

Knowledge gaps in scientific literature on maternal mortality: a systematic review

Diana Gil-González,^a Mercedes Carrasco-Portiño^a & Maria Teresa Ruiz^a

Abstract Issues related to maternal mortality have generated a lot of empirical and theoretical information. However, despite the amount of work published on the topic, maternal mortality continues to occur at high rates and solutions to the problem are still not clear. Scientific research on maternal mortality is focused mainly on clinical factors. However, this approach may not be the most useful if we are to understand the problem of maternal mortality as a whole and appreciate the importance of economical, political and social macrostructural factors. In this paper, we report the number of scientific studies published between 2000 and 2004 about the main causes of maternal death, as identified by WHO, and compare the proportion of papers on each cause with the corresponding burden of each cause. Secondly, we systematically review the characteristics and quality of the papers on the macrostructural determinants of maternal mortality. In view of their burden, obstructed labour, unsafe abortion and haemorrhage are proportionally underrepresented in the scientific literature. In our review, most studies analysed were cross-sectional, and were carried out by developed countries without the participation of researchers in the developing countries where maternal mortality was studied. The main macrostructural factors mentioned were socioeconomic variables. Overall, there is a lack of published information about the cultural and political determinants of maternal mortality. We believe that a high-quality scientific approach must be taken in studies of maternal mortality in order to obtain robust comparative data and that study design should be improved to allow causality between macrostructural determinants and maternal mortality to be shown.

Bulletin of the World Health Organization 2006;84:903-909.

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يمكن الاطلاع على الملخص بالعربية في صفحة 908.

Introduction

Much empirical and theoretical information exists on the various causes of maternal death. However, despite the amount of published work on this problem, maternal mortality remains high in many parts of the world and the solutions remain elusive.¹

Although almost all cases of maternal death are avoidable,¹ standard programmes to prevent deaths have not been effective in controlling the causes of maternal mortality. In 1998, the WHO Division of Reproductive Health stated that there had been little evidence of progress in the effort to reduce rates of maternal death.² Some authors disagree with current safe-motherhood strategies and have raised concerns that interventions are poorly implemented or lack an evidence base.^{3,4} In Africa, for example, there have been calls for further operational research to identify

and test promising safe-motherhood interventions, in particular interventions designed to reduce the high rate of maternal mortality associated with unsafe termination of pregnancy.⁵ Strategies to reduce maternal mortality have also been criticized on the grounds that the component programmes are based mostly on low-grade evidence derived from retrospective and observational studies, as well as on empirical knowledge or conclusions reached via deductive reasoning.⁶ A further problem is that most research is focused on providing evidence for clinical decision-making.⁷ This tactic needs to be reconsidered to fit with strategies at the population level since safe motherhood strategies require complex public health and multidisciplinary policy approaches.^{4,6}

In many countries, maternal mortality is the main cause of death in women of reproductive age.^{7,8} The severity of the problem has caused the United Nations

General Assembly to focus its attention on improving maternal health. The fifth Millennium Development Goal (MDG) is to reduce maternal mortality by three-quarters by 2015.⁹ Clearly, interventions in reproductive health are necessary if the burden of maternal mortality is to be alleviated.

To increase the likelihood of achieving a reduction in maternal deaths, WHO launched the Partnership for Maternal, Newborn and Child Health in September 2005. This collaboration between many academic and research institutions, governments, nongovernmental organizations, professional groups and health agencies aims to take immediate action to help women and children to survive.¹⁰ The importance of addressing maternal health with the same determination as that shown for child health and the influence of Goal 5 on the other MDGs are the key points of this partnership. WHO intends to

^a Preventive Medicine and Public Health, University of Alicante, Campus San Vicente del Raspeig, Ap. 99 C.P 03080, San Vicente del Raspeig (Alicante), Spain. Correspondence to Dr Gil-González (email: diana.gil@ua.es).

Ref. No. 05-029454

(Submitted: 26 December 2005 – Final revised version received: 27 June 2006 – Accepted: 29 June 2006)

prioritize maternal health¹⁰ and to raise awareness of the fact that maternal health interventions have not been implemented in countries where pregnancy and childbirth pose the greatest threats to women's health.¹

There is agreement that access to health services is essential if high rates of maternal death are to be reduced.¹¹ Nevertheless, a focus on only the clinical causes of maternal death may not be the most comprehensive perspective from which to understand the problem of maternal mortality since it largely ignores the macrostructural — i.e. the social, cultural, economic and political — determinants of health.^{12–15}

Some studies have noted the relation between maternal mortality and socioeconomic factors, such as income per capita, gross domestic product and educational level.^{16,17} However, less effort has been spent researching the influence of culture and political conditions on health — although it has been shown that political factors, such as democracy, have a positive effect on health indicators including maternal mortality.¹⁷ The United Nations Population Fund (UNPFA) has promoted the “three delays model,” a framework useful for identifying the stages at which delays can occur in the management of obstetric complications.¹⁸

There is concern that little research is done on diseases that affect people in developing countries.¹⁹ Health professionals and policy-makers from those countries may have difficulty in setting priorities²⁰ and also there is an increasing demand for research to be prioritized according to the prevalence of a health issue.²¹ Therefore, although all health problems that can cause a maternal death are important, not all the underlying causes of maternal mortality will attract the same amount of scientific interest.

As political decisions and best practice should be based on evidence, the lack of information and the quality of research on the macrostructural determinants of health could be a handicap. Consequently, the objectives of our study are: to quantify the amount of scientific interest in the main causes of maternal mortality and compare the proportion of papers on each cause with the corresponding burden of the cause; and to assess the characteristics and quality of papers on the macrostructural determinants of maternal mortality.

Methods

To measure the amount of scientific interest in the main causes of maternal death, we identified and counted all papers published between 2000 and 2004 that mentioned WHO-defined causes of maternal mortality.¹ The decision to start from 2000 was somewhat arbitrary and based on the idea of reviewing only recent data.

We searched several databases that covered the social and behavioural sciences, clinical medicine and life sciences: Medline, Science Citation Index, Institute for Scientific Information (ISI) Current Contents, the Cumulative Index to Nursing and Allied Health (CINAHL), PsycINFO EconLit, FRANCIS, Sociological Abstracts, and the Education Resources Information Center (ERIC). To identify the keywords, a thesaurus (such as MeSH) was consulted in all the databases. In the cases of the Science Citation Index and ISI Current Contents, which do not have a thesaurus, we used the search equation “maternal mortality AND [search term]” with the following search terms: haemorrhage, infection, eclampsia, pre-eclampsia, obstructed labour, unsafe abortion, AIDS, anaemia, malaria and cardiac disease. Duplicate papers in the databases were deleted.

To assess the characteristics of published work on macrostructural determinants of maternal mortality, we

undertook a systematic review of original research papers identified from the previously mentioned databases using the search term “maternal mortality.” We included all papers in any language published between 2000 and 2004 that mentioned any of the macrostructural determinants (social, cultural, economic and political factors) of maternal mortality in the title or abstract.

We excluded papers that dealt mainly with clinical issues such as obstetric interventions during and after delivery, the application of medical technologies, clinical trials of medicines, clinical practice guidelines, medical protocols from hospitals and primary health care centres, maternal health not associated with maternal mortality, pregnancy-related diseases (e.g. diabetes, high blood pressure, pre-eclampsia) and infant mortality. In addition, non-original papers such as theoretical reviews, book reviews, letters, editorials, summaries of conferences, historical papers and papers without abstract were excluded. After screening 2250 abstracts, we analysed the full text of all papers included in the final systematic review using a checklist to capture information about the papers (Box 1). To assess the level of agreement between the researchers who reviewed the papers, the codifiers and classifiers (MC and DG) independently analysed a sample of 10 papers: a high level of concordance was noted (kappa index = 88%).

Box 1. Checklist to assess characteristics and quality of articles on macrostructural determinants of maternal mortality

1. Country of origin of the authors.
2. Country or countries where research was set.
3. Quality of papers: by type of study design and the inclusion of the UNPFA^a “three delays model” variables in the different sections of the papers: introduction (I), methods (M) and results (R).
 - 3.1. Study design: cross-sectional, case-control, cohort, ecologic or qualitative.
 - 3.2. Inclusion of macrostructural determinants in the papers, which is related to the first step of the three delays model:
 - 3.2.1. Socioeconomic variables are included (yes/no) in the different sections (I,M,R) of the papers: income per capita, formal work of the woman, educational level of the woman and socioeconomic level.
 - 3.2.2. Cultural variables are included (yes/no) in the different sections (I,M,R) of the papers: cultural support and integration or cultural criticism.
 - 3.2.3. Political factors are included (yes/no) in the different sections (I,M,R) of the papers: community participation or political participation, or both.
 - 3.3. Inclusion in the different sections (I,M,R) of the papers of information about access to health services (distance between home-health care centre or transport facilities, or both) (yes/no). This variable is related to the second step of the three delays model.
 - 3.4. Health care and services variables are included (yes/no) in the different sections (I,M,R) of the papers: perinatal care, care at delivery, family planning and access to trained staff or traditional birth attendant, as non-exclusive categories.

^a UNPFA = United Nations Population Fund.

We calculated frequencies and percentages of the variables included in the review using SPSS 11 and MS Excel 2000 commercial software.

Results

We identified 1232 papers published between 2000 and 2004 about the main causes of maternal mortality. Table 1 shows the frequency distribution of published scientific articles by cause and compares this with the burden of each cause.¹ Articles on eclampsia or pre-eclampsia (28.25% of all scientific papers about causes of maternal death) and all indirect causes (26.71%) were over-represented when compared with the burden of these causes reported by WHO (12% and 20%, respectively). There is a lack of information about obstructed labour (2.51%) and unsafe abortions (3.73%) in light of their prevalence (8% and 13%, respectively). Information about haemorrhage is also slightly under-represented in the scientific literature (19.72% of papers but a burden of 25%). The proportion of papers on infection (18.26%) was similar to its prevalence as a cause of death (15%).

From 2000 to 2004, we identified 2250 papers on maternal mortality. However, after applying the exclusion criteria, only 27 papers were selected.²²⁻⁴⁸ These were studies focused on the possible relation between maternal mortality and socioeconomic, political and cultural factors.

Of the 2223 papers excluded, 842 (37.87%) were theoretical or were book reviews, letters, editorials, summaries of conferences, historical papers or papers without an abstract. Another 835 (37.56%) were excluded because they focused on evaluations of obstetric interventions during and after delivery, the application of medical technologies and clinical trials. Also excluded were papers on clinical practice guidelines and medical protocols from hospitals and primary health-care centres (9.71%), maternal health not associated with maternal mortality (9.35%), pregnancy-related disease (3.95%) and infant mortality (1.52%).

Of the 27 papers, 23 (85%) analysed the influence of macrostructural determinants on maternal mortality in developing countries: six papers reported findings from a group of developing countries,^{23,24,35,38,46,48} three reported data

Table 1. Causes of maternal death: frequency distribution of published scientific papers by cause and prevalence of cause of death

Cause of maternal death	Frequency of published papers on causes of maternal mortality ^{a,b} (n=1232)	Prevalence of cause %
Eclampsia/pre-eclampsia	348 (28.25)	12
Indirect causes	329 (26.71)	20
- AIDS	127 (10.31)	
- Anaemia	97 (7.87)	
- Malaria	83 (6.77)	
- Cardiac disease	22 (1.78)	
Haemorrhage	243 (19.72)	25
Infection	225 (18.26)	15
Obstructed labour	31 (2.51)	8
Unsafe abortion	46 (3.73)	13
Other direct causes	10 (0.81)	8

^a For work published between 2000 and 2004.

^b Figures in parentheses are percentages.

from Nigeria,^{29,31,44} two from Uganda,^{30,32} two from Zambia,^{22,25} and there was one paper from each on Afghanistan,³⁴ Bangladesh,⁴³ Cambodia,²⁷ Guatemala,⁴⁸ Guinea Bissau,²⁸ India,⁴⁵ Indonesia,²⁶ Mexico,³⁹ Mozambique³⁷ and the United Republic of Tanzania.³³ However, controversially, 70% of the studies¹⁹ were done by scientists from developed countries: 10 from the USA,^{24,27,29,34-37,40,41,43} four from the United Kingdom,^{38,44-46} two from Japan,^{23,26} and one each from Denmark,²⁸ the Netherlands²⁵ and Sweden.⁴⁸

With respect to the study design of papers on macrostructural determinants of maternal mortality, 17 of the 27 papers were cross-sectional (63%);^{22,24,25,29-35,37,41-46} there were three case-control studies (11%),^{26,36,40} one cohort study (4%),²⁸ three ecological studies (11%)^{23,38,47} and three qualitative studies (11%).^{22,39,48}

Table 2 shows where in the 27 papers macrostructural determinants and accessibility to health care and services were mentioned. Socioeconomic status was mentioned in 18 introduction sections (67%),^{23-26,31,34-37,39,40,42-48} 18 methods sections (67%)^{22-24,26,27,31-35,39,40,43-48} and 16 results sections (59%).^{24-26,31-35,37,40,42-48} Educational level of the woman was considered in six introduction sections (22%), 12 methods sections (44%) and 16 results sections (59%). One study⁴⁷ considered political stability as a factor that might influence rates of maternal death. Research on the effect of culture on maternal mortality was rare (nine from 27 papers). Furthermore,

messages from these nine papers were contradictory — some supported the local culture and proposed integration with the official health system while other papers criticized the local culture as a risk factor in maternal mortality.

Mention of attendance by a traditional birth attendant appears in 12 results sections (44%) but in only seven (26%) methods sections. Accessibility of health-care centres shows similar results: although the problem of distance between a woman's home and the health-care centre is mentioned in 11 results sections (41%), this variable is only included in only three methods sections (11%).

Few studies have been found about the relationship between macrostructural determinants of maternal mortality and health care and services. The clinical variables that are most often mentioned in the results section of papers about macrostructural determinants of maternal mortality are care during delivery ($n = 12$ [44%])^{24,26,32,34,35,37,40,42-45,47} and perinatal care ($n = 11$ [41%]).^{24,27,29-32,34,35,42,43,45}

Discussion

In our review of published articles on maternal mortality, we found that reports on obstructed labour, unsafe abortion and haemorrhage are under-represented in the scientific literature. This finding suggests that there may be an inverse scientific interest pattern — understood as a knowledge-base gap — between the burden of the causes of maternal mortality and scientific interest in these determinants. Furthermore, we noted

that research concentrates on clinical issues rather than on the social, economic and political factors that may affect rates of maternal death, as shown by the number of papers excluded. Most studies analysed were carried out by researchers from developed countries without the participation of the developing countries where maternal mortality was studied. There is also a lack of information about the cultural and political determinants of maternal mortality. Moreover, research on maternal mortality lacked robust methodological design and we believe that the quality of such research needs to be improved to produce knowledge about macrostructural causes of maternal mortality.

Limitations

Since the mention of macrostructural variables was the main criterion for inclusion in our review, some important papers may have been overlooked given that clinical papers were excluded. For example, pregnancy-related studies in which economic, social and political aspects are not mentioned in the abstract but are considered later in the article would not have been included in our study. Another factor which may have affected the completeness of our review is that not all research papers on maternal mortality are published in scientific journals; such work also appears in institutional and nongovernmental organization reports.⁴⁹ Furthermore, the difficulties encountered in obtaining data from developing countries with high rates of maternal deaths limit the quantity and quality of scientific results emerging from these countries. Overall however, the small number of papers finally selected for the review reflects the near-absence of scientific studies on the relation between maternal mortality and macrostructural determinants; it also restricts our ability as researchers to draw meaningful conclusions about the nature of work on the topic. One strength of the review, however, is that inter-reviewer agreement was strong, as shown by the kappa index.

Cultural skews

The fact that more than two-thirds of the studies were carried out by researchers from the developed world without the participation of the developing countries could be problematic. Work by researchers from developing countries is underrepresented in health research: data

Table 2. Inclusion of macrostructural determinants and health care and health services variables in introduction, methods and results sections of papers on macrostructural determinants of maternal mortality^a

	Mention of macrostructural determinant ^b		
	Introduction	Methods section	Results
First step of three delays model			
Macrostructural determinant			
Socioeconomic variable			
- Income per capita	3 (11)	4 (15)	5 (19)
- Formal work of the woman	1 (4)	4 (15)	5 (19)
- Educational level of woman	6 (22)	12 (44)	16 (59)
- Socioeconomic level	18 (67)	18 (67)	16 (59)
Cultural variable			
- Cultural support and integration	5 (19)	3 (11)	3 (11)
- Cultural criticism	4 (15)	3 (11)	3 (11)
Political variable			
- Political variable	1 (4)	1 (4)	1 (4)
Second step of three delays model			
Accessibility of health centres			
- Distance	0	3 (11)	11 (41)
- Transport	0	0	1 (4)
- Health care access	0	8 (30)	11 (41)
Third step of three delays model			
Health care and health services			
- Perinatal care	13 (48)	10 (37)	11 (41)
- Care at delivery	10 (37)	9 (33)	12 (44)
- Family planning	6 (22)	3 (11)	5 (19)
- Accessibility to trained staff	0	8 (30)	11 (41)
- Traditional birth attendant	9 (33)	7 (26)	12 (44)

^a Papers published between 2000 and 2004.

^b Figures in parentheses are percentages.

from the developing world are mostly obtained by researchers with resources and values from developed countries.⁵⁰ Enabling developing countries to play a leading role in the study of their maternal diseases and health contexts seems crucial if changes to health status are to be achieved. The involvement of workers from the countries themselves may also result in more work being produced on high prevalence factors in maternal mortality, such as obstructed labour, unsafe abortion and haemorrhage. Policy-makers and health professionals — including traditional health-care staff — should be able to access information and be involved in the process of generating and disseminating information that contributes to best practice and political decisions related to women's health.

The failure of some health strategies in developing countries could be related to a lack of knowledge about the cultural and political structures of such countries: this problem might have been the reason behind the lack of success resulting from

some initiatives implemented in the 1990s.¹¹ Although maternal mortality ratios have decreased in some countries such as El Salvador, Ethiopia, Honduras, Mozambique and Uganda, they have increased in other places, including Guatemala, Nicaragua and Pakistan, despite the measures taken.¹¹ In particular, the lack of involvement of the local culture in the implementation of health strategies may not have had a positive effect on maternal mortality.

An integrated approach

The clinical model of reinforcing health services and trained staff may not be enough to solve the problem of maternal mortality.¹⁶ Our review of the literature shows that the effects of cultural and political issues on maternal mortality are largely ignored. However, political variables, such as democracy, have been shown to have an important influence on health indicators such as maternal mortality ratio.¹⁷ This means that in some contexts characterized by chronic

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poverty, researchers are not considering the complete set of determinants that may affect rates of maternal deaths. Gender equity and traditional culture^{23-26,31-34,37,40,42-47} must be taken into account to improve maternal health. For instance, it could be interesting to use the three delays model as a research tool to allow macrostructural factors and health factors to be integrated into one analysis.¹⁸

Obtaining information about the relation between maternal mortality and the coordination of the different institutional levels is also an important factor in measuring the real magnitude of maternal mortality. In the case of death directly related to the distance between women's homes and health-care centres, it is not only health-care institutions that should be examined, but also other factors such as infrastructure, transport and social services. All relevant govern-

mental departments, not only health, should also be involved in tackling the problem.⁹

Recommendations for the future

Most studies of maternal mortality focus on clinical factors. However, the lack of new knowledge and the poor quality of macrostructural determinants of these maternal mortality studies affect policy-makers and health professionals.^{4,12} As it is recommended that political decisions be based on scientific evidence, scientific literature on maternal mortality should be re-examined carefully before putting reproductive health policies into practice and the number of studies on such macrostructural variables must be increased. Furthermore, the problem of maternal mortality must be understood as a whole. We must look beyond the difficulties that pregnant women may face in accessing health services to develop a

broader framework that includes socio-cultural and political contexts as well as other structural boundaries such as access to health services. Furthermore, a high-quality scientific perspective must be achieved to obtain robust comparative data and study designs should be improved to allow causality to be proven. In addition to these changes, papers should be written so that the information is presented with coherence between the different sections of the paper.

Finally, to tackle the issue of maternal mortality, a new perspective based on identification of new information sources in different environments is required. This could be achieved by not only taking into account information from public and private health services, but also by looking at the community's own experiences. ■

Competing interests: none declared.

Résumé

Lacunes de la littérature scientifique sur la mortalité maternelle mises en évidence par une revue systématique de cette littérature

Une grande quantité de données empiriques et théoriques ont été rassemblées sur les problèmes liés à la mortalité maternelle. Cependant, malgré le volume de travaux publiés à ce sujet, les taux de mortalité maternelle se maintiennent à des niveaux élevés et il n'existe guère de solutions claires à ce problème. La recherche scientifique dans ce domaine est axée principalement sur les facteurs cliniques. Cependant, cette approche n'est peut-être pas la plus utile si le problème de la mortalité maternelle n'est pas appréhendé dans son ensemble et si l'importance des facteurs macrostructurels économiques, politiques et sociaux n'est pas dûment prise en compte. Le présent article recense le nombre d'études scientifiques publiées entre 2000 et 2004 sur les causes principales de décès maternel selon l'OMS et compare la proportion d'articles consacrés aux différentes causes à la charge de mortalité associée à ces causes. Par ailleurs, il analyse de manière systématique les caractéristiques et la qualité des articles portant sur les déterminants macrostructurels de la mortalité maternelle.

Par comparaison avec la charge de mortalité qu'elles entraînent, les causes de mortalité maternelle suivantes sont proportionnellement sous-représentées dans la littérature scientifique : dystocies, avortements non médicalisés et hémorragies. La plupart des études que nous avons analysées sont transversales et ont été réalisées par des pays développés sans la participation de chercheurs des pays en développement servant de cadres à ces études. Les principaux facteurs macrostructurels mentionnés étaient des paramètres socioéconomiques. Globalement, la littérature publiée ne traite pas suffisamment des déterminants culturels et politiques de la mortalité maternelle. Nous pensons qu'il est nécessaire, pour étudier la mortalité maternelle, d'appliquer une démarche scientifique rigoureuse afin d'obtenir des données solides et comparables, et d'améliorer la conception des études pour mettre en évidence les relations de causalité entre les déterminants macrostructurels et la mortalité maternelle.

Resumen

Lagunas en las publicaciones científicas sobre la mortalidad materna: revisión sistemática

Los temas relacionados con la mortalidad materna han generado abundante información empírica y teórica. Sin embargo, pese a los muchos trabajos publicados sobre el tema, las tasas de mortalidad materna siguen siendo altas, y las soluciones a este problema siguen también sin estar claras. Las investigaciones científicas sobre la mortalidad materna se centran principalmente en los factores clínicos. Sin embargo, puede que este enfoque no sea el más conveniente para lograr comprender el problema de la mortalidad materna en su globalidad y apreciar la importancia de los factores macroestructurales de índole económica, política y

social. En este artículo analizamos el número de estudios científicos publicados entre 2000 y 2004 sobre las causas principales de mortalidad materna según la OMS, comparando la proporción de artículos sobre cada causa con la carga correspondiente a la misma. En segundo lugar, examinamos sistemáticamente las características y la calidad de los artículos sobre los determinantes macroestructurales de la mortalidad materna. A la vista de la carga que representan, el parto obstruido, el aborto peligroso y la hemorragia están subrepresentados proporcionalmente en la bibliografía científica. En nuestra revisión, la mayoría de los

estudios analizados eran transversales, y habían sido realizados por países desarrollados sin la participación de investigadores de los países en desarrollo donde se estudió la mortalidad materna. Los principales factores macroestructurales mencionados eran variables socioeconómicas. En términos generales, se observa una escasez de publicaciones sobre los determinantes culturales

y políticos de la mortalidad materna. Consideramos que los estudios sobre ésta deben adoptar un enfoque científico de calidad que permita obtener datos robustos y comparables, y que el diseño de esos estudios debe mejorarse para poner de manifiesto las relaciones de causalidad entre los determinantes macroestructurales y la mortalidad materna.

ملخص

فجوات معرفية في النشريات العلمية حول وفيات الأمهات: مراجعة منهجية

فعلى ضوء ما يليق المخاض المتعسر والإجهاض المحفوف بالمخاطر والنزوف من أعباء، فإنها تبدو أقل تمثيلاً في النشريات العلمية. ومن وجهة نظرنا فإن معظم الدراسات التي خضعت لتحليلنا كانت مستعرضة (شاملة للقطاعات)، وقد أُجريت في بلدان متقدمة دون مساهمة باحثين من البلدان النامية التي أُجريت دراسة وفيات الأمهات فيها. أما ما يتعلق بالبنية الإجمالية من عوامل فأكثرها ذكراً كان المتغيرات الاقتصادية والاجتماعية. وبالإجمال، كان هناك نقص في المعلومات المنشورة حول المحددات الثقافية والسياسية لوفيات الأمهات. ويعتقد أنه ينبغي اتباع أسلوب علمي رفيع الجودة عند إجراء دراسات حول وفيات الأمهات، لضمان الحصول على معطيات رصينة يمكن مقارنتها بغيرها، كما ينبغي تحسين تصميم الدراسة بحيث تسمح بإظهار العلاقة السببية بين محددات البنية الإجمالية ووفيات الأمهات.

أدت القضايا المتعلقة بوفيات الأمهات إلى الكثير من المعلومات النظرية والتجريبية، ورغم المقدار الكبير من الأعمال المنشورة حول هذه المواضيع، لاتزال وفيات الأمهات تحدث بمعدلات مرتفعة، ولاتزال الحلول بعيدة المنال: فالبحوث العلمية حول وفيات الأمهات تتركز بشكل رئيسي على العوامل السريرية (الإكلينيكية)؛ وقد لا يكون هذا الأسلوب أكثر الأساليب نفعاً إذا ما أردنا فهم مشكلة وفيات الأمهات مجملها، وإذا ما أردنا تقدير أهمية العوامل الاقتصادية والسياسية والبنية الإجمالية للمجتمع. وقد سجلنا في هذا التقرير عدد الدراسات العلمية التي نشرت في الفترة بين عامي 2000 و2004 حول الأسباب الرئيسية لوفيات الأمهات، كما عرّفنا منظمة الصحة العالمية، وقارناً نسبة المقالات التي كُتبت حول كل سبب مع العبء الذي يليه ذلك السبب. والأمر الثاني أننا أجرينا مراجعة منهجية لخصائص وجوده المقالات حول ما للبنية الإجمالية من محددات تؤثر على وفيات الأمهات.

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