigating the impact each one has on health is becoming a priority for medical research. ${ }^{3}$ Gender, which is a social construct, and sex, which is a biological construct, are distinct terms. Depending on the health problem being studied, either, neither, or both gender and sex may affect the risk of being exposed to an unhealthy situation and subsequently developing a health problem. Two different approaches to gender in relation to health and healthcare should be distinguished and considered in research. One approach - the most common - focuses on women's health needs, particularly the specific needs of women and girls as a consequence of the

[^2]biology of reproduction and the implications of differences in the epidemiological profile between the sexes. The other approach focuses on gender equality and inequality, and is concerned with the role of gender relations in the production of vulnerability to ill health and disadvantage within healthcare systems, and particularly the conditions that promote inequality between the sexes in relation to access to and use of services.

- Sex and gender 'mainstreaming' is a strategy for bringing equality into the 'mainstream' of activities rather than treating it as an 'add-on' to existing research goals. A mainstreaming approach does not focus only on women but conceptualises both men and women as actors and beneficiaries of scientific research. ${ }^{4}$ Mainstreaming gender means analysing potential gender differences by asking such questions as the following and using the answers to shape planning and implementation:
- How are the problems of men and women different? How might solutions be different?
- How might contributions of men and women to programmes be different?
- How might activities differently affect women and men?
- Health research has failed to adequately explore the combination of social and biological sources of differences in men's and women's health. Consequently, scientific explanations often proceed from reductionist assumptions that differences are either purely biological or purely social. Such assumptions and the models that are built on them have consequences for research, healthcare and policy. An understanding of the interaction between sex and gender in the development and management of health and disease can benefit both sexes in terms of intervention and outcome, as well as providing a deeper understanding for researchers, clinicians and policy-makers.
- While contracting infectious diseases is a function of the interaction of the biological and the social, the experience of the illness/disease is more socially determined. For example, biology may interact with social influences to exacerbate the risk of tuberculosis for women at certain points in their life cycle. Attention in research to the impact of exposure to infectious diseases on women and men in their life span is therefore important.
- Medical treatment is also gender-sensitive: for example men sometimes drop out faster from a long-term treatment scheme because they are more reluctant to queue at the health centre, a place associated with women and children.
- Medical and social scientists must take into consideration gender and its interaction with physiological/immunological factors, and how the outcome of that interaction can protect men and/or women from communicable diseases, or, conversely, place them at risk. For example, there are important differences between women and men in the underlying mechanisms of HIV/AIDS infection and in its social and economic consequences, stemming from biology, sexual

[^3]behaviour and socially constructed "gender" roles and responsibilities, access to resources and decision-making power . ${ }^{5}$

## Optimising the delivery of healthcare to European citizens

- Healthcare and health sector reform should take into consideration gender issues and the potential impact of reforms on certain groups of men and women. Health and well-being are dependent on health-seeking behaviour. It is therefore important to look at the issue of access to appropriate care for all components of the population and be aware of the specificities and different realities of men and women. The gender dimensions of user fees, for example, have significant implications for healthcare policy and management: women, being the majority of the poor, are particularly affected by user fees.
- In communicating research results (reports, scientific papers and articles, etc.) any findings on sex and gender differences from the research should be included, so that the knowledge-base and thus the quality of healthcare provision is increased.
In engaging in dialogue with medical sectors and civil society (including the patients), all actors must keep in mind the need to respect gender equity in opportunities to voice positions, in participation in the policy debate, and in any (ethical or other) decisions that might stem from such dialogue. Health systems are observed to be gendered institutions. ${ }^{6}$ For example, the hierarchy among healthcare staff tends to place doctors, policy-makers and administrators (predominantly male) above nurses, paramedical staff and orderlies, who are more likely to be female, and day-to-day working relations between healthcare staff and patients tend to be predominantly between women.

Developing science to meet current and future needs requires perceptions of research to be reframed within a culture of raised awareness of the influence of sex and gender on scientific knowledge, taking into account men and women as both generators and beneficiaries. To this end, men and women scientists need equal opportunities to establish a bridge to society which would enable the transfer of scientific knowledge and technology for the well-being and development of society. Thus, investing in a gender-sensitive approach to the research content makes for higher quality and validity.

[^4]
## THREE EXAMPLES

## Case 1

Social networking for dietary guidance

## Project outline

Combining work, social obligations and caring for a family in a balanced way has become an important worry for a growing number of European citizens. The project will offer European citizens consumer solutions for a hassle-free guidance towards a balanced lifestyle. The project focuses on methods for inferring eating habits in an unobtrusive way and seeks to use this information to provide situated feedback on meal planning and preparation. Throughout all phases of the project a process of user-centred development (UCD) will be adopted. Since the project aims to change people's behaviour, it is seen as vital to take user needs as the starting point for technology development. The main challenge will be to create solutions that give situated feedback in an enjoyable and engaging manner, leveraging social networking and the collaborative internet (i.e. Web 2.0) to affect behavioural change.

The knowledge exchanged and developed in the project will strengthen both the academic and industrial sectors by creating knowledge on nutrition assessment, situated assistance for meal planning and preparation and the use of social networking to promote healthy eating. The partnership will benefit from knowledge exchange in a number of fields of inquiry. Both partners have significant experience in developing technology, and this expertise is complementary, with one understanding consumer technologies (and the associated methods) and architectures for pervasive environments, and the other developing novel design methodologies and techniques to engage in experience-centred design and to exploit new findings in multimodal cognition. One partner will also contribute nutritional expertise, while external knowledge will be introduced to the partnership through the recruitment of an external expert in the social psychology of behavioural change.


## Identification of relevant gender issues

## Equal opportunities for women and men in research

The project presentation does not address the composition of its team(s). The project focuses on offering nutritional guidance to contribute to healthy lifestyles. Women still bear the brunt of food shopping and cooking responsibilities within households. A non-gender-sensitive strategy for health education may only serve to increase women's burden of guilt and stress rather than leading to a transformation of family eating habits. ${ }^{7}$

A gender-balanced team will perhaps help in integrating as early on as possible women's often unrecognised knowledge on food and nutrition. This might help the project to define adequately the issues "European citizens" face and that trigger their worry about a balanced lifestyle. Moreover, to approach the nutritional balance comprehensively, the project will have to consider how work and private life are combined, and here again, female team members might be valuable sources of information right from the start. A gender-balanced team could also be the project's first step into defining working conditions and culture which work for all its staff members, both female and male, and contribute "in situ" to a healthy balanced lifestyle.

The team will be multidisciplinary, with an external expert in the social psychology of behavioural change associated with the project. Adding gender expertise to the project would also be highly beneficial and might contribute to keeping a consistent gendered perspective on the whole enterprise. Finally, the project will be trying to provide solutions using social networking and the collaborative internet. If one can be optimistic as to the closing of a gender gap in women using ICTs (Information and Communication Technologies), women in computer science and engineering are still a tiny minority, and the situation does not appear to be improving. ${ }^{8}$ Given the blatant gender dimension of the project, there might still be room to consider whether a female computer expert might not usefully complement the team, however rare female computer experts might be.

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## Gender in research content

Gender should be taken into account at every step of this project's methodology, since gender is a central variable in the issue at hand. The gendered division of labour in our societies implies that women still assume multiple roles (bread-winner, carer/parent, home/community "manager") more frequently than men, whose roles are more often restricted to professional activities. To assess the eating habits and dietary needs of the "citizens", the project will need to take these gender differences into account because they have gender-related impacts on female and male citizens' daily lives. Failing to collect gender-sensitive data will result in a skewed picture, and may threaten the success of the proposed technology. The project could build upon existing research, which has thoroughly explored the gender differences in difficulties people face in combining work and private life and their impacts on healthy lifestyles. ${ }^{9}$ Although the majority of funded studies have taken place in the developing world, the advantage of using a gendered perspective in the success of these projects has been clear. A major multi-country study on gender and intra-household aspects of food policy, carried out by the International Food Policy Research Institute (IFPRI), provides evidence that increasing resources in the hands of women, both as researchers and consumers, is critical to improving project performance and attaining many important development outcomes. ${ }^{10}$ This new understanding has been the catalyst for a host of innovative public policies for alleviating poverty and hunger, including microfinance directed to women, food for education, childcare programmes, and integrated health, nutrition, and education programmes.

There is no mention on how the process of the user-centred development (UCD) will be elaborated. Here again, to guarantee the success of the project, a gendered look at the "user" will be necessary. Male and female potential users will not face the same needs. Since these needs are claimed to be the starting point for the technology development, it seems paramount to define them accurately following a gendered axis (sex-disaggregated data).

A gender-sensitive perspective can only be accomplished if researchers themselves view this change as necessary, feasible and contributing to the quality of their research. Since gender is so central to this project, disseminating its approach, methodology and outcomes would be highly worthwhile as it would enrich gender expertise.

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## Case 2

## Mosquito immunity and reproduction

## Project outline

Malaria, one of the world's most devastating diseases, is caused by protozoan parasites of the genus Plasmodium and is obligatorily transmitted to humans by anopheline mosquitoes. The African mosquito species Anopheles gambiae s.s. is the major vector of this disease. Current strategies aimed at tackling malaria rely extensively on the control of vector populations in the field, chiefly through the use of insecticides and insecticide-impregnated bednets. However, the insurgence of resistance in mosquitoes and the lack of novel insecticidal compounds constitute major hurdles to insecticide-based control methods. Novel alternative strategies are urgently needed to monitor risks and to roll back the disease.

This proposal aims to provide an integrated view of mosquito immunity and reproduction, the latter largely understudied in Anopheles, and to analyse how these two physiological processes are linked and jointly affect mosquito biology and its interactions with the malaria parasite.

Research groups from three European countries and two African teams will integrate their resources and scientific expertise in malaria research to expand knowledge of mosquito biology and of vector-parasite interactions, exploiting the opportunities provided by the recently available genome information and technological developments concerning mosquito vectors. The project consortium's joint scientific programme integrates for the first time three crucial aspects of the biology of An. gambiae - reproduction, immunity and population biology - with the ultimate aim of providing novel concepts and targets for malaria control.

## The main activities will address:

- The molecular bases of the reproductive biology of the mosquito vector, and its effects on immunity and Plasmodium transmission;
- The molecular mechanisms which determine mosquito-immune statusand regulate Plasmodium sporogony and transmission, in both laboratory settings and natural populations;
- The role of genetic polymorphism in genes controlling reproduction and immunity on the structure of mosquito populations and malaria transmission in Africa.

In order to reach its objectives, the project will employ a number of concerted strategies in support of its three-year agenda. Special attention will be given to cuttingedge training opportunities and sharing of resources, by implementing interactive programmes for the training and exchange of personnel at all levels, and by rationalising and coordinating investment. The knowledge acquired in this project will have a strong impact on European scientific competitiveness.

The scientific activities of this project will identify the factors and pathways regulating immunity against Plasmodium parasites and provide molecular insights into the reproductive processes essential for the fertility and fecundity of the mosquito, the two crucial aspects of mosquito biology at the basis of developing transmissionblocking interventions. The knowledge gained will be instrumental in determining at the molecular level how the modulation of immune factors affects reproductive success in vector populations, and how reproductive efforts influence the immune status of mosquitoes and parasite development. Polymorphisms of key molecules regulating reproduction and immunity will be characterised in the natural populations across sub-tropical Africa, and the key factors that shape local vector populations will be identified. Data on the polymorphisms of key molecules regulating reproduction and immunity will generate new tools for genetic analyses of the population structure of An. gambiae and of the physiological/ecological/behavioural traits underlying it. Moreover, the knowledge developed within this project will enhance understanding of reproductive behaviour in other insect vectors such as tsetse and sand flies.


## Identification of relevant gender issues

## Equal opportunities for women and men in research

The project will bring together teams from three European and two African countries. Diverse teams have been shown to work better, when well managed ${ }^{11}$,and this project certainly opens a window of opportunity to set up a diverse team, in terms of an acceptable gender balance but also in terms of ethnic background. FP7 will monitor the team composition, and reporting on its gender balance will gain the proposal a higher score.
The project foresees the sharing of resources, interactive training programmes and the exchange of personnel at all levels. The project would do well to examine its working conditions and culture, to guarantee that all staff members, men and women, European and African, are treated fairly and provided with support, should they need it, to benefit equally from the opportunities of exchange and training offered. For example, these might involve transcontinental travelling, which might have different consequences for male and female, European and African team workers.

## Gender in research content

Since this project focuses on the reproduction of malaria flies, men and women have been known to play different roles in disease control. For example, women's and men's access to water, and use of water resources, where mosquitoes breed, might be different. Although malaria affects both men and women, vulnerability to malaria and access to treatment is often different for women and men and is greatly influenced by gender roles and issues. Women, particularly pregnant women, and children are at the greatest risk of contracting malaria in both high and low malaria endemic areas for both biological and social reasons. A careful gendered analysis of how the outcomes can be used to actually improve disease control will be necessary. The success of any disease control programme depends on a gender-sensitive approach, taking into account that if women are likely to be in charge of practical implementation requirements, they might not be present in local decision making circles.

Evidence worldwide show that women at community level have been at the centre of the fight against the disease that claims many lives each day. By the same token decisions are usually taken by men without much consultation with women. ${ }^{12}$ There is an imbalance in the roles played by each group. In addition, socially determined gender norms often require women to undertake a 'double burden' of providing care to sick family members in addition to other household and income earning duties. ${ }^{13}$ As men are also vulnerable to contracting malaria through occupational exposure, malaria programmes need to work on improving men's access to malaria prevention methods and treatment. ${ }^{14}$ As the global strategy to roll back malaria charts the way forward to scale up efforts to reduce the mortality caused by the disease and improve health, there is a need for increased advocacy to accomplish this goal. The importance of integrating a gender-sensitive approach to dealing with malaria control has been emphasised. ${ }^{15}$ A gender approach that analyses the impact of gendered norms and behaviour on vulnerability to malaria, as well as the gender-related dynamics of health seeking behaviour, is essential in the fight against malaria. Many strategies for malaria control and prevention have not been able to be sustained or implemented owing to the failure to incorporate an interdisciplinary and gendered perspective in the design of such programmes, coupled with insufficient consideration of the general social and cultural context of infection and disease.

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## Case 3

## Clinical decision-making and people with severe mental illness

## Project outline

- Background: A considerable amount of research has been conducted on clinical decision-making (CDM) in short-term physical conditions. However, there is a lack of knowledge on CDM and its outcome in long-term illnesses, especially in care for people with severe mental illness. Thus, this project entitled "Clinical decision-making and outcome in routine care for people with severe mental illness" is proposed by participants in six European countries.
- Methods: First, the project will establish a methodology to assess CDM in people with severe mental illness. Specific instruments will be developed (and psychometric properties established) to measure CDM style, key elements of CDM in routine care, as wellas CDM involvementand satisfactionfrom patientandtherapist perspectives. Second, these instruments will be put to use in a multi-national prospective observational study (monthly assessments over a one-year observation period; $\mathrm{N}=540$ ). This study will investigate the immediate, short- and long-term effect of CDM on crucial dimensions of clinical outcome (symptom level, quality of life, needs) by taking into account significant variables moderating the relationship between CDM and outcome.
- Expected results/impact: The results of this study will make it possible to delineate quality indicators of CDM, as well as to specify prime areas for further improvement. Ingredients of best practice in CDM in the routine care for people with severe mental illness will be extracted and recommendations formulated. With its explicit focus on the physician perspective and the patient role in CDM, the project will also contribute to strengthening the service user perspective. Beyond dissemination of results in scientific journals, a number of steps to ensure swift transfer of the results to routine practice are proposed. Thus, this project will substantially add to improving the practice of CDM in mental healthcare across Europe.
- Physician perspective: In the past, psychiatrists, with the appropriate level of involvement from their patients, were the sole source of authority and legitimacy in the clinical decision-making process. Today, the psychiatrist-patient relationship is no longer uninfringeable by the outside world. Because there is variance in our practice, some of it unsupported by scientific evidence, the question is no longer whether there will be intervention in mental health services to assure quality but who will intervene and what methods will be used. If psychiatrists want to remain in control of their profession, they must have the motivation to track and evaluate mental health outcomes routinely. Further, psychiatrists are the only mental health professionals who can make a comprehensive biopsychosocial diagnosis. Psychiatrists need to be able to monitor their patients' treatment progress objectively by evaluating quantitative outcome data.
- Patient perspective: The patient perspective is even more important for outcome assessment, in part because many important outcomes (such as patient satisfaction, attitudes toward treatment, and quality of life) can be determined only by asking the patient. There is also growing recognition that patients, as consumers of care, are important healthcare partners. Several studies have noted a relation between treatment compliance and patients' understanding and awareness of their treatment progress.



## Identification of relevant gender issues

Equal opportunities for women and men in research

There is no indication of the gender balance within the research team, although this information, and indication of its monitoring, would collect marks from evaluators. The project being a collaborative effort between partners spread over six countries, travelling might be required, and the project might be well advised to look into travelling requirements that still guarantee a healthy work/private life balance, as some team members, and more likely female team members, might be hard pressed to combine mobility requirements with family/home responsibilities.

## Gender in research content

The research aims to delineate quality indicators of CDM in severe mental illness, integrating the psychiatrist's perspective as well as the patient's. In the case of severe mental disorders such as schizophrenia and bipolar depression, there do not seem to be sex-differences in prevalence. However, significant sex differences have been demonstrated in the patterns of development and symptoms of the disorders. Research suggests that, in relation to women's mental health, psychosocial factors are equally or more important than biological ones. ${ }^{16}$ Life course developmental theories are supported by evidence from longitudinal studies, which show that differences in the mental health of boys and girls start to appear at the onset of adolescence, when social roles are adopted to a greater extent. ${ }^{17}$

For example, while the numbers of male and female Alzheimer patients are similar, women's living longer implies that more female patients will live longer with the condition. Hence what is needed is a greater contextualisation of mental health decisions within current social realities. Gender differences appear not only in relation to the kinds of mental health problems experienced by women and men, but also in their patterns of help seeking and treatment. For example, women are more likely to seek help from and disclose mental health problems to their primary care physicians, who, in turn are more likely to prescribe them drugs rather than refer them to psychiatric services. It is estimated that women are prescribed twice as many psychotropic drugs per head as men. ${ }^{18}$

The World Health Organization identifies three types of underlying factors which might explain gender differences:

- the interaction between biological and social vulnerability: for instance, it has been shown that marital disharmony, lack of social support and poverty increase the risk of postnatal depression;
- gender roles: studies have shown that in industrialised countries, low income and women's increased exposure to uncontrolled life events such as illnesses and deaths of family members, job insecurity and dangerous neighbourhoods translate into a significantly higher risk of depression; whereas in men, the same situations may be associated with alcohol or drug abuse, and violence;
- gender-based violence: there is a strong link between being sexually abused in childhood and the occurrence of multiple mental health problems later in life, and globally, girls and women experience more sexual violence than men. Still, studies in the USA and the Netherlands have reported that male victims of childhood sexual abuse later suffer worse and more complex problems. ${ }^{19}$

[^8]To guarantee the validity of the project's approach and make sure its outcomes are effective for any patient, the gender delineation of severe mental illness will need to be precisely drawn. This implies that the research should systematically and consistently collect sex-disaggregated data, whenever the patient is concerned. But not only this: the history of the diagnosis of such disorders also preaches caution. We might be a long way from the diagnosis of "hysteria" in female patients requiring hysterectomies, but psychiatrists are still gendered beings whose gender stereotypes might perhaps bias their assessments. For example, studies in Germany and the USA have shown that elderly women might be more easily diagnosed with depression than men showing the same symptoms. The project aims to investigate the effect of CDM on crucial dimensions of clinical outcome by taking into account significant variables moderating the relationship between CDM and outcome. It ought to integrate from the start sex as a potentially significant variable that needs to be examined, with reference to both patient and doctor.

The project's ultimate aim is to improve mental healthcare in Europe. Since mental health problems are gendered, it follows that treatment programmes, service provision, and clinical decision-making and evaluation need to adopt a gendered approach in order to be effective.

At this point, it might also be useful to consider how realities for men and women might differ in terms of access to care, women's and men's vulnerability, the impact illness might have on families and, of course, who is likely to be the carer for patients of severe mental disorders (in most cases, women). All these elements might affect the patient's perspective and needs, which in turn will impact on the patient's response to their treatment.

## Gender and Health

## USEFUL READING

Bekker M.H.J., van Mens-Verhulst J.(2007), Anxiety Disorders: Sex Differences in Prevalence, Degree, and Background, but Gender-Neutral Treatment, The Official Journal of the Partnership for Gender-specific medicine at Columbia University, Special Edition, 4(Supplement B):178-93.

Dijkstra A.F., Verdonk P., Lagro-Janssen A.L.M. (2008), Gender bias in medical textbooks: examples from coronary heart disease, depression, alcohol abuse and pharmacology, Medical Educa-tion;42(10):1021-8.

DunnGalvin A. (2006), Incorporating a gender dimension in food allergy research: a review in Allergy, 61(11): 1336-1343.

Hamberg K. (2008), Gender bias in medicine in Women's Health, May 2008;4(3):237-43.
Hammarstroem A. (2007), A Tool for Developing Gender Research in Medicine: Examples from the Medical Literature on Work Life in The Official Journal of the Partnership for Gender-specific medicine at Columbia University, Special Edition, 4 (Supplement B):123-32.

Holdcroft A. (2007), Integrating the Dimensions of Sex and Gender into Basic Life Science research: Methodological and Ethical Issues in The Official Journal of the Partnership for GenderSpecific Medicine at Columbia University, Special Edition, 4(Supplement B):64-74.

Huyer S.O., GeoffreyJeenah, Mohammed Naim, Tanveer (2004), Understanding the gender dimensions of biotechnology research and development : consultative expert workshops; final technical report, United Nations Commission on Science and Technology for Development University of Pretoria Pakistan National Commission on Biotechnology; 2004.

Klinge I. (2007), Bringing Gender Expertise to Biomedical and Health-Related Research in The Official Journal of the Partnership for Gender-specific medicine at Columbia University, Special Edition, 4(Supplement B):59-63.

Klinge I., Bosch M. (2001), Gender in Research - Gender Impact Assessment of the specific programmes of the Fifth framework Programme- Quality of Life and Management of Living Resources, European Commission, http://www.genderdiversiteit.nl/en/download/pdf/Gender\  in\%20research.pdf (16.03.2009).

Lagro-Janssen T., Lo Fo Wong S., Muijsenbergh Mvd.(2008), The importance of gender in health problems in The European Journal of General Practice; 14(1):33-7; 4(Supplement B):96-105.

Prins M.H., Smits K.M., Smits L.J. (2007), Methodological Ramifications of Paying Attention to Sex and Gender Differences in Clinical Research in The Official Journal of the Partnership for Genderspecific medicine at Columbia University, Special Edition; 4(Supplement B):106-10.

Verdonk P., Benschop Y.W.M., De Haes J.C.J.M., Lagro-Janssen A.L.M. (2008), Making a gender difference: Case studies of gender mainstreaming in medical education in Medical Teacher; 30(7):194-201.

World Health Organisation - Gender and health information sheets on various health topics. http://www.who.int/gender/documents/fact/en/index.html (13.03.2009).


[^0]:    ${ }^{1}$ http://cordis.europa.eu/fp7/projects_en.html

[^1]:    ${ }^{2}$ Decision on FP7 programme

[^2]:    ${ }^{3}$ Institute of Medicine (2001) 'Exploring the biological contributions to human health: does sex matter?', in Journal of Women's Health \& Gender-based Medicine 10(5): 433-439. Doyal, L., 2004 'Gender and the 10/90 gap in health research', in Bulletin of the World Health.

[^3]:    ${ }^{4}$ Fausto-Sterling, A. (2003), Science matters: culture matters, Persp. Biol. Med 46, pp.109-124; Klinge, I. (2007), Bringing gender expertise to biomedical and health related research, Gender Med. 4, pp. S59-63, www.GenderBasic.nl;
    Klinge, I. and Bosch, M. (2005), Transforming research methodologies in EU life sciences and biomedicine: gender sensitive ways of doing research. Eur. J. Women's Studies 12, p377.

[^4]:    ${ }^{5}$ UNAIDS (2003), Gender and HIV/AIDS, Gender and Health Fact Sheet
    ${ }^{6}$ Mackintosh, M. and Tibandebage, P. (2004), 'Gender and Health Sector Reform: Analytical Perspectives on African Experience', Working Document prepared for the UNRISD report Gender Equality: Striving for Justice in an Unequal World.

[^5]:    ${ }^{7}$ Charles, N. and Kerr, N. (1986), Issues of responsibility and control in the feeding of families in Rodnell, S. and Watt, A. (eds), The politics of health education: raising the issues, London: Routledge and Kegan Paul.
    ${ }^{8}$ Sørensen, Knut H. and Stewart, James (eds) (2002), Digital Divide and Inclusion Measures: A review of Literature and Statistical Trends on Gender and ICT, Senter for teknologi og samfunn, Report 2002-59, December 2002, Trondheim: NTNU.

[^6]:    ${ }^{9}$ Perrons, D. \& al. (2007) 'Gender, social class and work-life balance in the new economy' in Crompton, R., Lewis, S. and Lyonette, C. (eds) Women, men, work and family in Europe. Basingstoke, UK: Palgrave Macmillan, pp. 133-151.
    ${ }^{10}$ Jackson, C. (2005) Strengthening food policy through gender and intrahousehold analysis: Impact assessment of IFPRI multicountry research, IFPRI Impact Assessment Discussion Paper 23, Washington, DC: International Food Policy Research Institute.

[^7]:    ${ }^{12}$ Tolhurst, R and Nyonator, F.K. (2005), Looking within the household: gender roles and responses to malaria in Ghana, Trans R Soc Trop Med Hyg. Oct 5.
    ${ }^{13}$ World Health Organization, Information Sheet on Gender, Health and Malaria, April 2006 working draft.
    ${ }^{14}$ Heggenhougen, K.H., Hackethal, V. and Vivek, P. (2003), The behavioural and social aspects of malaria and its control: An introduction and annotated bibliography, UNDP/WorldBank/WHO Special Programme for Research and Training in Tropical Diseases (TDR). TDR/STR/SEB/VOL/03.1., p 118
    ${ }^{15}$ Liverpool School of Tropical Medicine (2005), Gender Perspectives in Malaria Management and Malaria Knowledge Programme at Liverpool School of Tropical Medicine, accessible at http://www. healthlink.org.uk/PDFs/mkp_perspectives.pdf\#

[^8]:    ${ }^{16}$ World Health Organization (2001), Gender Disparities in Mental Health, Geneva.
    ${ }^{17}$ Kornstein, S.G. and Wojcik, B.A. (2002), 'Depression', in Women's mental health: a comprehensive textbook, Kornstein, S.G. and Clayton, A.H., (eds), New York: The Guildford Press.
    ${ }^{18}$ World Health Organization (2001), Gender Disparities in Mental Health, Geneva,.
    ${ }^{19}$ World Health Organization (2002), Gender and Mental Health, Geneva.

