

Girls from Santa Catarina: losing your life to become a mother

MENINAS CATARINAS: A VIDA PERDIDA AO SER MÃE

NIÑAS DE SANTA CATARINA: LA VIDA PERDIDA AL SER MADRE

Maria de Lourdes de Souza¹, Diego Burgardt², Luiz Alberto Peregrino Ferreira³, Maria Bettina Camargo Bub⁴, Marisa Monticelli⁵, Haimée Emerich Lentz⁶

ABSTRACT

The Maternal Mortality Ratio (MMR) is an indicator that analyses the life conditions and care given to pregnant women, and indicates whether the constitutional rights related to life and health are being complied with. This study shows losses of lives among adolescent women associated with pregnancy, childbirth and the puerperal period, in the state of Santa Catarina between 1994 and 2005. It is an exploratory study of a quantitative nature. There were 72 maternal deaths in adolescents, 67% had a direct obstetric cause, 23% had an indirect obstetric cause and about 9% were classified as accidental or incidental. The Maternal Mortality Ratio in adolescents was high and most could have been prevented and its causes controlled. The identified situation shows an absence of quality health care. To reduce these deaths it is central that nursing action be combined with other professionals and other organized sectors of society.

KEY WORDS

Adolescent.
Maternal mortality.
Nursing care.

RESUMO

A razão da mortalidade materna é um indicador para análise das condições de vida e de assistência prestada à mulher, e instrumento para avaliar o cumprimento dos direitos constitucionais relativos à vida e à saúde. Esta pesquisa demonstra a vida perdida de mulheres adolescentes associadas à gestação, parto e puerpério, em Santa Catarina, no período de 1994-2005. Trata-se de um estudo exploratório quantitativo. Encontrou-se no período 72 mortes maternas em adolescentes, sendo que 67% foram obstétrica direta, 23% obstétrica indireta e 9% acidentais e incidentais. A razão da mortalidade materna entre adolescentes foi elevada e a maioria dos óbitos poderia ter sido evitada, pois existem recursos técnicos para prevenir e controlar suas causas. A situação identificada demonstra a ausência de assistência de qualidade. Para reduzir estas mortes é fundamental o cuidado de enfermagem, numa ação articulada com outros profissionais e diferentes segmentos organizados da sociedade.

DESCRIPTORIOS

Adolescente.
Mortalidade materna.
Cuidados de enfermagem.

RESUMEN

La Tasa de Mortalidad Materna (MMR, según siglas en inglés) es un indicador para el análisis de las condiciones de vida y cuidados prestados a la mujer, y sirve como instrumento para evaluar el cumplimiento de los derechos constitucionales relacionados con la vida y la salud. Esta investigación analiza las defunciones de mujeres adolescentes por causas asociadas a la gestación, parto y puerperio, en el Estado de Santa Catarina (Brasil) durante el período 1994-2005. Se trata de un estudio exploratorio de naturaleza cuantitativa. Se detectaron en dicho periodo 72 muertes maternas en adolescentes, siendo 67% del tipo obstétricas directas, 23% obstétricas indirectas y 9% accidentales e incidentales. La Tasa de Mortalidad Materna entre adolescentes presentó valores elevados y la mayoría de las muertes podría haber sido evitada, siendo que existen recursos técnicos para prevenir y controlar las causas determinadas. Para reducir estas muertes, la atención de enfermería es fundamental, en acciones coordinadas con otros profesionales y diferentes segmentos organizados de la sociedad.

DESCRIPTORIOS

Adolescente.
Mortalidad materna.
Atención de enfermería.

¹ Nurse. PhD in Public Health by the School of Public Health at University of São Paulo. Faculty of the Nursing Graduate Program at Federal University of Santa Catarina. Member of the Research Group *Caring and Comforting* (Grupo de Pesquisa Cuidando e Confortando). Vice-presidente of the State of Santa Catarina Committee for Mother Mortality. General Coordinator of the Network for the Promotion of Nursing Development. Florianópolis, Santa Catarina, Brazil. lourdesr@repensul.ufsc.br, repensul@uol.com.br ² MD. Graduated by Federal University of Santa Catarina. Former grant holder with the Adolescent Mortality Project developed by the State of Santa Catarina Committee for Mother Mortality. Florianópolis, Santa Catarina, Brazil. diego_burgardt@yahoo.com.br ³ Faculty of the Department of Clinical Analyses at Federal University of Santa Catarina. Student of the Doctoral Program at Federal University of Santa Catarina. Florianópolis, Santa Catarina, Brazil. lulaperegrino@yahoo.com.br ⁴ Nurse. Master and Doctorate degrees in Nursing by the Federal University of Santa Catarina. International doctoral studies at University of Linköping, Sweden. Faculty and Coordinator of International Exchange Programs and Agreements of the Nursing Graduate Program at Federal University of Santa Catarina. Leader of the Center for Studies in Philosophy and Health. Florianópolis, Santa Catarina, Brazil. vito@unetsul.com.br ⁵ Nurse. PhD in Nursing. Faculty of the Nursing Department and Nursing Graduate Program at Federal University of Santa Catarina. Vice-leader of the Group for Research on the Health of Women and Newborns. Florianópolis, Santa Catarina, Brazil. marisa@nfr.ufsc.br ⁶ Nurse. Master in Public Health. President of the State of Santa Catarina Committee for Maternal Mortality. Florianópolis, Santa Catarina, Brazil. haimeelentz@hotmail.com

INTRODUCTION

Health indicators are evaluation instruments used to obtain data about the health attributes and dimensions of a given population.

The Maternal Mortality Ratio (MMR) is an indicator of which analysis reveals women's accessibility to health care services, the risks associated with pregnancy and delivery, and the adequacy of the health care system in meeting women's needs. In other words, it demonstrates the women's social and economic conditions⁽¹⁾. The MMR is obtained by dividing the number of maternal deaths by the number of live births in a given period, multiplied by 100,000⁽¹⁾.

Ideally, the MMR denominator should be the number corresponding to pregnant women. However, since there is insufficient data regarding miscarriages/abortions and stillbirths, and as the number referring to live births (LB) is regularly included in life record systems, the latter is used as an approximation of the number of pregnant women.

To determine the MMR, clear definitions regarding maternal death and live births should be established. According to the 10th review by the International Classification of Diseases (ICD-10), maternal death refers to the death of a woman during pregnancy or in the puerperium (42-days period following delivery), regardless of the duration and location of the pregnancy, or the cause being associated with or worsened by the pregnancy or by the measures taken due to the pregnancy, excluding accidental or incidental causes⁽²⁻³⁾.

Maternal deaths are classified as direct obstetric deaths and indirect obstetric deaths⁽³⁾. Direct obstetric deaths result from complications in the pregnancy, delivery or puerperium, interventions, omissions, incorrect treatments or a chain of events that originates in one of the previous situations, and are the main cause of maternal death in developing countries. Examples include: hemorrhage, puerperal infections and hypertension⁽³⁾. Indirect obstetric deaths occur due to diseases that existed before or appeared during pregnancy and worsened throughout the process, such as heart diseases, collagenosis, diabetes, hormonal-dependent neoplasms and other chronic diseases⁽³⁾.

Accident-related (traffic accidents and homicides) and incident-related causes (acute appendicitis during pregnancy) comprise a group of deaths referred to as non-obstetric⁽³⁾.

The International Federation of Gynecology and Obstetrics (FIGO) recommends considering maternal deaths as all deaths that occur within 42 days after completing the pregnancy, regardless of their causes, and all deaths occurring within one year after delivery, in cases when it is possible to identify that the pregnancy was the triggering process.

The second definition is that of live births (LB):

[...] the complete expulsion or extraction from the mother of a baby, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live Born⁽²⁾.

The MMR should be closer zero; which would imply that pregnancy - a predictable and controlled phenomenon, exclusive to women, which has a known duration and available technological support in several medical areas - would actually be receiving appropriate care. There are, however, aspects that cannot be disregarded, which refer to the inevitable causes of death and the whole social process in which those women live (life conditions, quality and accessibility of health services), all of which interfere in the MMR.

The World Health Organization (WHO) estimated the occurrence of 529,000 maternal deaths in 2000 in the world, and that every minute approximately one woman in the pregnancy-puerperal cycle loses their life. In Brazil the estimate was of 8,700 maternal deaths⁽¹⁾.

In Brazil, maternal deaths among adolescents, women of ages between 10 and 19 years, reflects the social inequities in the country, such as the low value attributed to women. Furthermore, for each death several other death risk situations, with possible permanent sequelae, remain completely unknown.

Both international and national contexts motivated the Brazilian government towards making efforts to comply with specific commitments of protecting women's health and human rights. One example is the "National Agreement for the Reduction of Maternal and Neonatal Death" (*Pacto Nacional de Redução da Morte Materna e Neonatal*), in 2004⁽⁴⁾.

The panorama presented herein justifies performing studies on maternal mortality, with the purpose of reducing its rates.

OBJECTIVE

To demonstrate the deaths of adolescent women associated with pregnancy, delivery and the puerperium in the State of Santa Catarina, from 1994 to 2005.

METHOD

This is an exploratory quantitative study, comprising a ten-year history from 1994 to 2005. This study refers to the deaths of adolescent women, registered in the different regions of Santa Catarina state. The regions were grouped according to that presented in the United Nations Development Programme (UNDP): North, Itajaí Valley, Greater Florianópolis, South, Highlands and West. Each region was

divided into its respective micro-regions and the municipalities comprising each region were identified⁽⁵⁾.

Data collection was performed using the following systems: The Brazilian Institute of Geography and Statistics (IBGE, abbreviation in Portuguese)⁽⁶⁾; Mortality Information System (SIM, abbreviation in Portuguese)⁽⁷⁾; Live Births Information System (SINASC, abbreviation in Portuguese)⁽⁸⁾; Investigation Forms of the state of Santa Catarina Maternal Mortality Committee – State Department of Health.

Once the quantitative studies were performed, the data were grouped according to the cause of death. The ninth ICD was used to perform the referred grouping for the 1994-1996 data analysis, and the 10th ICD⁽²⁾ was used for the other years. Data was systematized using an electronic spreadsheet designed specifically for this purpose. For each region, considering the same period, the maternal mortality ratio (MMR) was obtained by dividing the number of maternal deaths by the number of live births, multiplied by 100,000.

The causes of maternal death were classified as direct obstetric deaths (hemorrhage, infection, toxemia or others), indirect obstetric deaths, and accidental or incidental deaths. Before being performed, the study was presented to the Ethics Committee at Federal University of Santa Catarina, in compliance to Resolution 196/1996 of the Ministry of Health⁽⁹⁾, and approved as per protocol number 213/2005. The study was also approved and funded by The State of Santa Catarina Scientific and Technological Research Foundation - FAPESC (*Fundação de Apoio à Pesquisa Científica e Tecnológica do Estado de Santa Catarina*), under Process number 03/2004 and Contract number 14794/2005-0.

RESULTS

In the state of Santa Catarina, in 2005, the estimated population was 5,866,590, consisting of 2,944,728 women, 571,625 of which were adolescents, with ages between 10 and 19 years. Table 1 shows the distribution of the adolescent female population by region and their percentage distribution. Proportionally, per region, percentages range between 19.96 in the South to 18.84% in the Itajai Valley Region.

Table 1 - Adolescent female population per region in the state of Santa Catarina, in 2005

| Region | Adolescents | | Female Population |
|-----------------------|----------------|---------------|-------------------|
| | N | % | N |
| Greater Florianópolis | 87,892 | 18.85% | 466,358 |
| North | 111,924 | 19.61% | 570,671 |
| West | 113,862 | 19.76% | 576,302 |
| Highlands | 41,589 | 19.86% | 209,449 |
| South | 89,223 | 19.96% | 447,045 |
| Itajai Valley | 127,135 | 18.84% | 674,903 |
| Total | 571,625 | 19.41% | 2,944,728 |

In 2005, in the state of Santa Catarina, there were 15,616 registered live births, children of adolescent mothers, corresponding to 18.47% of the total number of registers. Proportionally, per region, percentages range between 24.90% in the Highlands and 15.71% in the Itajai Valley Region (Table 2).

Table 2 - Live births, children of adolescent women per region in the state of Santa Catarina, in 2005

| Regions | Adolescents | | Total |
|-----------------------|---------------|---------------|---------------|
| | N | % | N |
| Greater Florianópolis | 1,994 | 16.33% | 12,210 |
| North | 3,242 | 18.13% | 17,884 |
| West | 3,486 | 20.83% | 16,732 |
| Highlands | 1,610 | 24.90% | 6,466 |
| South | 2,264 | 18.84% | 12,019 |
| Itajai Valley | 3,020 | 15.71% | 19,227 |
| Total | 15,616 | 18.47% | 84,538 |

In the period ranging from 1994 to 2005, there were 72 maternal deaths among adolescents. Figure 1 shows that the highest rate of adolescent maternal deaths occurred in the Highlands Region, with 26.4% of the cases, and the smallest rate was 3.4% in the Greater Florianópolis Region.

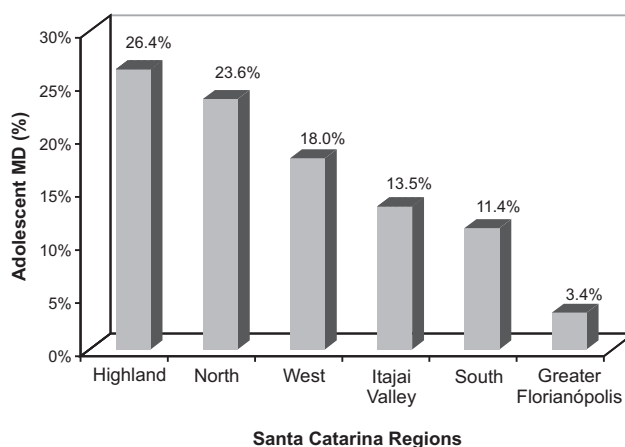


Figure 1 - Percentage of maternal deaths among adolescents per region, in the state of Santa Catarina, in the period from 1994 to 2005

Table 3 lists the maternal deaths among adolescents in the state of Santa Catarina, according to the type of death, in the period from 1996 to 2005. Sixty-four deaths were registered in the referred period, 67.18% of which were direct obstetric deaths, 23.43% indirect obstetric, and 9.37% were accidental and incidental deaths.

Most of the adolescent maternal deaths presented in Table 3 had causes associated to delivery and puerperium.

Table 3 - Adolescent maternal deaths according to the type of cause, in the regions of Santa Catarina, in the period from 1996 to 2005

| Type of cause | Greater Florianópolis | North | West | Highlands | South | Itajai Valley | Total | |
|---------------------------|-----------------------|-----------|-----------|-----------|----------|---------------|-----------|----------------|
| | | | | | | | N | % |
| Direct obstetric | 1 | 12 | 10 | 10 | 5 | 5 | 43 | (67.18) |
| Hemorrhage | 0 | 1 | 1 | 3 | 2 | 2 | 9 | (14.06) |
| Toxemia | 1 | 6 | 4 | 4 | 0 | 2 | 17 | (26.56) |
| Infection | 0 | 4 | 3 | 1 | 2 | 0 | 10 | (15.62) |
| Other direct causes | 0 | 1 | 2 | 2 | 1 | 1 | 7 | (10.93) |
| Indirect obstetric | 0 | 2 | 6 | 0 | 2 | 5 | 15 | (23.43) |
| Unrelated | 0 | 2 | 2 | 1 | 1 | 0 | 6 | (9.37) |
| Total | 1 | 16 | 18 | 11 | 8 | 10 | 64 | |

The MMR in adolescents, by regions in the state of Santa Catarina, in the period from 1994 to 2005, is shown in Table 4. The Highlands, in the years of 1994, 1995, 1996, 1997

and 2004 was the region with the highest MMR. In the analyzed period, Greater Florianópolis was the region with the lowest MMR.

Table 4 - Maternal Mortality Ratio in adolescents, by region in the state of Santa Catarina, in the period from 1996 to 2005

| Regions Year | Greater Florianópolis | Itajai Valley | North | West | Highlands | South | Total |
|--------------|-----------------------|---------------|--------------|--------------|--------------|--------------|--------------|
| 1994 | 0.00 | 38.54 | 0.00 | 29.10 | 57.50 | 0.00 | 15.24 |
| 1995 | 0.00 | 27.09 | 25.46 | 21.17 | 98.04 | 0.00 | 27.67 |
| 1996 | 0.00 | 0.00 | 25.00 | 20.25 | 94.47 | 35.42 | 29.33 |
| 1997 | 0.00 | 26.41 | 47.03 | 43.09 | 93.41 | 35.04 | 50.18 |
| 1998 | 0.00 | 0.00 | 50.24 | 83.95 | 0.00 | 68.56 | 49.73 |
| 1999 | 0.00 | 0.00 | 96.88 | 45.31 | 0.00 | 0.00 | 38.42 |
| 2000 | 0.00 | 26.41 | 0.00 | 21.69 | 52.38 | 69.98 | 25.41 |
| 2001 | 0.00 | 28.71 | 56.10 | 48.54 | 53.56 | 37.33 | 38.74 |
| 2002 | 0.00 | 60.48 | 30.72 | 51.64 | 56.85 | 0.00 | 35.19 |
| 2003 | 0.00 | 95.82 | 32.71 | 0.00 | 59.74 | 41.53 | 37.63 |
| 2004 | 48.38 | 63.01 | 62.74 | 83.19 | 169.59 | 0.00 | 68.38 |
| 2005 | 0.00 | 0.00 | 30.85 | 28.69 | 0.00 | 0.00 | 12.81 |
| Total | 3.64 | 29.07 | 39.39 | 39.88 | 61.42 | 25.24 | 35.14 |

Table 4 reveals the irregular MMR values in the different regions. The Highlands presented the highest values and the greatest irregularity. A regular tendency for MMR was observed in Greater Florianópolis, except for the year of 2004, whereas in the other regions there was an irregular tendency in the whole period analyzed.

DISCUSSION

Despite the fact that the regions of Santa Catarina have a similar number of adolescent women, there are different magnitudes of live births, children of adolescent mothers. The percentages of live births, children of adolescent mothers, found in the state of Santa Catarina, particularly in the Highlands (24.90%), are close to those found for Brazil in 2001, which were of about 23.3%⁽⁷⁻⁸⁾.

In Santa Catarina, 2005, the total percentage of LB records was 18.47%, which is similar to the findings found in other states of Brazil and the world, although the present study did not consider the total number of deliveries, i.e., still births were not included. In the municipality of Ribeirão Preto (São Paulo state), in the period from 1992 to 1996, a study showed that 16.6% of the deliveries occurred in adolescents⁽¹⁰⁾. In the state of Minas Gerais, in 2001, the estimated percentage of LB, children of adolescent mothers, was 21.5%⁽¹¹⁾. In the year 2000, the percentage of LB, children of adolescent mothers, was 22% in the United States, 15% in England, 11% in Canada, 6% in France, and 4% in Sweden⁽¹²⁾.

The percentage of maternal deaths in adolescents in the state of Santa Catarina, in a study that analyzed the data for years 1980 to 1998, was 13.3%⁽¹³⁾. In the present study the percentage differences observed in adolescent mater-

nal deaths in all regions may indicate differences in the quality of the existing health services. The highest percentage of deaths occurred in the Highlands, in which the risk of adolescent death associated to pregnancy, delivery and puerperium is eight fold that of Greater Florianópolis, where the state capital is located. This information confirms the importance of the MMR as an indicator of the quality of the health care delivered to the population⁽¹⁾.

The irregular MMR values found in the regions of Santa Catarina indicate that adolescents receive inefficient health care. There is no system to follow adolescent pregnancy. In addition, the reference and counter-reference system does not identify the risk of the pregnancy, delivery and puerperium in adolescents due to a lack of planning and the abandonment of pregnant women at this age.

It should not be disregarded that the Child and Adolescent Statute and the Federal constitution determine that the State is responsible for assuring the right to life and health with absolute priority. Therefore, adolescent maternal death also indicates the failure of complying with that responsibility⁽¹⁴⁾.

In the present study, the data regarding MMR are similar to that found for capital cities in Brazil, ranging from 42 per 100,000 LB in the South, to 73.2 per 100,000 LB in the Northeast⁽¹⁵⁾, with a national rate of 54.3 per 100,000 LB.

The causes found for maternal deaths among adolescents in the regions of Santa Catarina, in the period from 1996 to 2005 were mostly associated with obstetric complications in pregnancy, delivery or puerperium, indicating once again the deficiencies of health care services. About 90% of those deaths could be avoided with simple measures, such as having adequate prenatal care to prevent pregnancy toxemia, or through preventive practice in cases of puerperal infection or hemorrhage^(3, 16).

The data found in this study are similar to that of previous research, such as one performed in the city of Campinas (São Paulo state), with 85.5% of maternal deaths being direct obstetric⁽¹⁷⁾. Another study on maternal deaths in Brazilian capital cities reported a rate of 67.7%⁽¹⁵⁾.

Studies on adolescent mortality in Brazil could help reduce the impact of a problem with such magnitude. Data records, analyses and the resulting inferences are information that makes it possible to design public health policies, thus meeting the needs of the population.

In this context, nursing care should be incorporated in the strategy aiming at reducing adolescent mortality, with actions in the areas of health care services, data registering, investigation of deaths, data collection and interpretation, as well as in proposing policies for health care and education⁽¹⁶⁾.

As for the *girls from Santa Catarina*, who lose their lives in their wish to become a mother, there is still much to be learned. That is because a girl is not born a woman; she

becomes a woman⁽¹⁸⁾. One of the bridges to becoming a woman in the society is maternity. Therefore, "girls" are acknowledged as women by their family or in the general society. The girls show that their wish arises and overcomes reasoning, and that includes the norms of society, religion, family, and health services.

To analyze the lives of adolescent women that are lost and the causes associated with pregnancy, delivery and puerperium in the state of Santa Catarina, in the period from 1994 to 2005, is an alert to health care professionals learn to join forces among each other and with the society, in a practice in which knowledge becomes wisdom for living. Adolescents should not have to lose their lives when offering another life to society. Girls have the right to becoming a woman-mother, adult, even if being socially dependent. The Brazilian legislation determines that the public power must assure, with absolute priority, the compliance to the rights to life and health, among others^(4,14).

Therefore, health care professionals must also contribute to complying with legislation, learning to learn about life in society and, nursing, in particular, to show on a daily basis the importance of nursing care in the inexorable human duality – living and dying.

CONCLUSION

The information presented herein is sufficient to direct the definition of public policies aimed at adolescents, and should be used to validate the actions of planning and education with a view to reducing the risks of mortality in adolescents, associated with pregnancy, delivery or puerperium.

Health institutions, in the national, state, or municipal domains should work together and articulate, as a network, in which all programs are integrated. That is how it should be, for instance, with the Family Health Strategy, the Women's Health Program and the Adolescents' Health Program.

Health care policies should determine that health professional work together, as a form of implementing the necessary integration and team work. It is also necessary to define the mechanisms of continuing education so that health care professionals learn how to work as a team and also make adequate registers of the facts and situations they experience as responsible parties.

In terms of practice, pregnancy in adolescence requires special prenatal care, with nursing care to follow the patient at home and an early inclusion in the program, adopting a risk protocol, supporting a satisfactory completion of the pregnancy, i.e., with outcomes that guarantee the lives of the woman and her child.

Nursing can contribute to reducing most adolescent maternal deaths by performing, for instance, an active search of pregnant adolescents to forward them to prenatal care and domiciliary nursing care. In addition, nursing care is fundamental in the delivery, especially in the first

seventy-two hours postpartum, for either vaginal or cesarean deliveries.

Nursing care is also central to mobilize other health professionals to work timely, for instance, in the adoption of a clinical risk protocol for every pregnant adolescent, and in including the family in the health care process, and in the administration of blood or other support in the appropri-

ate time and, finally, in forwarding the girl-woman to reference centers.

Information obtained through research, with historical series, provides the necessary data for health care services and their professionals to acknowledge the value of their work and to always improve the service they deliver to the population.

REFERENCES

1. World Health Organization (WHO). Maternal mortality in 2000: estimates developed by WHO, UNICEF and UNFPA. Geneva; 2004.
2. Organização Mundial da Saúde (OMS). Classificação Estatística Internacional de Doenças e Problemas Relacionados à Saúde. 10ª rev. São Paulo: Centro Colaborador da OMS para Classificação de Doenças em Português/Universidade de São Paulo; 1994. 2 v.
3. Souza ML, Laurenti R. Mortalidade materna: conceitos e aspectos estatísticos. São Paulo: Centro Colaborado da OMS para a Classificação das Doenças em Português; 1987. (Série Divulgação, n. 3).
4. Brasil. Ministério da Saúde. Portaria n. 427, de 22 de março de 2005. Institui a Comissão Nacional de Monitoramento e Avaliação da Implementação do Pacto Nacional pela Redução da Mortalidade Materna e Neonatal e dá outras providências [legislação na Internet]. Brasília; 2005. [citado 2007 out. 17]. Disponível em: <http://dtr2001.saude.gov.br/sas/PORTARIAS/Port2005/GM/GM-427.htm>
5. Programa das Nações Unidas para o Desenvolvimento (PNUD). Atlas do Desenvolvimento Humano [texto na Internet]. 2007 [citado 2007 set. 20]. Disponível em: <http://www.pnud.org.br/atlas/>
6. Instituto Brasileiro de Geografia e Estatística (IBGE) [homepage na Internet]. Rio de Janeiro; 2007 [citado 2007 set. 25]. Disponível em: <http://www.ibge.gov.br/home/>
7. Brasil. Ministério da Saúde. DATASUS. Sistema de Informações sobre Mortalidade - SIM, 2007 [texto na Internet]. Brasília; 2007. [citado 2007 set. 20]. Disponível em: www.datasus.gov.br
8. Brasil. Ministério da Saúde. DATASUS. Sistema de Informações sobre Nascidos Vivos - SINASC, 2007 [texto na Internet]. [citado 2007 set. 20]. Disponível em: www.datasus.gov.br
9. Conselho Nacional de Saúde. Resolução n. 196, de 10 de outubro de 1996. Dispõe sobre diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Bioética. 1996;4(2 Supl):15-25.
10. Yazlle MEHD, Mendes MC, Patta MC, Rocha JSY, Azevedo GD, Marcolin AC. A adolescente grávida: alguns indicadores sociais. Rev Bras Ginecol Obstet. 2002;24(9):609-14.
11. Goldenberg P, Figueiredo MCT, Silva RS. Gravidez na adolescência, pré-natal e resultados perinatais em Montes Claros, Minas Gerais, Brasil. Cad Saúde Pública. 2005;21(4):1077-86.
12. Darroch JE, Singh S, Frost JJ. Differences in teenage pregnancy rates among five developed countries: the roles of sexual activity and contraceptive use. Fam Plann Perspect. 2001;33(6):244-50, 281. [Erratum in: Fam Plann Perspect. 2002;34(1):56.
13. Peixoto HCG. A mortalidade materna em Santa Catarina no período de 1996-2002 [texto na Internet]. Florianópolis: Secretaria de Estado da Saúde de Santa Catarina; 2007. [citado 2007 out. 16]. Disponível em: www.saude.sc.gov.br/gestores/sala_de_leitura/artigos/Mortalidade/Mortalidade%20Materna_1996-2002.doc
14. Brasil. Lei n. 8.069, de 13 de julho de 1990. Dispõe sobre o Estatuto da Criança e do Adolescente - ECA e dá outras providências. Diário Oficial da União, Brasília, 16 jul.1990.
15. Laurenti R, Jorge MHPM, Gotlieb SLD. A mortalidade materna nas capitais brasileiras: algumas características e estimativa de um fator de ajuste. Rev Bras Epidemiol. 2004;7(4):449-60.
16. Gomes FA, Nakano AMS, Almeida AM, Matuo YK. Mortalidade materna na perspectiva do familiar. Rev Esc Enferm USP. 2006;40(1):50-6.
17. Parpinelli MA, Faúndes A, Surita FGC, Pereira BG, Cecatti JG. Mortalidade materna na cidade de Campinas, no período de 1992 a 1994. Rev Bras Ginecol Obstet. 1999;21(4):227-32.
18. Beauvoir S. O segundo sexo: fatos e mitos. Rio de Janeiro: Nova Fronteira; 1949.