

## PONENCIAS

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### QUALITATIVE RESEARCH AND THE EPIDEMIOLOGICAL IMAGINATION – A VITAL RELATIONSHIP

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This paper takes as its starting point the assumption that the 'Epidemiological Imagination' has a central role to play in the future development of policies and practice to improve population health and reduce health inequalities within and between nation states. It will be argued that there are three critical aspects to this role and that in relation to each the 'knowledge' created by qualitative research has a major contribution to make. These three domains of the epidemiological contribution to health improvement/inequality reduction are:

- Providing accurate and accessible descriptions of the social patterning of health experiences;
- Enhancing understandings about the multifactorial causal mechanisms/pathways generating patterns of health experiences;
- Evaluating the effectiveness of policy and practice interventions to improve health and reduce inequalities.

Before illustrating the contribution of qualitative research the paper will briefly consider the what qualitative research is, touching on epistemological questions - what type of 'knowledge' is generated by qualitative research - and questions of methods - what approaches to data collection, analysis and interpretation are involved. Following this the paper will then consider each of the three 'domains' of the epidemiological imagination using examples of qualitative research to illustrate the contribution that it can and should make.

- The social patterning of health experience: drawing on research on the experience of 'tiredness' the paper will seek to illustrate how qualitative research adds depth to descriptions of gendered patterns of health and illness.

- Enhancing understanding of causal mechanisms and pathways: drawing on research on the relationship between place and health the paper will argue that qualitative research on the meanings that people attach to the places in which they live provides a critical missing dimension to the current understanding of the health impact of areas generated by multi-level modelling.

- Evaluating health interventions: the paper will use findings from methodological research currently underway to illustrate the potential contribution of findings from qualitative research to Cochrane systematic reviews of effectiveness.

The final section of the paper will provide a typology of different approaches to combining qualitative and quantitative methods within epidemiology and/or health research highlight some of the potential conflicts that may arise. The typology will include:

- 'Preparing the ground' - qualitative research as a precursor to other methods
- 'Researching parts other methods can't reach' - qualitative research addressing different kinds of questions
- 'Thickening understanding' - qualitative research adding conceptual and theoretical depth to research
- 'Oppositional perspectives' - qualitative research shifting the power balance between 'knowledges' and between researcher and researched.

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### UNDERSTANDING SEX AND GENDER: THE CHALLENGES FOR EPIDEMIOLOGISTS

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Differences between women and men are receiving increasing attention in the planning and delivery of health services. However the knowledge produced by epidemiologists and clinical researchers is often inadequate for the development of sex/gender-sensitive health care. Biological (or sex) differences between men and women continue to be confused with socially constructed (or gender) differences. This limits the value of many research findings. In order to improve the situation, conceptual and methodological improvements are needed in medical research.

Biological differences between the sexes begin with reproductive functioning but also include genetic, hormonal, metabolic and other differences. These need to be better understood if the health care needs of both women and men are to be properly met. At the same time, it is clear that gender divisions in society also shape male and female patterns of health and illness. This is especially evident in the case of women whose health problems have been linked to poverty, low self esteem, lack of physical security and the 'double burden' of waged work. However some men are also beginning to identify their gender as a health hazard, pointing to dangerous jobs and to interpersonal violence as significant risks. As well as shaping patterns of health and illness, gender differences can also shape access to health care as well its quality. Studies have shown that in many parts of the world women face gender-related obstacles in access to health care. They may also experience care of a lower quality than that offered to male patients. On the other hand, social expectations about masculinity may limit men's willingness to consult health care workers or to protect their own health.

Both sex and gender are fundamental to health and health care and should therefore be treated as key variables in research designs. However this is rarely done. As a result, preventive or therapeutic interventions based on evidence from men may be applied to women without any real understanding of their appropriateness. At the same time, health services are introduced without any understanding of their different implications for women and men. This can result in inefficient and ineffective use of health care resources.

If these problems are to be reduced, researchers need to mainstream sex/gender through all their work. This will require the use of a broader range of methods, more interdisciplinary studies and the development of new methodological approaches for understanding the relationship between biological sex and social gender. A failure to take these issues seriously will result in the continuation of bad science that pays little attention to some of the most important determinants of human wellbeing.

### QUALITATIVE AND QUANTITATIVE RESEARCH IN SOCIAL EPIDEMIOLOGY: IS COMPLEMENTARITY THE ISSUE?

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Although in recent years there has been a growing acceptance of qualitative research in social epidemiology the role and scope of its use remain a contested terrain. I sketch some of the issues that have been the focus of the debate between supporters and critics of qualitative research in social epidemiology and adjacent public health disciplines. They include epistemological problems, such as the limitations of survey research to uncover social mechanisms, lack of background among epidemiologists to generate sound hypotheses for specific populations, and ontological problems such the idealism inherent in some of the qualitative research coming from anthropology.

Next I draw from my own experience working with urban sociologist Elliot Liebow's (e.g., Tally's Corner, 1967; Tell Them Who I am, 1994) and from a decade of population based research in African American and low income neighborhoods in the United States to expose another role for qualitative research in social epidemiology. Thus, I argue that qualitative research is used in scientific debates that confront researchers with their research institutions or with peers in higher managerial positions with different economic interests and ideologies. This conflict can involve the potential negative effect research findings for the economic interests of academic institutions. Mostly conflict arises over theoretical frameworks and the measures to be included in quantitative population based surveys. I confine this use of qualitative research to the academic world and do not necessarily imply that communities benefit from it.

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**OCCUPATIONAL CANCER AMONG WOMEN: WHERE HAVE WE BEEN AND WHERE ARE WE GOING?**

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Studies of occupational exposures have been a fruitful area of research for identifying carcinogens and some of the early observations, such as increased risk of breast cancer among nuns and bone cancer among radium dial workers, were made among women. Recent research has shown increased risk of leukemia among women exposed to benzene, other solvents, vinyl chloride, antineoplastic drugs, radiation, and pesticides or employed in food processing, or the textile and garment industries. Elevated lung cancer rates have been observed among women exposed to asbestos and metals, including arsenic, chromium, nickel, and mercury, as well as among women employed in motor vehicle manufacturing, food service, or cosmetology. Bladder cancer is excessive among women employed in the dyestuff, textile, rubber, plastic, and leather industries, as well as among painters, dry cleaners, and health care workers. In 1981, Doll and Peto estimated that occupational exposures were responsible for about 4% of cancer among men and 1% among women, but these estimates were based on research conducted mainly among men in developed countries. Few studies included women, who had been employed infrequently in the large-scale manufacturing workplaces that were the settings for most of the research. However, as the percent of women working outside the home, the proportion of life spent working, and the participation in non-traditional jobs increased, the potential for sustained exposure to occupational carcinogens increased. The 1981 estimates may not reflect today's risks. Perhaps even more importantly, these early estimates do not reflect the role of occupation among women in developing countries. As countries move from agrarian to industrial, information, and service economies, the proportion of women in the paid workforce, the amounts and types of unpaid labour, the distribution of women by economy sector, the scale of the workplaces, the exposure levels in the workplace, and their control vary dramatically. Many industries have moved major portions of their operations to developing nations. Well-designed studies in developing countries are crucial to identify where control measures are needed and to discover new occupational carcinogens.

As we go into the future, we need to expand our focus on women, increase our activities in developing countries, include newly created industries and non-chemical "exposures", such as stress and shiftwork, and use the most advanced methods available. Much more sophisticated exposure assessment and incorporation of molecular epidemiologic techniques are needed to advance the field. Occupational cancer research is essential to increase our knowledge of the etiology of cancer and to ensure safer work lives for women in all countries.

**HUMAN RIGHTS AFTER 11 SEPTEMBER 2001: CHALLENGES FOR THE MEDICAL PROFESSION**

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On 11 September 2001, four US passenger jets were hijacked in a carefully planned operation involving 19 hijackers. Three of the jets were deliberately crashed into the World Trade Center in New York and the Department of Defence headquarters (the Pentagon) in Washington DC with large-scale loss of life, including all passengers and hijackers. The fourth plane crashed in Pennsylvania after some passengers attempted to wrest control of the plane from the hijackers.

In the year following this event, there has been much discussion about "terrorism", "Islamic fundamentalism", security and the "war against terror". Some of this discussion has been translated into action, most notably in the military action undertaken by the USA and allies in Afghanistan. There has also been heightened security procedures at airports, new laws allowing detention of foreigners, and the suspension of key rights such as the right to be charged and to receive a fair trial. The indefinite detention of several hundred men without charge at the US base on Cuba is an example of this.

Some of the rhetoric of the "war against terror" has issued from the mouths of governments with poor human rights records or democratic credentials. Such governments appear to wish to disguise illiberal acts by arguing a necessity for anti-terror measures.

The reaction from medical professionals has, not unsurprisingly, focused on two principal issues: the effect of trauma on families of victims, witnesses to the attacks and the general population, and "bio-terrorism" (a result of the mailing of anthrax spores to various addresses in the USA in the period just after the 11 September attack). But are these the only points at which health professionals can engage the issues arising from the 11 September attack?

In this paper I will suggest that, as important as the information-giving and support role is in the context of 11 September, health professionals have much to offer in illuminating some of the issues which have been the subject of misleading rhetoric and in urging the protection of human rights in the face of the global concern about "terrorism". Of particular importance are protecting the rights of both patients and health personnel; avoidance of cruel punishments and maintenance of medical ethics.

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**EXPOSICIÓN A PLAGUICIDAS Y SALUD DE LAS MUJERES**

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Los plaguicidas son productos tóxicos muy presentes en el medio ambiente. Debido a su ubiquidad existe un alto grado de preocupación en la población general por los efectos de los plaguicidas sobre la salud. Aunque en los países industrializados se han desarrollado diferentes regulaciones y prohibiciones que afectan a los plaguicidas, se ha demostrado que la distribución de los compuestos persistentes (especialmente los denominados plaguicidas organoclorados) está generalizada en todo el planeta. No obstante, los países más pobres siguen afrontando los mayores riesgos para la salud de la población.

La exposición aguda e intensa de origen doméstico, ambiental o laboral a plaguicidas puede producir daños graves en la salud, pero existe mayor controversia en relación con las exposiciones crónicas a niveles bajos de estos productos y determinadas alteraciones que afectan típicamente a las mujeres, como ciertos cánceres o problemas de la reproducción y el desarrollo. Otros efectos crónicos, como alteraciones del sistema nervioso o del sistema inmune, han sido investigados con menor frecuencia. En estudios de laboratorio se ha demostrado que un número importante de plaguicidas actúan como disruptores endocrinos y pueden producir daños crónicos (por ejemplo, metoxicloro y endometriosis o diclorvos y cáncer de mama), pero la evidencia procedente de estudios con seres humanos es todavía incierta. En revisiones recientes sobre este tema se concluye que los niveles habituales de disruptores endocrinos en el ambiente no tienen suficiente actividad estrogénica como para afectar el riesgo de cáncer de mama o de endometrio. Sin embargo, en estos mismos estudios no se descarta que la exposición a niveles importantes de algunos derivados del DDT, especialmente en mujeres postmenopáusicas, pueda aumentar el riesgo de cáncer de mama. El conocimiento disponible acerca de los efectos de otros plaguicidas organoclorados, como los herbicidas triazinas, de amplio uso, o de plaguicidas de otras familias químicas también incluidas en la creciente lista de disruptores endocrinos conocidos, como las piretrinas o el malation, es mucho más limitado y requiere evaluación epidemiológica adicional. Asimismo, se ha demostrado que un importante número de plaguicidas actúan como teratógenos o producen otros efectos negativos sobre el desarrollo y la reproducción en animales de laboratorio, pero una vez más, son escasos y no concluyentes los estudios epidemiológicos que evalúan la exposición materna a plaguicidas específicos en relación con el riesgo de aborto, muerte fetal o anomalías congénitas.

Se ha señalado que la exposición a plaguicidas de las mujeres en países en desarrollo está aumentando. Igualmente, existen datos que demuestran que las intoxicaciones y otros tipos de lesiones producidas por los plaguicidas en las mujeres de estos países están infraestimadas en gran medida. Se ha apuntado la necesidad de desarrollar investigación diferenciada por género para abordar adecuadamente el estudio de las exposiciones a plaguicidas en las mujeres y sus efectos sobre la salud. Los estudios epidemiológicos basados en cohortes laborales altamente expuestas (por ejemplo, mujeres aplicadoras de plaguicidas o mujeres trabajadoras en plantas de producción de estas sustancias) puede aportar información muy valiosa, pero también los adecuados programas de vigilancia de la salud. La investigación epidemiológica debe abordar el estudio de plaguicidas específicos o combinaciones conocidas de plaguicidas, y deben refinarse los métodos de evaluación de la exposición. Se necesita un mayor conocimiento de las interacciones ambiente-ambiente y gen-ambiente que pueden afectar los efectos de estas sustancias, pero también de las interacciones sexo-ambiente y género-ambiente que determinan las características de la exposición y los efectos de los plaguicidas sobre la salud de las mujeres.