

The Brazilian Commission on Social Determinants of Health is a most welcome initiative. The World Health Organisation set up the Commission on Social Determinants of Health with the aim of making major difference to health equity globally. The Commission has reviewed evidence and made recommendations. But these must cover health inequity wherever it is found i.e. in all countries. There is, therefore, pressing need for national analyses and recommendations that fit the national context. The present report provides this in abundance for Brazil. The report has a penetrating analysis of the health situation in Brazil and its social and economic background. The analysis includes the major social determinants of health in addition to health systems. The aim of this Brazilian action, as with the WHO Commission, is to achieve a fair distribution of health. Particularly important, is the fact that the recommendations are based on three fundamental pillars: scientific evidence, the need for intersectoral action and social participation.

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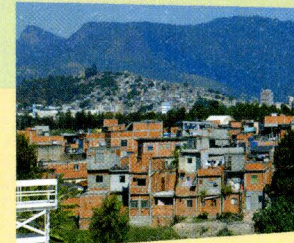
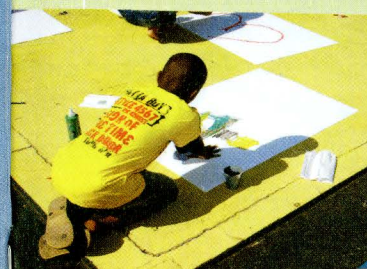
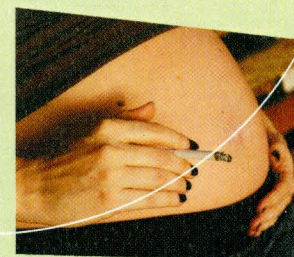
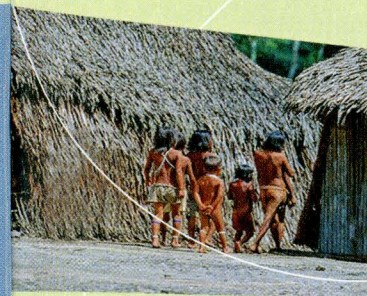
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NATIONAL COMMISSION ON
SOCIAL DETERMINANTS
OF HEALTH

The Social Causes of Health Inequities in Brazil



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The final report of the National Commission on Social Determinants of Health was published unabridged in Portuguese by Editora Fiocruz, with the following summary:

Preface

Presentation

1. Introduction
2. Analysis of the Health Situation
 - 2.1. The Situation and Trends in Demographic, Social and Economic Development
 - 2.2. Socioeconomic Stratification and Health
 - 2.3. Living, Environmental and Working Conditions
 - 2.4. Social, Communitarian and Health Networks
 - 2.5. Behaviors, Life Styles and Health
 - 2.6. Maternal-Infant Health
 - 2.7. Indigenous Health
3. Recommendations

References and Supplementary Bibliography

Appendices

Executive Summary

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I am very pleased and satisfied to see the final report of the National Commission on Social Determinants of Health (NCS DH) published, entitled *The Social Causes of Iniquities in Health in Brazil*.

During its two years of existence since March 2006, the NCS DH – comprised of 16 personages from civil, scientific, cultural and business life in Brazil and supported by a technical department installed at Fiocruz – developed a series of activities that contributed to the national debate on problems concerning the social determinants and iniquities in health. These activities were focused on the production of knowledge and information on the social determinants of health (SDH), on review and analysis of the policies and programs of intervention on these determinants and on communications with the diverse sectors of society regarding the importance of the SDH and the possibilities for acting upon them.

The report is the product of this work. Based on information and existing knowledge found in diverse information systems or recorded in national and international literature, it analyzes the impact of the SDH at their various levels on the health situation, with special emphasis on the iniquities in health. It encompasses the determinants related to individual behavior and living and working conditions, as well as those related to the economic, social and cultural macrostructure. Its recommendations, solidly grounded on the analysis of the health situation and the interventions in progress, are designed to enable more sustainable coordination and efficient action on the social determinants.

We are confident that the set of data and considerations gathered in this report will constitute a mandatory reference for researchers, professionals in the social area, managers in diverse spheres of public administration and all those interested in contributing to promoting health and equality through action on the social determinants that, as the publication so well demonstrates, are the product of human action and, therefore, can and must be transformed by human action.

José Gomes Temporão
State Minister of Health

The report of the National Commission on Social Determinants of Health (NCS DH) has three objectives:

- to outline a general panorama of the health situation in Brazil, with emphasis on data, information and knowledge about health inequities generated by the social determinants;
- to propose policies, programs and interventions related to the social determinants, based on an evaluation of the policies and interventions currently underway and the experiences reported in the national and international literature;
- to describe the activities developed by the Commission to comply with its objectives.

The contents are arranged in the following sections: introduction, analysis of the health situation, recommendations (for policies and programs), references and supplementary bibliography, appendices and executive summary.11

The Introduction presents a brief history and the antecedents of the creation of the NCS DH, as well as its objectives. It also includes the principal commitments that have guided the NCS DH since its creation - commitments to equality, presenting evidence and actions. Finally, it presents the Dahlgren and Whitehead (1991) model, which schematisizes the various levels of the social determinants of health and served as the basis for guiding the activities of the Commission and organization of the contents of this report.

The body of the report, entitled Analysis of the Health Situation, brings together data, information and knowledge available regarding the relationships between the SDH, as well as the health situation in various population groups, highlighting the relationships among these determinants and health inequities. It utilizes as sources of information various systems that have a nationwide scope and the scientific literature produced by national and international authors during the past five years.

Both the analysis of the situation as well as the recommendations for policies and programs are primarily focused on the problems of health inequities in urban areas. This emphasis is justified not only because the immense majority of the Brazilian population lives in urban areas, but also because of the extremely accelerated manner

in which this urbanization process took place, without an equivalent counterpart in providing an adequate infrastructure, generating enormous inequities and concentrating, mainly in the metropolitan areas, large portions of the population exposed to precarious living, environmental and working conditions.

The analysis of the health situation is comprised of the following sections:

- The status and tendencies of demographic, social and economic development in Brazil: it outlines the general panorama of reference for analyzing of the health situation, describing the evolution of these macro determinants, particularly over the last four decades. It includes data on population growth, fertility, mortality, migrations, urbanization, the structure of the labor market, income distribution and education.

- Socioeconomic stratification and health: it presents the current status and trends in the health situation in Brazil, highlighting the inequalities of health according to the variables of socioeconomic stratification, such as income, schooling, sex and where one lives.

- Living, environment and working conditions: it presents the relationships between the health situation and the living, environment and working conditions, emphasizing the relationships between sanitation, food, habitation, the workplace, pollution, access to health information and services and their impact on the health conditions of various population groups.

- Social, communitarian and health networks: it includes evidence regarding communitarian organization and solidarity networks and support to improve the health situation, highlighting in particular the degree of development of these networks in the least favored social groups.

- Behavior, lifestyles and health: it includes evidence available in Brazil regarding risk conduct, such as the smoking habit, alcoholism, sedentaryism and inadequate diet, among others, as seen in the different socioeconomic strata of the population.

- Maternal-infant health and indigenous health: given their social importance and the specific needs for public policies they present.

The report cannot, nor does it intend to be, exhaustive. Several topics are absent or were only partially developed that, given their importance, merit greater development in the future. Among these topics could be included: health and the environment in large cities, social security and health; culture and the promotion of health; the distribution, access and utilization of health services in urban areas; violence and health; communitarian initiatives to promote and protect health; and unemployment and health, among others.

To overcome the problems described, recommendations for policies and programs are made, based on international and national experience in interventions on the SDH at their diverse levels.

Meeting one of its fundamental commitments, the Commission's recommendations must be grounded in solid evidence. This part includes two types of recommendations. The first is based on the analysis of existing policies and programs in the federal sphere that affect the SDH. An analysis of this set of policies and programs is presented, seeking to identify overlapping, parallelisms or contradictions, with the corresponding recommendations to overcome the problems encountered, seeking a more integrated sectorial action.

A second group of recommendations refers to the institutionalization of certain processes that are fundamental to sustainable action on the SDH and whose development must generate specific policies and programs. Included are recommendations for the institutionalization of sectorial action that seek to improve the quality of life and health, for social participation and empowerment of the more vulnerable population groups and for the systematic production of information and knowledge regarding the relationships between SDH and health and an evaluation of the interventions.

The national and international scientific literature published in the last five years on SDH in Brazil has been comprehensively reviewed and is collected together in References and the Supplementary Bibliography.

Finally, the report includes three Appendices, to wit:

- Appendix I – To meet its objectives, the Commission defined five lines of action and specific projects related to each of them. This appendix describes the activities undertaken and presents their principal results.

- Appendix II – Transcribes the Presidential Decree of March 13, 2006, which created the National Commission on the Social Determinants of Health and the Ministerial Order that appointed its members.

- Appendix III – It contains the document "Health Inequities in Brazil: our most serious disease", which was presented on the occasion of the launching of the NCSHD on March 13, 2006 and the speech given by Dr. Adib Jatene in the ceremony delivering the report to the President of Brazil on August 1, 2008.

The report also has a CD insert produced by the Latin American and Caribbean Center for Health Sciences Information team (Bireme/Opas/OMS), with full text versions of the texts that are found in the References and Supplementary Bibliography.

1. INTRODUCTION

In March 2005, the World Health Organization (WHO) created the Commission on Social Determinants of Health (CSDH) to internationally promote awareness of the importance of social determinants on the health conditions of individuals and populations and of the need to fight inequalities generated by these determinants. One year later, on March 13th 2006, by means of a presidential decree, the National Commission on Social Determinants of Health (CNDSS) was created with a two-year mandate.

The CNDSS is composed of 16 social, cultural, scientific and business leaders in the country. The diversity in the constitution of the CNDSS expresses the acknowledgment that health is a public good that should be constructed with the participation of all sectors of Brazilian society.

The goals of the CNDSS are summarized as the following:

- To produce information and knowledge on social determinants of health in Brazil;
- To contribute to the formulation of policies that promote health equity;
- To mobilize different sectors of government and civil society concerning the issue.

In order to meet its goals, the CNDSS has three basic commitments:

Commitment to Equity: Despite the latest advancements in its average health indicators, Brazil is one of the worst countries concerning health inequities, which are systematic and relevant, as well as avoidable, unfair and unnecessary health inequalities between population groups. These health inequities are the product of the large inequalities that exist between the various social and economic strata of the Brazilian population. In a country with one of the worst income distributions, CNDSS's commitment to equity – to assure the universal right to health – is not simply a rational decision, but fundamentally an ethical commitment and a political stance.

Commitment to evidence: The CNDSS seeks to base their analyses and recommendations on solid scientific evidence, given that they aid in understanding, on the one hand, how social determinants operate in producing health inequalities and, on the other hand, how and where interventions should be implemented to fight them, and which results might be expected in terms of effectiveness and efficiency.

Commitment to action: Fighting health inequalities by addressing social determinants that produced them is not only the Commission's greatest commitment, but also its *raison d'être*. Social determinants are a product of human action and, therefore, can and should be changed by human action. The commitment to action is based, firstly, on collecting scientific evidence, and secondly, on creating a broad political base, which is the result of the awareness and mobilization of several sectors in society.

The various existing studies concerning the SDHs and health inequities allowed the formulation of models to understand the web of relations between the various levels of social determinants and the health situation. Among these models, CNDSS adopted Dahlgren and Whitehead's, which guided the organization of activities and contents in the present report. The model was chosen because it is simple, easily understood by different types of public, and features clear graphic visualization of the many Social Determinants of Health. The model separates SDHs in layers, beginning with individual determinants and reaching a more distant layer of macro-determinants.

2. ANALYSIS OF THE HEALTH SITUATION

2.1. The Current Situation and Trends in Demographics, Social and Economic Development

Brazil has been undergoing major economic, social and demographic transformations – especially over the last four decades –, which significantly influences the lives and working conditions of the population and, consequently, their health conditions.

The 1960 census showed that 55% of the economically active population – that is, the majority – was dedicated to agriculture, while the remaining 45% worked in the secondary (industry) and tertiary (services) sectors. By the end of the following decade, the situation had been inverted: 54% of the population was employed in industry or in services. According to the latest Brazilian census (carried out in 2000), only 19% of the population was employed in agriculture, which is a drop from 55% to 19% in four decades. During the same period, the percentage of the population employed by

the service sector went from 27% to 60%, and industry, which accounted for 17% in 1960, rose to 29% in 1980, then declined to 21% in 2000.

It is clear that this accelerated redistribution of the economically active population from the agricultural sector to industry and services resulted in an extraordinarily rapid process of urbanization. In 1960, most of the population, that is 55%, dwelled in rural areas. This proportion became inverted in the following decade, when 56% of the population resided in urban areas, a proportion which continues to grow exponentially and had reached 81% by 2000.

Both the processes of industrialization and accelerated urbanization were responsible for important changes in fertility rate patterns. According to the Census, the average geometric growth rate of the population went from 2.89% in 1960/1970 to 1.64% between in the 1991 and 2000 censuses. In 1960 every fertile woman had, on average, 6.3 children. This went down to 2.3 in 2000, and, according to the projections of the Brazilian Institute for Geography and Statistics (IBGE), in 2006, it should have reached 2.0%. Even though this accelerated decline in the birthrate has been occurring in all regions of the country, there are important differences in relation to women's educational levels. According to the National Household Sample Survey (PNAD) of 2006, the total fertility rate for 2005 was of 2.1 children per fertile woman. However, women with up to 3 years of school bore 4 children and women with up to 8 years of school or more had had 1.5 children. Despite the current drops in fertility rates, the Brazilian population should still have an expressive growth in the next few decades due to past fecundity. There will also be another important change in the country's age structure as the population grows older due to the decrease in fertility rates and the increase in life expectancy.

The four decades between 1960 and 2000 were also marked by important economic transformations. According to IPEADATA (the database of the Institute for Applied Economic Research), the *per capita* GDP went from US\$ 2,060 in 1960 to US\$ 5,250 in 2000 and US\$ 5,750 in 2006 (in constant values with 2006 as reference). Agricultural activity was responsible for 25% of the GDP in 1960, but fell to 8.9% in 2004, having grown 209% in the period. Industrial activity accounted for 18% of the GDP in 1960 and 42% in 2004, for growth of 1,727% in the period.

However, this extraordinary growth in wealth and the modernization of the economy did not translate into an improvement in wealth distribution. Despite recent improvements, income distribution in Brazil is still one of the worst in the world. Based on the 2003 Gini Coefficient (0.57), the United Nations Development Program

2007 report placed Brazil in 11th place based on the income concentration rate (in 2006, the Gini Coefficient dropped to 0.54).

As for social development, great changes have taken place in the last few decades, especially in the field of education. In 1940, 56% of the Brazilian Population was illiterate, a percentage which declined to 40% in 1960 and 13.6% in the year 2000. According to the PNAD 10.4% of the population fifteen years of age or older was illiterate in 2006. This illiteracy rate, however, has significant regional differences, as it is around 5.7% in the South and 20.8% in the Northeast. Important disparities also exist in relation to family income. For people with a per capita monthly family income of less than half of a minimum wage salary it was 17.9%, while it was only 1.3% for those with over two minimum wage salaries.

According to the PNAD carried out in 2006, there had been extraordinary progress in elementary and middle school rates, which attained almost universal coverage for ages between 7 and 14 in almost all regions, urban and rural. In regard to high school education, the net attendance rate between the ages of 15 and 17 is still quite low for Brazil as a whole (around 47%), with large regional and urban/rural dweller disparities, whereas for the elementary and middle school the index is 95%, without large disparities.

The important advancements and contradictions in the social and economic development of the country in the last few decades have also been observed in health. According to the IBGE, the child mortality rate, which in 1960 was of 124 deaths in the first year of life per thousand children born alive, dropped to 48.3 in 1990, 35.26 in 2000 and 25.1 in 2006. Life expectancy in the country also rose by over 20 years (from 51.6 years to 72.4 years) between 1960 and 2006. Although significant regional differences continue to exist, such as between the Northeast and the South where there was a 2-year difference in life expectancy in 1990, there is a trend for these differences to decrease. In 1960, the life expectancy of a Northeastern Brazilian was 20 years less than a Southern Brazilian, but by 2006, this difference had decreased to 5 years.

The positive trends observed in the last few decades related to income, schooling and health have been translated into an improvement in the Human Development Index of the UNDP – 0.649 in 1975 and 0.800 in 2005.

2.2. Social and Economic Stratification and Health

The social, economic, cultural and environmental conditions of any given society – that is, the distal determinants in Dahlgren and Whitehead's model – stratify population

groups socially and economically, producing health differences. In other words, the distribution of health and disease in a society is not random and is associated with the social position of the individual, which, in turn, defines the life and working conditions of people and social groups.

This section presents a few associations between social and economic stratification (according to income, schooling, gender and dwelling place) and health outcomes, pointing out health inequities related to the social position of individuals and population groups.

Preventive breast and cervical cancer examinations, as well as prenatal exams, are a good example of the inequalities in the access to and use of health services due to the level of schooling, with a clear gradient. The percentage of women 25 years of age or over that have already had a mammogram ranges from 24.5% in women without any or up to one year of schooling to 68.1% in those with at least 15 years of study. The proportion of women aged 25 or over that have had cervical cancer screening exams ranges from 55.8% in those with one year of education or less to 93.1% for those with at least 15 years of study. Among women with at least 12 years of schooling, 20% give birth after having had seven or more doctors visits, whereas this percentage drops to 1.2% among women with no instruction. Inversely, 14.4% of children born to women with zero years of schooling are born without the benefit of any sort of prenatal exam – a percentage that goes down to 2.7% among women with at least 12 years of education.

2.3. Living Conditions, Labor and Health

In this section, a few fundamental aspects of life and working conditions, especially concerning their relation to health, are presented. Food and nutrition, basic sanitation and housing, employment and working conditions, environmental and health conditions, and the access to health services and information are pointed out.

Food and Nutrition

Over the last few decades, Brazil has been going through a nutritional transition, which consists of the replacement of a nutritional standard based on the consumption of cereal grains, beans, roots and tubers for one richer in fats and sugars. As it occurs with the demographic and epidemiological transition processes, this nutritional transition is also marked by overlapping patterns, by an undefined time frame, and especially by inequalities related to social and economic stratification.

This change in nutritional standards has led to an increased risk of becoming overweight or obese, factors which significantly contribute to the onset of chronic

diseases and disabilities. The 2003 Family Budget Survey showed that the number of overweight adult Brazilians had practically doubled since 1974, when the National Study on Family Expenses was carried out. In 2003, four in every 10 Brazilian adults were overweight, a rate 8 times larger than that of underweight women and 15 times larger than that of underweight men. Considering Brazilians 20 years of age or over, the IBGE estimates that 3.8 million people (4.0%) suffer from weight deficit and 38.8 million (40.6%) from excess weight, 10.5 million of which are considered obese.

Basic sanitation and housing

The National Household Sample Survey (PNAD) registered an improvement in water and sewage coverage rates from 1999 to 2004. According to the 2004 PNAD, the percentage of private dwellings covered by the water system rose from 80% to 83% and the percentage of homes with adequate sanitation (either connected to the sewage collection system or having septic system) rose from 65% to 70% in the period mentioned. There are, however, inequalities between regions and municipalities. In 2005, while the South and Southeast regions, respectively 83% and 91% of the population was covered by the water system, the coverage in the North and Northeast reached only 54.8% and 72% respectively. When comparing metropolitan areas of state capitals, the differences are also significant. For instance, the percentage of the population covered by the sewage system in 2005 varied from 44.46% in Recife and 66.33% in Fortaleza to 92.21% in Curitiba and 91.97% in Porto Alegre.

Working and employment conditions

The health problems faced by workers are intimately related to a country or region's level of development. When comparing regional differences in social and economic development, worker health and work-related injuries and diseases show a mixed pattern, which typifies the so-called "double disease burden". This term refers to the presence of some diseases that have already been controlled in developed countries, such as silicosis and other lung diseases, lead poisoning and asbestosis, as well as "new" work-related diseases, such as musculoskeletal diseases, dermatological diseases caused by chemical compounds, and stress-related mental symptoms and disorders. The combination of traditional and new forms of labor leads to high levels of exposure to chemical and physical problems, repetitive tasks, excessive straining, inadequate posture, exposure to stress and psycho-social factors, causing both temporary and long-term suffering and disabilities.

Official data on formal labor show that, in 2005, 2,700 workers died and 491,000 were out of work receiving insurance benefits. Between the years 2000 and 2002, the National Social Security Institute registered 58,978 cases of work-related diseases, which covers only 23% of workers – that is, those who had been hired formally and are, therefore, eligible to receive benefits. Consequently, a great number of cases remain unreported.

Environment and Health

The impact of air pollution in Brazil has been well documented in scientific literature. Studies have shown that increases in the levels of air pollutants are associated with increased mortality and morbidity rates related to respiratory and cardiovascular problems, especially in children and the elderly. Other consequences include economic loss, school absenteeism, lost days of work and asthma.

In the 1990's, the first estimates of the effects of air pollution showed that the total mortality of elderly individuals is directly associated with variations in the concentration of inhalable particles (PM10) in the air, since a difference of 10 $\mu\text{g}/\text{m}^3$ increases deaths of elderly individuals by 1.3%. The majority of these deaths are related to respiratory and cardiovascular diseases. The effects of these pollutants can be modulated by the social and economic conditions of those exposed. Individuals display different responses to similar stimuli due to their differences in terms of life conditions. This is fundamental for the formulation of public policies designed to reduce the emission of these pollutants.

Access to Health Services

Despite the undeniable progress in health services and the principles of universality and equity that govern the Brazilian Unified Health System (SUS), important inequalities in the offer of resources and services – as well as the strong influence an individual's social position has on her access, use and quality of services – are still being observed.

Data from the 2003 PNAD, showed that individuals with higher incomes have 59.5% more chances of using health services than those with lower incomes. The same relation is observed concerning education: individuals with nine or more years of school have a 20.9% greater chance of using health services than those with less education. When compared to the 1998 PNAD, despite the persistence of marked social inequalities in the use of health services, a continuous reduction in inequalities, in regard to both children and adults, can be observed.

Access to Information

One of the social determinants of health whose importance is not always adequately recognized is access to information. Accessing health information has been greatly facilitated by new information and communication technology, such as the Internet, which may have important consequences for health, especially in respect to health inequalities. Their potential, however, will be threatened if inequalities in the access to these technologies –the so-called “digital divide” – are not solved. According to a IBOPE/Netratings study, in the third trimester of 2007, despite a 21% increase over the previous year, only thirty-nine million Brazilians use the Internet. Through this medium this minority has better access to goods and services as well as opportunities to progress socially. The 2006 PNAD shows enormous inequalities in access to the Internet, depending on educational level, income and dwelling place. In some cases, the differences between groups are extreme: 60 to 70 times.

2.4. Social and Community Networks and Health

22... Social and community networks are part of the so-called “social capital”, that is, the set of relationships of solidarity and trust between individuals and groups. The deterioration of this social capital is an important mechanism through which social and economic inequities negatively affect the health situation. Countries with fragile social bonds caused by these inequalities invest the least in human capital and in social support networks and have the lowest indexes of social participation in the definition of public policies.

There are a small number of studies in Brazil relating social and community networks to disease burdens, which could be partially explained by the lack of expertise in adequate methodologies to approach these subject-matters. Studies conducted with the elderly show that remaining independent in daily activities and maintaining satisfaction with family and friends were prognostic factors independent of the process of aging well, for both men and women. Studies on the association between mental disorders and social support showed that people with less social support have a greater prevalence of mental disorders than people with higher social support. The connection between mental disorders and social support was observed even after the data were controlled by age, schooling and participation in the job market.

2.5. Behavior, Life-Styles and Health

This section is based on a review of a recent scientific literature on diet, physical exercise, tobacco consumption and alcohol abuse among various social groups.

Diet

The consumption of fruits and vegetables is low in Brazil as a whole, but the greater the individual's income and education, the higher their consumption. There is a direct effect of income on this consumption pattern: for each 1% increase in the individual's income, there was a 0.04% increase in the consumption of fruits and vegetables. On the other hand, a 1% drop in income caused a 0.2% decrease in the participation of these foods in the diet.

Tobacco

Comparing the two available national surveys, the National Health Survey, of 1989, and the World Health Survey, of 2003, there was an important reduction in tobacco consumption in all age groups, sexes, and in both urban and rural areas. However, inequalities in intensity of reduction were observed concerning education level and purchasing power. As to purchasing power, the pattern was similar for both men and women, that is, the lower the income, the lower the intensity of reduction. As for education, the differences were more apparent in the case of women: the lower the level of education, the lower the reduction. Women with up to four years of study showed prevalence levels twice as large for tobacco consumption than those with nine to ten years of education. In reality, despite the drop in all categories, inequalities were heightened in 2003.

Alcohol

According a study carried out by the National Cancer Institute (INCA, 2006), the prevalence of alcohol consumption in the 15 Brazilian state capitals and the Federal District varied from 32.4% to 58.6%. The prevalence varied from 48.9% to 72.1% in men and from 19.7% to 47.5% in women. It should be pointed out that the highest female rate was lower than the lowest male rate.

In developed countries, especially in Europe, gender differences in alcohol consumption are not as evident, only around 10 to 20%. In developing countries, these differences are larger, and, in Latin America, depending on the country, these differences vary from 20% to 100%. This variation could be explained by the kind of drink mostly

consumed. The lowest gender variation (40%) was observed in Porto Alegre, in the South x, where there is a concentration in the production of wine.

Gender differences tend to be even greater concerning "risk consumption". In this study, however, the rates for this indicator varied from 4.6% to 11.1%. In the South, despite the fact that consumption rates were high in comparison with other regions, risk consumption rates were among the lowest, which is probably related to regional differences regarding the most consumed drink.

2.6. Mother and Child Health

This section is divided into two parts. The first is based on the determinants of child mortality throughout Brazil, especially family income and the mother's educational level. The second is based on a review of recent scientific literature on various aspects of mother and child health in Brazil.

A Few Conditioning Factors in Childhood Mortality in Brazil and its Regions

Child mortality, that is, the mortality of children under five years of age, is employed as an indicator of the health and life conditions of a population. Recently (from 1990 to 2005), infant mortality in Brazil went from 53.7 deaths of under-fives per thousand live born to 28.8, which is a decrease of 46.4%.

Despite the progress in the indicators, deep regional contrasts continue to exist. Throughout the period, child mortality in the Northeast dropped 55%, that is, 10 percent above the national average. It should be mentioned, however, that the rate in that region, in 2005, (38.9%) was still twice as high as the rate in the Southeast and South. This shows that progress has been made since, in 1990, the ratio between those regions was 2:5.

There is an inverse relationship between the mother's education and child mortality, that is, the more years of schooling the mother has, the lower the mortality rate for children under five years of age. Thus, for Brazil as a whole, in 1990, the child mortality rate for mothers with less than four years of school was of 89.7%. For mothers with more than eight years of school, this number goes down to 30.3% – a 196.6% difference.

The inequality between child survival levels is also affected when income, another important socio-economic variable, is considered. When desegregated by per capita income fifths, child mortality is always higher for the most underprivileged. Generally,

there is little difference between the first three per capita income fifths, but this disparity is increased in the last two fifths, independent of which special unit is being analyzed.

Review of the Literature on Mother and Child Health

A review of scientific literature on the disparities in the health of mothers of under-fives from different social and economic groups between 1990 and 2007 was carried out.

The results cast no doubt on the existence of marked social inequalities in terms of child health and nutrition throughout the country, which is evidenced in the mortality, morbidity, nutrition and service use indexes. In all studied indicators, the poor always showed a less favorable situation in terms of prenatal care, birth weight (both by a restriction in intrauterine growth and preterm delivery), exclusive breastfeeding, immunizations, preventive medical care, morbidity, malnutrition, micronutrient deficiencies, cognitive development and, consequently, mortality.

The few indicators that are worse among richer mothers and children include higher caesarian birth rates, overweight/obesity rates and the use of oral re-hydration therapy for diarrhea. Recent surveys on breastfeeding show that the practice, which was more common among poor families, is now more frequent among those of a higher social and economic level, at least during the baby's first six months of life.

2.7. Indigenous health

The most recent Demographic Census (2000) shows that the educational level of the indigenous people remains very low and that there are important differences between fertility rates of urban (2.7) and in rural (5.7) indigenous women.. Census data also show an infant mortality rate in 2000 of 51.4 per thousand, significantly higher than the national rate (30.1 for thousand) and the rate for "black" and "brown" infants (34.9 and 33.0 for thousand, respectively).

Acute respiratory infections and diarrheas are the main causes of disease and death in children of less than five years. More than 25% of them are malnourished. Precarious sanitation and housing conditions, as well as low coverage and quality of health services combine to further undermine the nutritional level of indigenous children.

3. RECOMMENDATIONS

This section includes a series of recommendations for SDH-related interventions intended to address the problems listed in the report, especially those concerning health inequity.

3.1. Ongoing policies and programs

SDH-related actions comprised in social policies carried out by several federal government institutions, as executed in the 2004-2006 budget, have been listed.

The resources involved and the amount of actions carried out indicate that the universe studied here is a prominent theme in the federal government's political agenda. The increases recorded show that, as a whole, investments in the sector did not decline.

As to the articulation of policies, programs and actions, data suggests that there is little communication between theme areas, little participation of the Ministry of Health in the actions studied, high fragmentation of actions, redundancy, competitiveness between federal agencies and little coordination among them.

Despite the descriptive character of this review, a few implications in terms of public policies might be inferred: to broaden the scope of investments in the actions studied; to rationalize investments, focusing on the actions showing the highest levels of consistency over time; to articulate these actions; and to integrate the various federal agencies involved in carrying out these programs and actions (including the Ministry of Health) in a common agenda based on SDH needs.

3.2. Institutionalizing processes

SDH interventions to promote health equality should encompass the various levels referred to by Dahlgreen and Whitehead, that is, they should address proximal (individual behavior), intermediary (life and work conditions) and distal (social, economic and cultural macrostructure) determinants. In order for interventions in the various levels of Dahlgren and Whitehead's model to be feasible, effective and sustainable, they must be based on three basic principles: intersectoriality; social participation and scientific evidence.

In order for the coordination of SDH actions to be sustainably institutionalized (which would allow the aforementioned problems with the low levels of articulation to be overcome), the CNDSS recommends the establishment of a instance of Intersectorial Actions for Health Promotion and the Quality of Life within the Civil Cabinet. This instance should be responsible for managing and evaluating SDH-related projects, programs, interventions or policies developed by represented institutions.

The instance should be coordinated by the Civil Cabinet of the Presidency of the Republic, and the Ministry of Health should work as a Technical/Executive Secretariat.

It would be advisable, at least at first, to prioritize intersectorial actions related to health promotion of children and adolescents and strengthen the already existing network of healthy municipalities. Moreover, the buttressing of two other strategies for promoting health, which have been tried in different contexts, is also advised: health-promoting schools and a healthy working environment.

In order to produce scientific evidence on the SDHs on a regular basis, the creation of a joint MCT/MS program is suggested. This program should provide support to SDH-related research projects and to the establishment of networks for researchers and administrators to interchange and collaborate in order for projects to be continued and for the results to be applied. The creation of a monitoring system of health inequities and of evaluation of the impact of intersectorial action on health is also recommended.

Participative management mechanisms, especially the Municipal Health Councils, should be strengthened to promote social participation in SDH actions. This participation is pivotal to give the necessary political support to SDH interventions and to empower vulnerable population groups.

ANNEX

CNDSS activities have been organized in five lines of action. In each of these lines of action, several activities were carried out through the participation of specialists, professionals and other members of the collaborator institutions, in addition to the members of the Commission.

The first line of action refers to *the Generation and Dissemination of Knowledge and Information*. This entails producing knowledge and data about the relationship between social determinants and health conditions, especially concerning health inequalities, to serve as a basis for policies and programs.

The second line of action refers to *Policies and Programs*. Its goal is to promote and evaluate governmental and non-governmental policies, programs and interventions concerning SDHs carried out on the local, regional or national level.

The third line of action refers to the *Mobilization of the Civil Society* and its objective is to call the attention of various sectors in the society to the importance of the SDHs and the possibilities of addressing them.

The fourth line of action concerns the *Development and of a Website* on SDHs (www.determinantes.fiocruz.br). The goal is to collect and register information and knowledge on SDHs that are already available in information systems and in the national and international scientific literatures. The final objective is for the website to become a reference for those interested in the issue.

The fifth line of action refers to *International Cooperation*, which includes cooperation with the Commission on Determinants of Health of the WHO and with Latin American countries to promote a greater focus on the SDHs in their health policies and/or the creation of the countries' specific national commissions.