A STUDY OF INFANT MORTALITY IN TURKEY IN RELATION TO HEALTH POLICY

The Institute of Economics and Social Sciences

of

Bilkent University

by

ŞULE ÇALIKOGLU

In Partial Fulfillment of the Requirements for the degree of

MASTER OF ARTS IN POLITICAL SCIENCE AND PUBLIC ADMINISTRATION

in

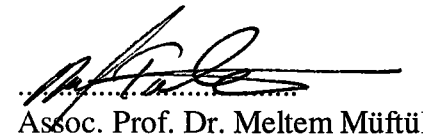
THE DEPARTMENT OF

POLITICAL SCIENCE AND PUBLIC ADMINISTRATION

ANKARA

July 2001

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science and Public Administration.

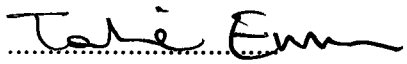


Assoc. Prof. Dr. Meltem Müftüler
Supervisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science and Public Administration.

Assoc. Prof. Dr. Ahmet İçduygu
Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Political Science and Public Administration.



Assis. Prof. Dr. Tahire Erman
Examining Committee Member

Approval of the Institute of Economics and Social Sciences

Prof. Dr. Kürşat Aydoğan
Director

ABSTRACT

A STUDY OF INFANT MORTALITY IN TURKEY IN RELATION TO HEALTH POLICY

Şule Çalıkoğlu

M.A. The Department of Political Science and Public Administration

Supervisor: Assoc. Prof. Dr. Meltem Müftüler

July 2001

This thesis investigates the determinants of infant mortality and the impact of health policy on mortality reduction. It focuses on Turkish case, studying the historical changes of the main inclinations of Turkish health policy. The thesis involves an empirical analysis of the factors affecting receiving prenatal care and postnatal care which reveals the need for coherent health policy in Turkey.

Keywords: Infant mortality, Turkish Health Policy, Determinants of Health

ÖZET

SAĞLIK POLITIKASI KAPSAMINDA TÜRKIYE'DEKI BEBEK ÖLÜMLERI KONUSUNDA BIR ÇALIŞMA

Şule Çalıkoğlu

Master, Siyaset Bilimi ve Kamu Yönetimi Bölümü

Tez Yöneticisi: Yard. Doç. Dr. Meltem Müftüler

Temmuz 2001

Bu çalışma bebek ölümlerinin belirleyici faktörlerini ve sağlık politikasının ölümlerin azaltılması üzerine etkisini incelemektedir. Çalışma Türkiye örneği üzerine yoğunlaşırken, Sağlık politikasındaki temel yönelimlerdeki tarihsel değişimi araştırmaktadır. Bununla birlikte, çalışma doğum öncesi ve doğum sonrası sağlık hizmetini etkileyen faktörlerin incelendiği ampirik bir analiz içermekte ve bu analizden yola çıkarak bebek ölümlerinin azaltılmasında sağlık politikasında geliştirilebilecek temel boyutları araştırmaktadır.

Anahtar Kelimeler: Bebek Ölümleri, Türk Sağlık Politikası, Sağlığı Belirleyici Faktörler

ACKNOWLEDGEMENTS

First of all I owe special thanks to Professor Scott Spehr for his guidance throughout the course of this study. I am grateful to him for sharing his invaluable experience with me and for his insightful criticisms in revising the text several times. I would also like to express my gratitude to Professor Meltem Muftuler for her support to my thesis . I would like to thank distinguished members of the jury for their valuable contributions. And I would like to present special thanks to Professor Lauren Mclearen who has provided me with a guidance through empirical study.

I am also grateful to my friends, especially to Fatma Kınay, Seniz Cetin and Aydın Isık whose unceasing support I have felt throughout the completion of the thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES:

INTRODUCTION

My initial concern in this thesis was that to analyse the extent to which health policy affects health status of the societies. This question in my mind, the need for analysing the meaning of health and its measurement become one of the important points in the thesis.

The first chapter attempts to explore the concept of health and the determinants of it. The definition of health is no longer an absence of disease but a total well being. Indeed the analysis of the determinants of health also has shifted from biological factors to socio-economic ones. Despite this extension of the conceptualisation, an effective measurement of the health status of societies is still mortality levels. The analysis of infant mortality becomes the focal point in the thesis because it is also considered to be an indicator of the development as well as that of health. In addition the impact of prenatal and postnatal care on infant mortality can be assessed quite effectively.

Before going into the detail of the determinants of infant mortality I asked the question that what is the reason for decrease in mortality levels. The answers in the literature focused on the one hand the importance of improvements in living conditions and nutrition, on the other hand the impacts of medical innovations and public health measures. However, the historical analysis reveals that while the socio-economic development was the deriving force in the beginning of nineteenth century, the medical improvements became influential after 1930s.

Another aspect in the analysis of infant mortality is related to the determinants of it. First group of factors affecting infant mortality is demographic characteristics like sex of child, age of mother, etc. Socio-economic differentials

constitute the second group and these are related to the income levels, housing conditions and the like. Last determinants consists of health care services such as vaccination, drug utility and access to health service become crucial aspect to understand high levels of infant mortality rate.

Although each group of determinant has its own effect, the importance of health policy cannot be neglected in analysing infant mortality. In this respect, I dealt with the Turkish health policy in the second chapter. Since my initial purpose is to analyse the impact of health policy on public health, I attempted to understand major policy changes. While eradication of communicative disease and improving the infra structure of the health system were the major concerns of the initial years of the republic, 1961 changed the policy direction towards the penetration of the health service through the whole country. The socialisation policy aimed at providing health services where people live. Although a reasonable improvement was achieved through this policy, there was another turning point in 1980s. The major emphasis turned towards hospitalisation rather than the preventive primary care. In line with the neoliberal arguments of the time, the privatization of the state hospitals and the establishment of general health insurance scheme has been proposed to solve the problems of the Turkish health system.

The third chapter focuses the infant mortality in Turkey. The historical trend of infant mortality rate is parallel to the policy changes discussed above. Indeed Turkey has comparatively high infant mortality rate and main problematic areas like regional disparities still continue. As I indicated before I don't neglect the importance of other factors but the provision of health care is quite important in explaining high infant mortality rate in Turkey. Therefore, I created an index for

receiving prenatal and postnatal care and analysed major factors affecting this index. I used Turkish Demographic and Health Survey conducted in 1998 to determine the socio-economic and cultural differentials of receiving prenatal and postnatal care.

The last chapter discusses the concept of health in a wider social and economic context. Indeed once the health is defined as total well being and the determinants of health status are related to the socio-economic and political context of the societies, the impact of health policy become very important. Indeed the role of the state in the health market is also related to understand structural factors of health. Lastly, I tried to evaluate what kind of policy formulation Turkey would need to decrease the infant mortality by taking into account the above argument.

CHAPTER I

THE DETERMINANTS OF HEALTH

1.1. The Dimensions of the Crisis in Health Care Systems

The worldwide crisis in health care systems has increased interest in the study of health policy especially since 1980's. This crisis has many dimensions, namely, economic, ideological, and cultural (Green and Thorogood, 1998: 9). In addition it is apparent in developing as well as developed countries but with different emphases. For instance, the issue of access to health service has become the major concern in the US, whereas the quality of health care challenges the comparatively well developed socialized health system of the UK. On the other hand, most of developing countries still suffer from communicative diseases that result in elevated death rates.

First dimension, the widely discussed economic factor concerns the increasing costs of health services. The rising demand for health service and the constant improvements in medical technology brought on by new equipment and drugs have increased medical expenditures in many countries. As a result many countries have experienced a continuing rise in their total health expenditure as a percentage of GDP (table 1.1).

Table 1. 1: Total health expenditures as percentages of GDP

	1960	1970	1980	1990
Australia	4,9	5,7	7,3	8,2
Denmark	3,6	6,1	6,8	6,3
Germany	4,8	5,9	8,4	8,3
UK	3,9	4,5	5,8	6,1
USA	5,3	7,4	9,2	12,3

Source: OHE 1995

Secondly, the increasing costs of medical services and the financial difficulties of the welfare state reflect both the economic and the ideological dimensions of the problem and the latter reflecting controversy of the role of the state in the market. In fact the target ideological critics is the nature of the welfare state. According to Clause Offe this phenomenon is related to the decline in consensus regarding the welfare state. The political right challenges basic welfare state assumptions regarding the relation between state and economy and claims that the overwhelming interventions of the welfare state constitute obstacles to private sector investments and the provision of extensive social benefits to individuals leads dependence on the state. In addition leftist arguments emphasise that ideological criticism of the welfare state serves the interests of capitalist relations of production at the expense of society as a whole.

Thirdly, changes in the meaning of health necessitates the evaluation of health policy from a broader perspective, one that includes many issues from environmental to life- styles. In other words, today health covers increasing range of

aspects such as environmental pollution, eating habits and the like. In this respect health is no longer regarded only as treatment, but also as 'maintaining' and 'preventing' disease (Green and Thorogood, 1998:8).

> Twenty years ago, the mention of health and illness would probably have invoked thoughts of hospitals, doctors, nurses, drugs and first aid box. Today, however, it would probably conjure up a much broader range of images which would well include healthy foods, vitamin pills, aromatheraphy, alternative medicine, exercise bikes, health clubs, aerobics, walking boots, running shoes, therapy, sensible drinking, health checks and more. (Nettleton 1995, Green and Thorogood et al. 1998: 8)

As a result of these challenges, on the one hand health systems are faced with pressures for improvement in proper methods of provision, and on the other hand they are expected to address a wider range of areas in daily life.

1.2. Concepts of Health

With reference to challenges to health systems, the definition of the concept of health itself has become a crucial point in contemporary discussions. Indeed, the evaluation of the concept also reveals the relationship between existing health service structures and "hegemonic values". What has been pointed out is that no definition is possible without reference to political, social and economic structures within which the concept is employed. Leaving this aside, the concept of health is mainly defined as the nonexistence of illness or recover from the condition of illness that provides general welfare to individuals. Although seemingly there is no controversy regarding this general definition, the difficulty emerges in determining the nature of "illness" and the methods of cure respectively.

In evaluating different approaches to health, three dimensions can be assessed (Stacey 1977).

1- Individual or collective

2- Functional fitness or welfare

3- Preventive or curative

The individualistic concept of health stresses the importance of the biological system of a human being in the analysis of illness. Indeed, individual is considered to be a machine like system and, as a result, the causes of illness only come from without through certain mechanisms like invasive microorganisms or viruses. In this respect, the main measurement of health becomes "functional fitness". In other words, this conception is consisted with the machine-like conception of human nature, which emphasises on functional ability. As a result the method of tackling health problems is confined to the cure of functional disintegration. This approach is called "flexnerianism" and proposes that "a living organism could be regarded as a machine which might be taken apart and reassembled if its structure and functions were fully understood" (McKeown 1979: 29).

On the other hand, the collective concept of health searches for the causes of illness in the environmental, economic, and social systems in which people live. That is to say, rather than single, atomistic causes, this approach takes into account the structural determinants of health. In this case, the total welfare of a human being becomes the prevailing indicator of health, and relieving pain and providing care constitute two pillars of medical success. Consequently, preventive policies appear as

the primary solution to illness since curing individuals one by one is generally ineffective if the causes of illnesses are structural.

In modern societies the predominant conception of health is individualistic, which also secures the position of the medical profession as a paramount to successful action. Indeed, this approach has been characterized as the medical model of health in which doctors have a central role and hospitals play a major part. In addition to the mechanistic understanding of illness as related to the biological system, therapy is conceived of as a technical field like engineering (Illsley, 1977). Thus the values of the medical model explain the pattern of investment in health service as oriented towards curative measures based on the hegemony of individualistic worldview.

On the other hand, sociologists and anthropologists have increasingly emphasized the collective concept of health. The apparent crisis of health systems within the general crisis of the welfare state provides the legitimate basis for this shift. In addition, studies in medical sociology have undermined the secure place of the professions in the existing system of health by challenging the proposed causes of illnesses put forward by the existing medical profession.

Lalonde developed a more articulated analysis of the concepts of health by taking into account the premises of two approaches (1974). In his analysis four elements determine illness: human biology, the environment, life-style and health organization. Human biology includes aspects of health such as aging which are developed within the body as a result of the basic biology of the human being. The environment comprises matters relating to factors external to the body over which

the individual has little or no control. Life-style refers to the decisions by individuals that affect health, and over which they have control, and organization consists of the arrangement to provide organised health services to individuals. Lalonde thus stressed the importance of other factors in addition to medical intervention and concluded that a healthy-life style is most important. However Lalonde failed to evaluate the socio-political nature of the practice of such healthy life-styles.

However despite this variation, each concept of health shares a common weakness. They are reductionist in the sense that the individualistic approach neglects socio- economic determinants, and the collectivist approach places the individual within the general environment without questioning the individual him/herself. Moreover, recent studies have begun to challenge both views by introducing the linkages between health and the general well being of individuals. In this sense, health is no longer defined with reference to illness but to quality of life.

Although health is a very common term in everyday language and is associated with the quality of life, the measurement of health status is not so simple. On the one hand, the official definition of illness that consists of recording the symptoms of diseases and the records of cases provides the method for the objective determination of health. On the other hand, the individual's perception on his/her own health is another significant measurement, especially when we define health in terms of total well being. Nevertheless, most studies have been based on the evaluation of mortality levels. What makes death rates a useful analytical tool is the fact that they are reliable and available, making historical evaluations and cross national comparisons possible.

Despite the fact that a general evaluation of crude death rates would reveal significant information on the health status of a society, an evaluation of the major diseases that cause death would provide the ability to explore change in the social and economic dynamics affecting the health of populations. In other words, not only the number of deaths is important in the analysis of health, but also the causes of death. In that sense, the examination of the reasons for illness becomes important in the evaluation of death rates. In general there are four different influences on disease (Edmoston and Andes, 1983: 72). The first group includes biological characteristics of the individual such as age, sex, various genetic characteristics, and idiosyncratic susceptibilities. Although in the past, medical treatment and public programs could not affect these factors, innovations in the field of gene technology have been constantly enhancing the ability to control genetic determinants of disease. The second group of influences is related to individual characteristics that are acquired both voluntarily and involuntarily. These are usually behavioural habits like smoking, diet, or doing exercise. Thirdly, we move on to environmental conditions in both the family and the community. The former provides the fundamental nutritional and economic context while the latter offers a diversity of public services such as food, water, and sanitation. Lastly, direct medical and health interventions influence the health condition of the individual. In accordance with these influences, the health disease process in a community is often determined by a combination of these factors. These factors refer to both the material conditions of life such as the level of housing, and to social conditions like class differences. In addition, direct interventions as a result of health policies or social policies are another influences.

The consideration of the effects of these factors on disease connects the study of mortality to the concepts of incidence and lethality. Incidence is the frequency of illness in a population and is related to the characteristics of individuals such as immunity and resistance. Lethality refers to the frequency of death among sick people. Therefore, the study of lethality involves the nature of the disease and the level of treatment, while incidence reveals socio-economic determinants, which affect the demand, and supply of medical services (Behm, 1988: 26). That is to say the study of mortality has two pathways; one the explanation of biological determinants, the other the investigation of socio-economic determinants.

1.3. Explaining Mortality Reduction

The statistical evaluation in a number of analysis of mortality rates shows that many societies have experienced a significant mortality decline during the 19th and 20th centuries (Cobalet, 1989; Schofield and Reher, 1991). The controversy arises when researchers investigate the reasons for this decline and account for the differences between countries. The field is an interdisciplinary one in the sense that various sociologists, demographers, and economists have studied relationships among economic development, the availability of health care, resource distribution, and mortality within and across countries (Cobalet, 1989: 9). These studies do not neglect the effects of other factors, but try to reveal the most significant ones in mortality reduction.

The conventional view explains mortality reduction by reference to economic development and to medical advances. According to McKeown, economic and nutritional conditions are the central elements which played significant roles in

mortality reduction from 1848 to 1971(McKeown quoted in Reher and Schofield et al. 1991: 8). McKeown reached this conclusion based on the fact that resistance to air-born micro organisms (especially tuberculosis) had accounted for the majority of the decline in mortality during the nineteenth and twentieth centuries, and this was largely unaffected by public health measures like sanitary improvements. Thus, according to McKeown, mortality decline was the result of an increase in resistance to disease that was sustained mainly by nutrition. Although this analysis has downplayed the importance of medical advances, McKeown fails to explain the significance of medical intervention in the eradication of communicatory disease like smallpox.

Contrary to McKeown, another explanation points to the role of public health technology in the decline of mortality. In this approach, Preston argues that nutrition, income, and other indicators of standard of living cannot have been responsible for more than 25 per cent of the rise in life expectancy at birth in a number of national populations during much of the twentieth century (Preston in Reher Schofield et. al.1991: 11). According to Preston, mortality reduction has been achieved without measurable improvement in the standard of living in much of the developing world.

The common weakness of each analysis is that they put forward unicausal explanations of mortality reduction by excluding the other determinants of health, discussed above. Nutrition, living standards, public health, and sanitation are included among these determinants, but there are others directly or indirectly associated with them, such as living and work place conditions, urbanisation, and education. In addition the aetiology of old and new diseases, physicians and medical

science, mothers, infant feeding practices and hygiene, politicians, planners and reformers, and even climate many have significant effects on mortality rates (Schofield and Reher, 1991: 10).

Historical analysis of each determinant indicates that each differential has played a significant role in the decline of mortality in different times and in different societies (Gobalet, 1989: 18). According to epidemiological transition theory, a shift has occurred in the leading causes of death from pandemics to degenerative and human-made diseases. However the timing of this shift is different between developed and developing countries in the sense that while pandemics began to retreat in Europe in the late eighteenth century, this occurred in the twentieth century in the less developed world, accelerated by medical technology and public health measures. The argument continues by implying thresholds in mortality reduction. While at the beginning of the eighteenth century improvements in food supply and in living conditions were the main factors in declining mortality rates, the provision of public health measures and diffusion of scientific knowledge became increasingly important towards the end of the century. By the 1930s, biomedical and chemical advances had produced the sulphonamides, antimicrobial drugs, and insecticides such as DDT that had significant effects in mortality reduction. These advances also affected less developed countries as a result of the importation of these substances. However in the 1960s, the decline in mortality lost momentum as improvements in medical technology reached their limits. In other words, after profound reduction in one of the major causes of death, infectious diseases, by medical improvements, socio-economic determinants dominate the death-illness relationship once again. Thus, according to Adelman and Schultz, once medical advances reached a

threshold, resource distribution becomes more important in mortality reduction (Gobalet et. al.1989: 21). Indeed, Grosse and Perry have concluded that while economic indicators had the strongest association with life expectancy in the 1960s, 'social' indicators had this effect at the beginning of 1970. As a consequence, reductions in mortality rates in the less developed world have been associated with achieving cheap medical treatment through importation and increased involvement of these countries in international market. However given the stagnation in the mortality decline in less developed countries, it appears that until economic and social development result in improved standards of living, further reduction in mortality rates will be difficult to achieve (Gobalet, 1989: 21).

1.4. Theories of Socioeconomic Development in Relation to Mortality

Most researches undertaken by demographers, sociologists, and economists in regard to mortality rates are empirical, and practical in the sense that they do not address theoretical frameworks. Indeed, the general coordinator of a research project on infant and child mortality in the Third World, Hugo Behm, emphasized the need for practical knowledge in the process of mortality reduction (Behm, 1983: 26). Nonetheless, an empirical analysis of mortality reduction can be embedded in a wider context of theoretical studies of socio- economic development considering the range of determinants of health.

The assumptions of modernisation theory can be discussed in many previous evaluations of mortality reduction. Accordingly, those who suggest that economic development and improvements in living conditions are the primitive antecedents of mortality decline have reproduced the assumption that economic

development would bring progress in all areas. This approach emphasizes the internal dynamics of a society in the evaluation of progress. However, as the historical evaluation has shown us, many other researchers make references to external factors like medical technology or integration in the world economy. In this respect, world systems theory argues for the need for constructing universal consensus on the establishment of health service and international aid, while dependency theorists claim that the very nature of economic dependence hinders mortality reduction (Gobalet, 1989: 37). Both theories emphasize the difference between developed countries and developing ones, but the former asserts that incorporation into the world economy is a contributory factor to mortality decline, while the latter claims the opposite, suggesting that the differences will persist as long as dependence exists.

Despite such different theoretical assertions, the link between economic development and the health status of a society is emphasized by all theories. They only differ in conceptualizing the way socioeconomic development is to be achieved. Nonetheless, the apparent crisis in health provision in all societies challenges the predominant and straightforward view of development and concentrates on inequality between nations and within nations. Indeed, economic determinants, such as income inequalities, appear as one aspect of explanatory model, and increasingly the political context of socio-economic differences is taken into account. The incorporation of general policy preferences into the analysis has provoked a closer evaluation of health policies in particular (Navarro and Shi, 2001: 481). According to Navarro, political forces that are more committed to redistributive policies (both economic and social), and full employment policies, like social democratic parties,

have generally been more successful in achieving a decline in mortality rates and thus in improving the health of populations.

A significant contribution to the analysis of social class inequalities is the research conducted by the Working Group on Inequalities in Health (Black report, Townshed Davidson 1992). The committee was charged with collecting information about health differences between occupational groups and concluded that in every stage of life a discrepancy between social classes persists. As a result the reasons for such inequalities became one of the major concerns of studies (Green and Thorogood, 1998: 68). One of the explanations refers to the behavioral factors in different social classes, such as diet, or detrimental addictions and other risk factors. Another explanation focuses on the importance of social selection, which rests on the proposition that the least healthy members of the society end up in the lower social classes, whereas the healthiest individuals move to upper ones (Green and Thorogood, 1998: 72). Apart from these behavioral and social selection approaches, another explanation analyses the relationship between income inequality and health. Richard Wilkinson argues that life expectancy tends to be highest when social inequality is less pronounced, and social integration highest (Wilkinson, 1992). Accordingly his findings point to relative income differences as the most significant factor regarding health inequalities due to the sociopyscological impact of socio-economic inequalities. Indeed for Willkinson 'social cohesion' is the determinant factor in regard to health in developed countries, since disintegration in social relations results in psychological stress that leads to health problems in developed countries despite their material success. In this respect Wilkinson argues that improvements in the health status of populations is directly related with the emphasis

placed on equality in a society. He gives Japan as an example of an egalitarian society that reached the same level of life expectancy with the UK, in a short period of time following the Second World War (Willkinson 1996:134).

Although these studies are initial attempts to explain health inequalities, nonetheless they reveal the necessity of analyzing health status within the more general context of social, economic, and political areas. The political commitment to equality of health status in some countries like Cuba, Sri Lanka, and Japan provide the examples of the impact of political factors.

1.5. INFANT MORTALITY

Up to this point I have discussed overall mortality in general. From now on I will focus on infant mortality for practical considerations. Indeed what has been discussed so far is also valid for the evaluation of infant mortality. Infant mortality is the probability of death before the age one. It is estimated as the percentage of those who die within their first year compared to all live births. The analysis of infant mortality rate is significant because crude death rates have fallen significantly in many regions of the world, while infant mortality rates remain high in many regions, including some parts of the developed world (Behm, 1983: 10). In addition many countries have implemented special programs to speed the decrease in infant mortality rates with the collaboration of World Health Organisation (WHO) and other international agencies since 1970.

The infant mortality problem will be evaluated first by exploring the main factors contributing to infant mortality rates. Most data regarding infant mortality come from demographers with the aim of projecting rates of population increase of societies, subject interest to them. Fertility surveys usually provide data on infant mortality, which make easier to compare this demographic data and mortality ratios. Thus a well-studied determinants of infant mortality are, age and fertility. A second group is composed of socio-economic factors, which are mostly related to the level of community development. Lastly medical intervention in the general context of health policies is another factor affecting infant mortality.

1.5.1. Demographic Factors

In regard to demographic factors the sex differential is significant. Statistics reveal that death rates tend to be higher for males than for females (World Fertility Survey Report, 1984). Although it is acknowledged that this might result from the underreporting of female deaths due to some cultural considerations, this artifact is not statistically significant. Another factor is the age of the mother at the time of pregnancy. The relationship between infant death and age of mother is U shaped. When the mother is between 20 and 29 the risk is minimal. Risk rises when mothers are older or younger than 29. Third factor in the analysis of demographic differentials is birth order. According to the surveys, the first born infant is at greater risk and such risks appear only after the seventh birth. In addition the birth interval and the existence of previous reproductive losses increase the risk of infant deaths. All these factors are especially significant in the evaluation of individual risks of infant death in the clinical studies that are commonly conducted by fertility surveys

(Sandhya 1991: 21). Indeed high infant mortality rates in certain societies raise the questions of cultural aspects regarding marriage and birth giving. In other words demographic factors related to infant mortality may be very much related to the cultural characteristics of societies regarding factors like age of marriage.

1.5.2. Socio-economic Factors

Apart from the demographic factors, socio-economic determinants also have a significant role to play in an analysis of infant mortality. The most important factor related to infant deaths is the place of residence. Infant mortality is generally lower in metropolitan areas, and also regional disparities may emerge according to countries' specific circumstances. Indeed regional disparities may be related to geographical factors like altitude as in the case of Peru (Edmonston & Andes 1983: 83). Place of residence may also reflect disparities in standards of living and health conditions in general. Another factor is education, which has been emphasized in many studies (Caldwell, 1983; Garma y Garcia, 1983; Andes and Edmonston, 1983). Indeed maternal education is one of the most important factors in the infant mortality analysis. Although education is sometimes regarded as a proxy for standard of living, it has its own impact in the determination of infant mortality rates in the sense that education is a way of breaking traditional family roles by giving more weight to mothers in the decision making process related to child care (Behm, 1983: 20). Indeed the ability of a mother to contribute her own assessment of proper childcare is regarded as an important factor. However, more importantly, education reflects levels of wealth and power because it tends to coincide with socio-economic position. Other factors in this group include the provision of clean water supply and

sanitary conditions that are usually referred to as community variables (Sandhya, 1991: 101).

1.5.3. Health Policy Related Differentials

The last group of differentials is related to health services. Indeed improvements regarding the care of pregnant women and childcare have played a significant role in infant mortality decline. Vaccination and drug availability together with pregnancy monitoring constitute important and influential parts of medical service. However, the crucial point in mortality decline is the penetration of health services into all sections of society through effective policies. Political commitment has clear effects in improving the health of societies although the methods of doing this may vary. For instance while Cuba has employed socialist structure of health services, Sri Lanka has achieved relatively the same level of health statuses by employing market based strategies. Indeed the structure of health system reflects the prevailing ideology of the social system in the sense that the power relations within society determine the allocation of resources (Behm 1983: 26). Apart from general impact of health policies, the rising costs of curative treatment have lead to considerations of preventive policies and promotion of community involvement in recent decades.

In conclusion, it can be said that there is no predominant determinant in the health promotion of health in societies but despite the general constraints related to the level of socio-economic development health policies make significant contributions in to infant mortality reduction. Although the general level of income has an effect on infant mortality the contributions of health policy are significant (Wennemo, 1993: 429). In addition the stagnation in mortality rates has revealed that

GDP/capita has a strong but declining impact on infant mortality (Wennemo, 1993; Waldmann, 1992; Kennedy, Kawachi, Glass, and Prothow-Stith, 1998). Nonetheless, health policy may have significant effects on improving the health of populations.

After proposing the importance of health policy in the reduction of infant mortality, I shall deal with the health policy in Turkey in the next chapter in order to analyse basic approaches to the health provision that had impact on public health.

CHAPTER II
THE HISTORICAL EVOLUTION OF THE TURKISH HEALTH POLICY

"Health is becoming a central political and social issue in all countries"

Turkish Minister of Health, 1997

2.1. Introduction

In this chapter I shall first provide a brief explanation of the nature of health services in general and the major actors involved, and then discuss the role of the state in the health sector. I shall more concentrate on Turkish health policy in the following part and analyse the Turkish Health system and its problems with proposed solutions.

As the above quoted phrase clearly reveals, the issue of health has becoming one of the most controversial issues in both the developed and developing countries. It is no longer a technical issue based solely on medical matters, but a highly political, social and economic issue. The shift of emphasis towards the more economic aspects of health services is related to the financial crisis of the welfare state. The concept of health has been redefined according to the demands of this new development and public policies have been formulated accordingly. From an economic perspective, the emphasis is on an individualistic conceptualization of health that defines health as a market commodity. In relation to that definition then, the objective of health policy is determined by a cost- benefit analysis and the economics of health has become a general area of research. On the other hand, a

more social perspective focuses on the collective and humanitarian nature of health services. Indeed, health is sometimes regarded as a part of social wage and included in the sphere of positive rights. In this approach, the basic questions are related to equality in health care, and 'social justice' is considered to be a desired objective of health policies.

If we define the concept of health from a wider perspective, one often cited definition which comes from World Health Organization (WHO) is that "(h)ealth is not merely the absence of disease, but a state of complete physical, mental and spiritual and social well being" (WHO, 1978). Such a broad definition expands the scope of health service to include housing legislation, pollution controls, provision of sanitation and regulation of the food, alcohol and tobacco industries (Taylor, 1984). We might also extend this list to road safety regulations and town planning regulations as well. However in a limited range we can regard the provision of health care as the basic activity.

Whatever the range we apply in the study of health policy, the linkage between socio-economic development and improvements in the health sector has been widely accepted (Mazgit, 1998). The Alma-Ata WHO conference declared the importance of health in the process of development in 1978. This conference was a turning point in the analysis of the provision of health services. The social and economic aspects of health were stressed, and all countries were urged to take necessary measures to increase the general level of health in their societies by collaborating with other countries. This conference pointed to the necessity of state involvement in the improvement of health services and the problems were considered to be common to all countries regardless of the level of development. Thus, WHO

initiated a common strategy called 'Health for all by 2000' in order to achieve the objectives of all member states.

Despite this expanded attention to the health status of societies, the provision of health service has becoming a very controversial issue in all countries, both developed and developing. Although the developing world is facing more significant problems in terms of serious deficiencies in their health services, there are endless discussions about the quality and accessibility of services in more advanced countries as well. In fact, proposed policy agendas regarding health service problems can be very influential elements of many election campaigns. For instance, the US President Bill Clinton's proposal regarding health care reforms was considered to be one of the significant reasons for his subsequent election to office. Similarly, the electoral success of the True Path Party in the Turkish elections in 1991 was associated with the party program of "green card", a state supported healthcare scheme (Kerman, 1999).

2.2. The Nature of Health Care Markets

Despite the fact that the role of the state as conceptualized in the context of Keynesian policies has been widely challenged by both Marxists and liberals, a specific role has been assigned to the state in the health sector because of its specific characteristics. Indeed even neoliberal attempts to 'roll back the state' have encountered challenges to their arguments which have either limited the application of such policies or have affected the conceptualization of policy (Mohan, 1990). Indeed two important neoliberal regimes, those of Ronald Reagan and Margaret Thatcher, had to rely on state control of some market mechanisms to overcome the

failures of their health systems. Nonetheless, they changed their societies' policy agendas by decreasing the role of the state in the sphere of direct provision. Therefore the special structural characteristics of the health care becomes important in the analysis of the state's role in the market since these characteristics constituted the rationale for state involvement in the sector.

2.2.1. Structural Characteristics

First characteristic of health care is that the demand for health service is contingent upon the deterioration of health status, which makes the costs of the service unpredictable. This unpredictability necessitates an insurance mechanism or a social security system through which individuals overcome the financial difficulties of treatment (Bennett, 1997: 86). The provision of such insurance has three different solutions. Firstly private insurance companies might be the major actors, as in the case of the US. The second option involves a publicly mandated and partially publicly financed form of insurance mechanisms, which can be seen in France, Germany and Latin American countries. Last, there is the full responsibility of the government through its tax revenues the examples of which are the UK, Scandinavia and the former communist states. Second aspect of health care, health is a 'merit good', is that it affects other aspects of welfare and therefore provides positive externalities as a public good. For example the provision of health services may directly related to the reproduction of the labour force. Indeed these economic dimensions for health usually legitimize the state role in the market in liberal theories (Mohan, 1994: 78). However, the prevalent argument on the nature of the health market is related to its tendency toward monopoly and the asymmetric relationship

between the provider and the patient. Monopoly arises from high costs and non-tradability of the patient, and the asymmetric relations arise as a result of knowledge differences also requires the protection of patients from commercialisation (Bennett, 1997: 88)

The role of the state with respect to this characteristic occurs in three ways: provision, subsidy and regulation (Le Grand and Robinson, 1984). The extent to which these are embedded in policy decisions vary between different states and between different historical times. Indeed a structural analysis of the health care only reveals the economic rationale for state involvement, but analysis should include political approaches to the issue. The literature on welfare state has widely discussed the political aspects of state involvement but I will not go into details regarding these arguments. Nonetheless, the dynamics of the welfare state have been analyzed within three spheres: levels of socio-economic development, especially industrialization and urbanization; political mobilization of the working class; and 'constitutional development', measured in terms of the degree of enfranchisement of the population and the extent of parliamentarism (Mohan, 1990: 79). In that regard we can analyze the role of the state in health service in Turkey in terms of its main functions as provider, regulator and supportive mechanism with reference to specific historical periods.

2.3. The Evolution of Turkish Health Policy

Like in other countries, health policy constitutes one of the controversial issues in Turkish politics. Historically three distinctive periods in Turkish health policy can be discerned. These periods are not independent from the overall socio-economic

changes in society and reflect the political context of their times. Recently, the controversies in the discussions of the health system are mainly related to articulation of political concerns such as privatization of state economic enterprises, private insurance and hospital management. Despite the obvious need for substantive reforms in the Turkish health system, most proposals have not been subject to a realistic analysis of the current social structure and past developments which may shed light on current policy proposals.

The evaluation of health policy in historical analysis can be subjected to three distinctive periods. The first period is in the founding years of the Republic in which preventive policies were given due importance. The second period starts with the 1960 coup, and the nature of policy reflects the spirit of those years as socialization of health services was given precedence. The third period begins in the 1980s and the main focus of policy change was in line with the introduction of market mechanisms in the provision of health services. The changes in policy agendas cannot be considered separately from historical developments in Turkish politics, since the very nature of public policy is determined by the changes in the dynamics of political life.

2.3.1. Initial Years of the Republic

In the first years of the Turkish Republic health and social policies were given due importance because Turkish society had been devastated during the War of Independence. Apart from the effect of the war, the new Republic did not inherit an efficient health system from the Ottoman Empire. Except for a few hospitals, which were founded during periodic modernization attempts, charitable foundations

sustained the provision of health service and these were mostly traditional institutions (Toros, 1993: 20). Nonetheless some organized attempts had been widely taken to improve people's health. Among these were the High Council of Health (founded in 1831) for the control of communicable disease, the Council for General Health and Civil Medicine (founded in 1839) to deal with problems related to health personnel, and compulsory vaccination against smallpox which began in 1885. In addition, some modern hospitals were established in the nineteenth century in relation to the attempts to modernize the army. The general directorate of health connected to the Ministry of the Interior was founded in 1912. In addition to charitable foundations and the few modern hospitals, basic health service was provided by the system of "country doctors", a type of compulsory service. However, most sections of society, especially the rural ones, had no access to this service and more commonly traditional ways of treatment were employed in those regions.

The health system of the new Republic was also initially based on this system of compulsory service, but additionally protective measures were taken against communicable disease, reflecting the social aspects of early republic health policy. The ministry of Health was among the first ministries of the Turkish Republic, reflecting the importance given to health. In fact this ministry was also among the first Ministries of Health in the world (Country Health Report, 1997).

During these years, the country lacked a coherent structure for the delivery of health services and trained human power. In this period efforts focused on strengthening the infrastructure of health care services, including the required health facilities and human resources. Indeed improvements in infrastructure and human

resources were the two main national objectives, and the law regarding public health reflected these policies (Ege, 1998: 11).

In regard to the long-term objectives of public health, the Institute of Public Health (Umumi Hifzisihha Enstitusu) was established in 1928 with the objective of both formulating protective policy agendas and providing major protective services to society. In that respect the Law of Public Health (Umumi Hıfzısıhha Kanunu) was enacted on April 12, 1930 which constituted the basis of the health service. For the improvement of curative policies, many state and university hospitals were founded in different regions. In addition, continuous efforts were made to address the shortage in medical personnel through the formation of nurse/midwifery schools and medical schools.

President Ismet Inonu, Mustafa Kemal's successor, stressed the importance of health policy by declaring the development of protective policies and the fight against communicable disease as official state objectives at a meeting of the High Council of Health in 1945. Indeed the fight against tuberculosis, malaria and leprosy had already been initiated.

In addition, the Social Security Institution (Sosyal Sigortalar Kurumu) was established for the working class in 1945. This institution was to provide basic health service as well as retirement security to the working population.

Many organisational models were established in the multi-party period after 1945. Indeed Article 14 of the Public Health Law stated that the responsibility of both protective and curative health service would belong to municipalities. However, the 1930 Municipality Law attributed a wide range of responsibilities to municipalities which lacked necessary financial means. The Ministry of Health

opened Numune Hospitals (Sample hospitals) in big cities as an example for local governments. Although many hospitals were established in this period, the prevalent model that emerged was the 'turnstile' model where the physician provided health services to those who had paid their bills to his/her private health service (Aksakoglu, 1994: 54). The majority of people were stuck in that system and faced inadequate health service, especially in rural regions. The only improvement was the SSK, which provided health care at least to the working class through its own hospitals.

2.3.2. The Second Period; 1960 As a Turning Point:

In 1960, while the emphasis on protective measures continued, the main concern became the extension of health service to all sections of society, especially to the rural areas as a result of a turn towards general populist policies. The uneven provision of health service between the rural/urban and east/west areas was clearly acknowledged, and the Law of Socialization was enacted as the basis of policy. Indeed this law, which is widely known as law 224, was in keeping with the general political concerns of the time. The important point in relation to the June 27, 1961 constitution is that health was considered one of the social rights which states were obliged to provide. Article 49 states " state is commissioned to sustain everyone to live in physical and mental health and to have health care when needed." Although there had been no strong working class struggle, the makers of this constitution, the military and intellectual elites, tried to establish a welfare state. The reason for emphasizing social rights was related to the political dynamics of world politics, regarding socialist appeals and reform of war devastated economies. Indeed these

Nalcacı, Onuroğulları, and Ardıc, 1992: 58) A 15-year plan foresaw the extension of the system to the Black Sea Region in 1970, and later to South Eastern Anatolia. In addition to the organizational set up, a mandatory service law was enacted in order to provide needed medical personnel to rural regions. As a result of these measures, the health status of society rapidly increased in general during the 1960s but the problem of coordination and the lack of referral mechanisms constituted serious obstacles towards further improvements (Aksanoglu, 1994: 56).

Despite the high standards of the program there was opposition from the beginning. Professor Nusret Fishek, the Undersecretary of Health, was the leading figure in the program and had the approval of the constitutive parliament from the beginning (Fidaner, 1994: 56). However, the first Demirel government declared the need for abolishing the program after only two years because of the financial requirements of the program. Indeed the government changed Article 4 of the law that necessitated full-time work for doctors as a result of strong opposition to socialization in Diyarbakır (Fidaner, 1994: 57). This opposition came from specialised physicians who refused to give up their private establishments. Therefore doctors working at public hospitals could establish their own private services and this resulted in the diffusion of private arrangements to public hospitals. However, the socialization process continued because of the fact that people in rural areas were happy to get access to health services no matter what the format was. In later period socialisation directorates only dealt with the physical establishment of health centres and ignored the personnel and equipment requirements (Dirican, 1994: 49). Nonetheless the existence of health services or health houses in rural areas increased

elites were affected by world conditions but at the same time there had been certain complaints coming from the low-income levels of society.

Socialisation policy took a societal view of health and a holistic approach to provision. It was defined as providing health services free or partly free of charge at the point of delivery, funded by premiums and state subsidies and other allocations from the public sector budget. The organizational model had mainly four defining principles (Aksanoglu, 1994: 55). Firstly, the basic pillars of socialisation were proximity and inexpensiveness. The motto was " adequate health service to everybody where they need". Secondly, the organization was based on the population figures that would sustain planning. In other words, the number of people living in that area determined the establishment of health centres. In that way health centers would have to plan their activities for certain number of people. Thirdly, there was a multidisciplinary approach related to the holistic notion of health and the collaboration with the educational sector and the agricultural sector was envisaged. In other words, law necessitated cooperation between doctors, teachers, and veterinarians. The last organizational characteristic was the provision of ambulant health service. Indeed this service would include monitoring infants and pregnant women, health care for chronic patients, and protective measures at homes.

Although such policies had been declared before, this time the government identified itself with socialization policy and prepared a necessary action plan immediately following the promulgation of the law. The directorates of socialization were established in 1962 to implement the policy. In the implementation process pilot regions were selected having low level of service. The first pilot region was Mus, and 24 other provinces were included in the period of 1964-1969 (Belek,

the health status of the regions although the development was constrained by later policies (Figure2.1, 2.2)

Figure 2.1 Number of Health Centers and Health Posts: 1970-1993

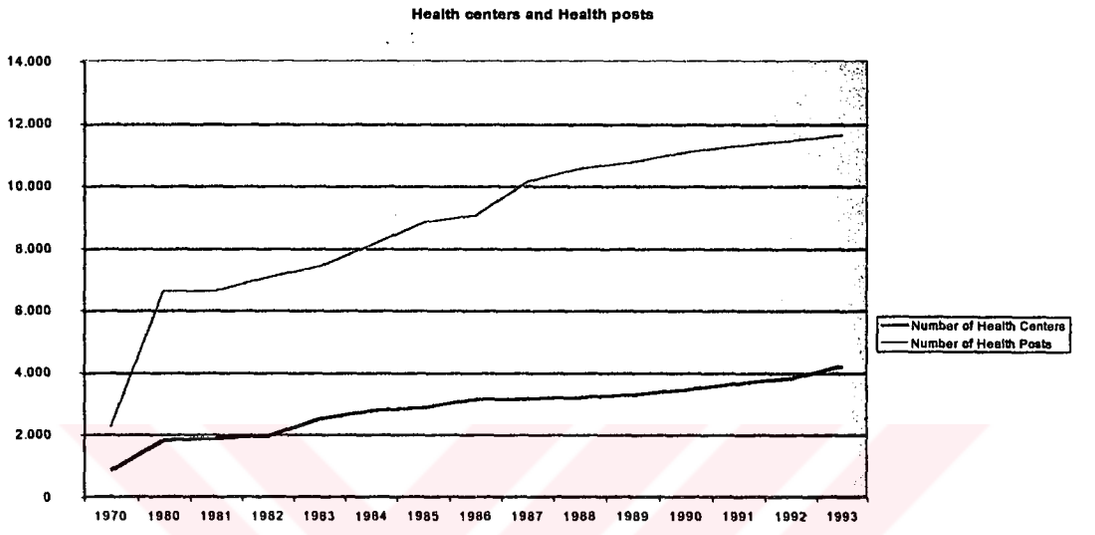
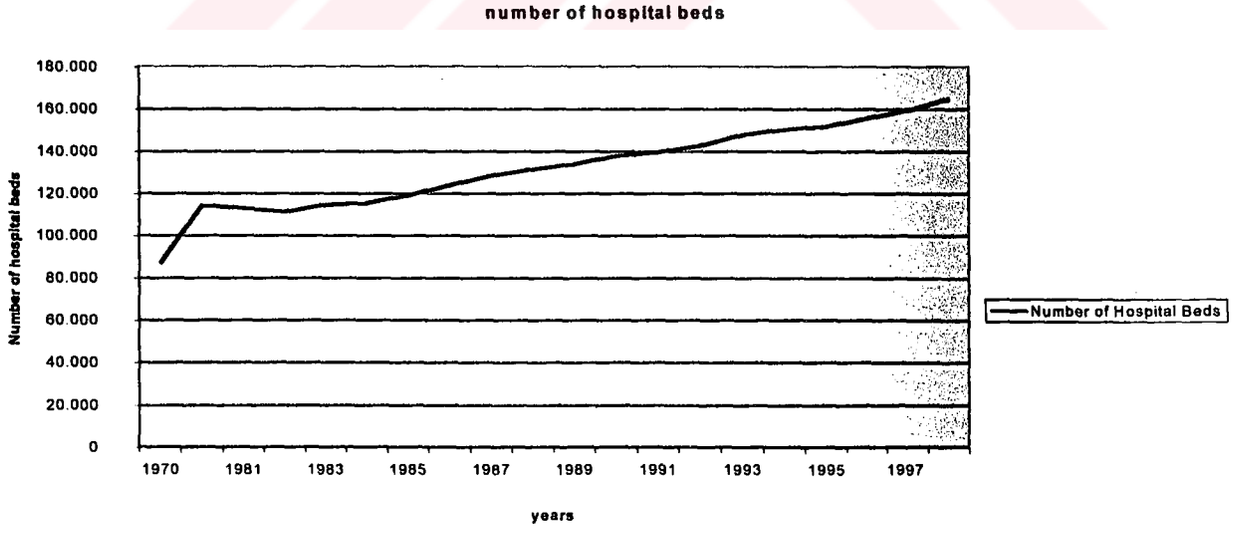


Figure 2.2: *Number of hospital beds: 1970-1997*



Sources: Ministry of Health Statistics

2.3.3. The Changing Perception in the 1980s

In the 1980s the inefficiencies of the socialization policy became more apparent as the health problems of society increased. The urban areas appeared as the major problematic areas in these years because of the migration from rural areas and the deficiencies of referral mechanisms. Indeed the socialization project had established the same organizational set up for both rural and urban areas, neglecting the specific requirements of the urbanites and mostly concentrated on rural ones (Fidaner, 1994: 58).

The major apparent difference in the 1980s was the conceptualization of socio-economic rights. In contrast to the 1961 constitution, Article 56 of the 1982 constitution restricts the state to the role of regulation in the provision of health service to the population. In addition, for the first time the constitution mentions general health insurance and supportive mechanisms in the private sector.

As a result of the increasing failure of the existing structures, new proposals aimed to introduce market mechanisms to the health sector. The concept of hospital management was included in the 1984-1989 five-year development plan, reflecting a general political movement towards liberalization. Thereafter fees for health service were increased and the government encouraged the establishment of private hospitals. The revolvary funds (doner sermaye) for public hospitals were established in 1983, forming the basic mechanism of revenue production from the health service. The 1983 government program aimed to prevent the high demand for city public hospitals by establishing referral mechanisms and promoting private investments to the sector (Soyer, 1996: 1117). However, health care for the poor sections of

society deteriorated as a result of increased fees for health care. As a response the social solidarity fund (FAK-FUK-FON) was established. In this period the establishment of subsidy funds and improvement of the health services fund compensated the decreasing budget revenues of the Ministry of Health. Although the health service fund was established to provide long term transformation to general health insurance, it was used mainly for drug procurement and for different purposes other than health (Soyer, 1996: 1119). The shift of revenues from general budget to funds provided a high degree of discretion to government in regulating the revenues of the system.

However, the system was under great pressure due to excess demand in hospitals and increasing costs. As the necessity of health system reform became obvious, the Ministry of Health prepared a national health policy program in 1992 based upon research conducted by the Research Company, Price Waterhouse. The major problems of the sector were found related to three main areas: administrative, financial, and human resources. (National Health Policy, 1992). The decentralization of administration, the foundation of semiprivate hospitals, and the establishment of a general health insurance scheme were proposed as solutions (Price Waterhouse, 1990). Following this report the Ministry of Health arranged 'The National Health Conference' in 1992, but government could not push through the prepared reforms. Although all parties seemingly agreed on these proposals, they increasingly met with challenges from other sections of society like the Association of Turkish Physicians (Turk Tabibler Birligi, TTB) and trade unions.

Nonetheless, the 1991 coalition government of Social Democrat Peoples Party (SHP) and True Path Party (DYP) stated the importance of further improvements in the socialization process and primary health services in their government program. Indeed Demirel had promised the establishment of the Green Card system that would provide basic health service to the poorest section of society in the election campaign. In addition to Green Card system, subsidies for private investments and the flexibility of cost determination increased the role of the private sector in the health market.

In regard to protective policies a lack of a coherent approach marked the third period. Nonetheless many campaigns were initiated in collaboration with WHO, UNICEF and the World Bank to improve the health status of children and mothers. For example, the Expanded Immunization Program was begun in 1988 in cooperation with UNICEF (Metin and Avci, 1997). In addition, the World Bank provided the Turkish government with financial means for specific projects like the program of mother and child health monitoring. However, most of these projects were temporary or they had a limited area of concern (Soyer, 1996: 1117). Hence, they did not constitute a general framework for the whole health system, which was in serious trouble (Country Report 1997).

To sum up, the development of health policy was very much dependent upon the general political context, and thus the socialization of medical care has lost its appeal since the 1980s, reflecting the effects of neoliberal policies of the era. Especially since the 1990s all governments declared the need for reform but due to general political instability a comprehensive reform plan has not been developed. Although some proposals have been heavily discussed in many contexts, there has

been no comprehensive attempt to discuss policy outcomes of the proposed solutions. In addition, serious challenges from the most disadvantaged sections of society have complicated the reform proposals and increased the need to critically consider the potential repercussions of the reform movements.

2.4. Current Health Care System

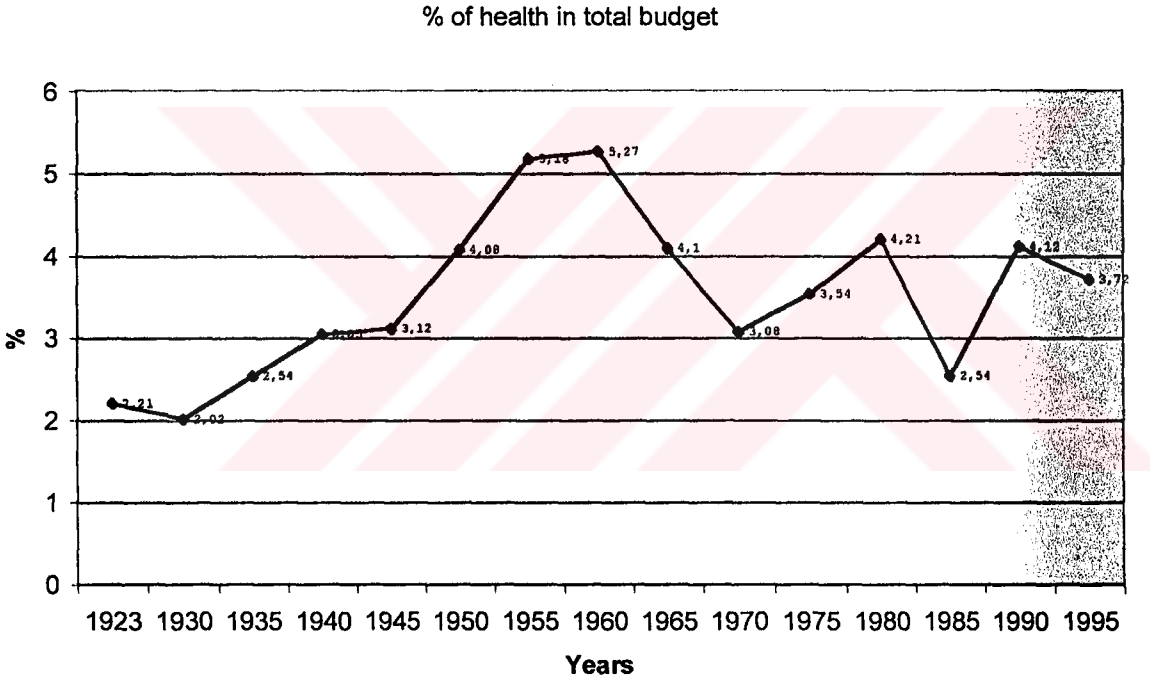
Within the structure of Turkish public administration, the central authority in health care delivery belongs to the Ministry of Health. However, the Social Security administration, universities, the Ministry of Defense, and private hospitals also provide hospital services. Different from other organizations, the Ministry of Health also provides the primary health care. Health centres and health posts mainly deal with primary health care within specified regions. In addition, mother and child health and family planning centers, tuberculosis dispensaries, malaria control centers and cancer control centers are specialized health agencies of the Ministry of Health.

In addition to provision of health care, the Ministry of Health is responsible for the country's health policy. The Grand National Assembly enacts the related laws, and the State Planning Institution prepares the long-term health policy in five-year development plans. The local administration of the Ministry of Health, provincial health directorates, directs personnel management and health facilities at the provincial level.

The budget of the Ministry of Health is included in the general budget of government. In general the share for health expenditures is small and has decreased. The largest allocation to the Ministry of Health was in the initial years of the socialization process (Figure 2.3). There are two major sources of funds for public

hospitals, namely state budget allocations and revolvary funds. Given the decrease in the allocation of general budgets, public hospitals have increased user charges. However, health centres revenues have decreased. In addition, although university hospitals receive some funds from the general budget, they mainly depend on their revolving funds. The premiums paid by employees and employers fund the social security hospitals.

Figure2.3 *Allocation of the State Budget to the Ministry of Health*



Source: Health Statistics yearbook 1995, the Ministry of Health

2.5. Problems of Health Sector

As the previous section indicates, the search for a comprehensive health system has become more apparent during the 1990s with the proposed attempts at reform. Unfortunately, the proposals themselves have many problematic aspects, and the government's failure in initiating any reform has worsened the situation. Indeed the

change in priority from primary health service to solely curative policies has resulted in the deterioration of the health status of the public. Although the reasons for this deterioration include more general issues in the field of socio economic development, deficiencies in health service constitute a significant factor.

Recent policy debates have focused on inefficiency of service and increasing costs in the health sector. Although the state subsidizes 40 % of service for those who are insured, all insurance institutions that are SSK institution for workers, BAGKUR for self-employed, and EMEKLI SANDIGI for state employees, are faced with decreasing revenues while experiencing increasing demand for service. As a result the quality of service has been continuously declining. Apart from this quality problem, there is the problem of equity with respect to access to health service. These institutions can only provide services to those covered by social security and many people in rural regions and from the poor areas of the urban regions do not even qualify for basic services.

Moreover, administrative and human resource related problems have further complicated the problem. Indeed hospitals have become the major areas of political patronage in the sense that the administrators of these institutions are appointed for their loyalty to the party in power rather than for their merit. The inefficiency of administration regarding the hospital management causes mismanagement of the allocated resources. In addition informal mechanisms for achieving health service either through clientelistic relations or through private consultations prevail in all state hospitals. The other problem related with medical personnel has two aspects. While the technical quality of the personnel has deteriorated because of educational

problems, the fatigue of personnel has increased as a result of decreasing salaries and increasing workload.

In conclusion, the Turkish health system has collapsed due to a number of convergent reasons. Financial shortage is the major source of problems but a lack of a coherent health system has increased the impact of these financial restrictions. In other words, the mismanagement of all resources, technical equipment, and human resources among other things exaggerate insufficient funding. Moreover, in addition to the problems of curative health services, the negligence of protective policies constitutes a further burden on the system.

2.6. Reform Proposals

It is clear that the Turkish health system is in need of reform like many other areas of Turkish society. Various attempts to reform the health system have met with failure. In 1992 the Mother Land Party (ANAP) Government prepared an action plan for health system reform reflecting the major concerns of the time. The proposals for reform mainly concentrated on the establishment of Family Physician System and General Insurance Scheme. However, the government failed to initiate the program due to political opposition (Turk Tabibler Birligi TTB, 1992).

One of the reform proposals, the Family Physician System was developed in order to solve the problems of excess demand in the hospitals. According to this proposal, a certain number of people would be assigned to one doctor who would be responsible for the initial consultation and maintaining the health records of individuals like the system in the States. This family doctor would send patients to hospitals only in the case of serious disease that could not be tackled by him/her.

Although this system was seen as a solution to the problem of excess demand in hospitals, the supportive medical services such as laboratory and radiology would not be provided to family doctors restricting the capacity of these physicians. In addition the place of health centres in the family physician system would be meaningless. Despite many discussions on the subject, the government did not formulate a coherent transformation program to the Family Physician System, which constituted the basis of failure.

Another proposal concerns the General Health Insurance Scheme. This program envisages the establishment of private health insurance for all. The initial aim of this proposal is to provide health insurance to the people who did not have any insurance. However, recently the program has devolved into the unification of three separate schemes. Although the state subsidy would address the problem of those who do not have sufficient financial means to pay general health insurance, the extent of health care that would be provided by this insurance is still controversial (TTB, 1992).

Nevertheless, in all such discussions the importance of protective policies has been neglected and discussion addresses only curative system policies. Health is increasingly conceptualized as an individual consumption good and the main concern is to decrease the state's involvement in the provision of service leaving the whole system to the market. Despite the breakdown of the system, no comprehensive reform proposal has been formulated so far. Turkey has to develop its reform policy in accordance with its socio-economic structures, taking account of the rural characteristics of society and the level of socio-economic development.

Next chapter will elaborate the effects of policy changes in Turkish Health policy on infant mortality rate and explore major determinants of infant mortality in Turkey as a case study.

CHAPTER III

INFANT MORTALITY RATE AND PRENATAL CARE IN TURKEY

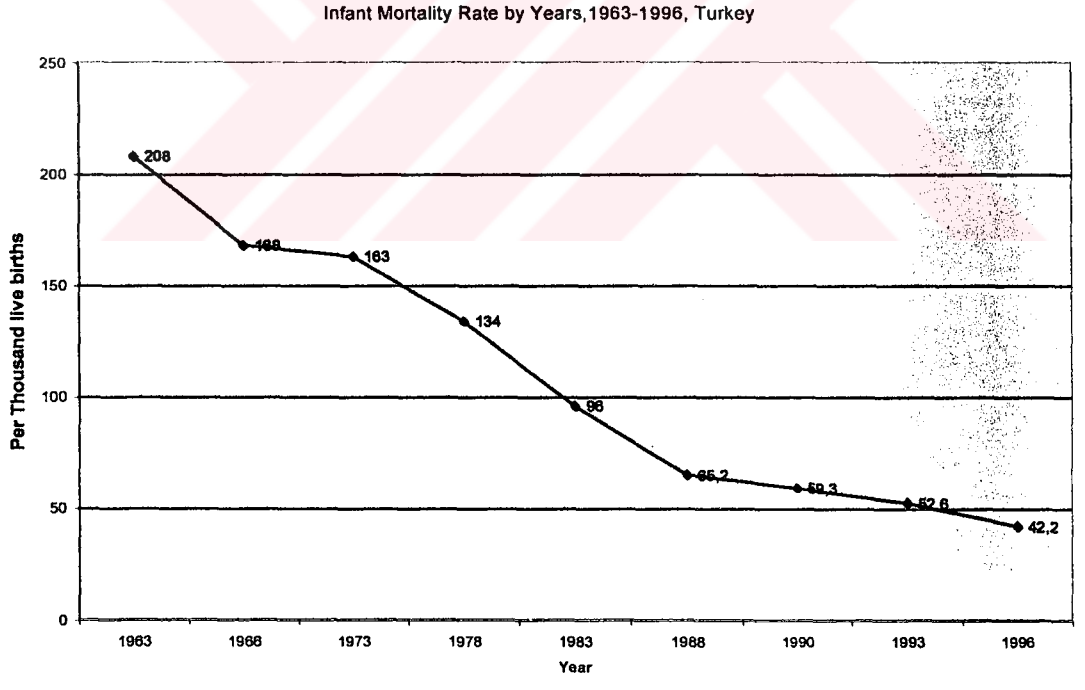
3.1. Introduction

The infant mortality rate reflects the general health status of populations. Although many indicators can be used to evaluate health, such as life expectancy at birth, mortality, and morbidity rates, I shall focus on the infant mortality rate to analyze the effects of policy changes in Turkey. The reason for choosing the infant mortality rate is to minimize the effects of other socio-economic factors on the analysis since health status of society is not only determined by the provision of health services but also by the general development of the economy (Mazgit, 1998). Indeed the infant mortality rate is mainly determined by the extent to which protective measures are taken. Therefore it is both useful for evaluating the impact of preventive policy and may also reveal major characteristics of the population in this regard. In this context, I shall analyze the infant mortality rate in Turkey and try to reveal its basic characteristics in the first section of the chapter. Secondly, I shall evaluate the provision of prenatal care and natal care, which I propose major factors contributing to the decline of the infant mortality rate.

3.2. An Overview of Infant Mortality Rate in Turkey

Infant mortality declined in almost all regions of the world between the 1960s and the 1990s. However, the speed of this decline varies from a 73 percent decline in East Asia (mainly China), down to a 34 percent decline in sub-Saharan Africa (Ross, Mauldin, Green, and Cooke, 1991: 8). Within each region there is a considerable diversity in infant mortality declines, as well as in current levels of infant mortality. Nonetheless, the most striking examples of sustained declines in infant mortality are those in Peru, Turkey, and Thailand (Department of International Economic and Social Affairs, 1983: 154).

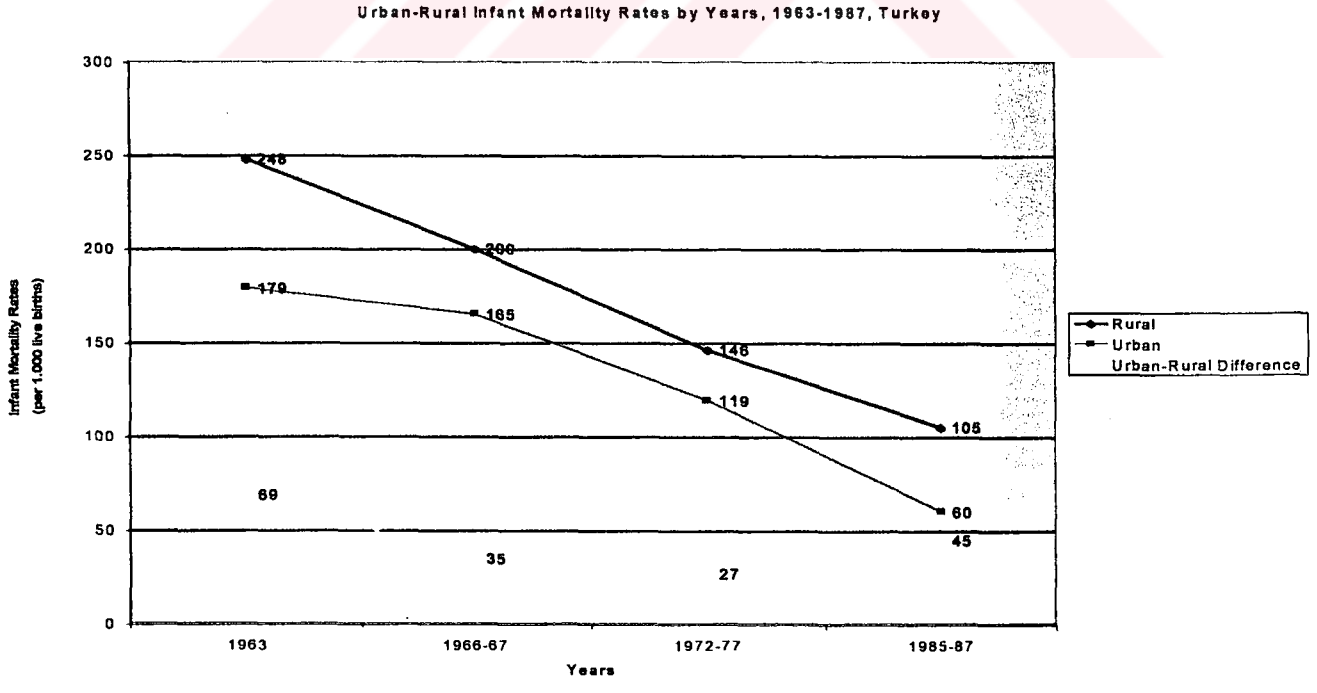
Figure 3.1: Infant Mortality Rate by Years, 1963-1996, Turkey



Source: State institute of statistics

As can be seen from the Figure-3.1, 40 years ago the Turkish Republic had a very high rate of infant mortality. I propose that the sharp decrease in the 1970s and early 1980s can be attributed to the improvement in preventive care in those years as well as socio economic development of the country. The protection of the health of mother and child was the basic service provided in the health centers and health posts, instituted as a result of socialization policies initiated in that period. In addition, specific organizational set ups called "Centres for Mother and Child Health", focused on the improvement in childcare. However, the slope of the curve started to decrease in 1990 due to the decline in coherent protective policies and the socialization process. Indeed financial resources of rural health centers decreased during that period, reflecting the shift of emphasis to hospital oriented health policy.

Figure 3. 2: Urban-Rural Infant Mortality Rates by Years, 1963-1987, Turkey

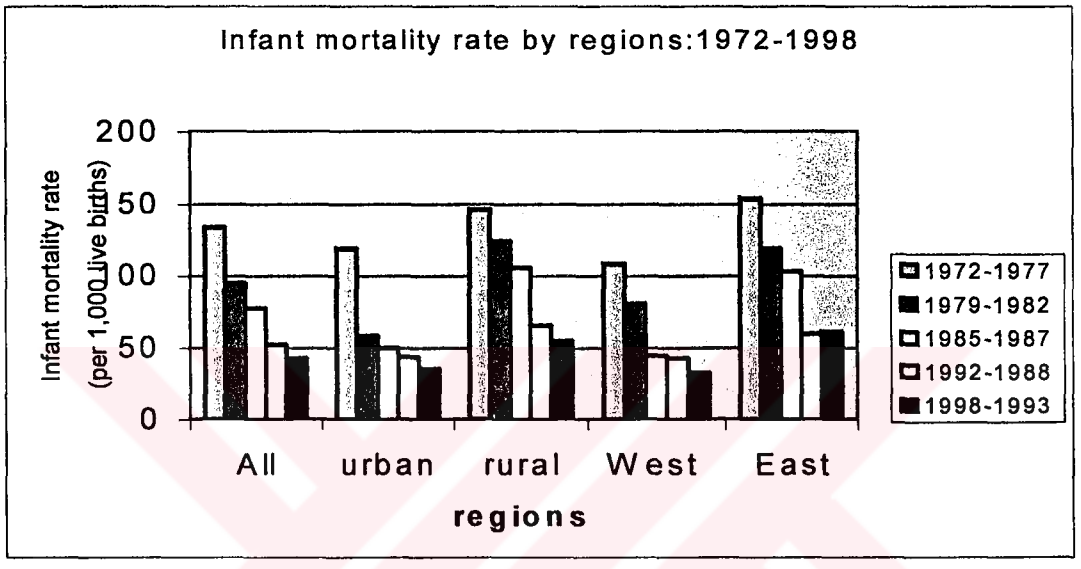


In regard to the analysis of the infant mortality rate differences between rural areas and urban centers, it can be said that there was a gradual decrease from the 1960s to the 1980s in both areas. In the initial years of socialisation, rural areas experienced a very sharp decrease reflecting the emphasis given to the accessibility of health care. Indeed in those years most of health centers and health posts were established, especially in rural areas. The provision of mid-wifery health care was a major factor, leading to this improvement. This system of health service could reach the most neglected parts of the country, although the nature of the service was very limited. Nonetheless, basic needs such as maternity and newborn care were obtained through these mechanisms. In addition, the rate of infant mortality in urban areas also decreased to some extent. In the 1970s the decline in the infant mortality rate was parallel in both areas. The establishment of hospitals in urban centers improved the health service in cities during those times, but the major development was the foundation of Mother and Child Health and Family Planning. These organizations focused mainly on emerging squatter areas in the cities.

Despite these improvements, the decline in the infant mortality rate lost speed in the 1980s. Furthermore the gap between the urban and rural areas also increased at this time. It is clear that the decline in infant mortality rate began to slow down in rural areas and the speed of this decline does not change much. On the other hand, the decrease in the urban areas has varied in speed, which seems due to parallel policy formulations. In that sense it can be argued that the repercussions of the socialization process have been most notable in the urban areas although the target was the rural region after the 1970s. Indeed, the scope of primary health care in rural

areas has remained very limited, largely as a result of financial restrictions that further decrease the effects of the socialisation policy in rural regions.

Figure 3.3: Infant Mortality Rate by Regions



Source: Demographic and health surveys, 1978,1983,1988,1993,1998

Another characteristic of infant mortality is related to the differences between East and West. The discrepancy between these regions has been acknowledged since the second development plan. The socialization process also was targeted to reduce this discrepancy in the 1960s. The determination of the first pilot regions reflected this emphasis, in the sense that the first two pilot provinces were Mus and Edirne, symbolising the extension of health service throughout the whole country. The reenacted law of compulsory service required certain years of service in Eastern and Southeastern Anatolia for all medical personnel. Despite these developments Figure 3. 3 reveals that the difference in the infant mortality rates

between the East and the West is increasing, although the rate has shown a gradual decrease in both regions.

Consequently, the evaluation of infant mortality rates supports the proposition that changes in health policy priorities affect the health status of society. The Socialization policy can be considered successful since overall infant mortality has dropped from 208 deaths per 1,000 live births to 42 from the 1960s to the 1980s. In fact this decrease was very rapid compared to other countries. However, the rate is still quite high (Tuncbilek, 1985: 15). In addition, major problem areas remain the same: rural areas and Eastern Anatolia. Moreover it is clear in Figure 3.1 that the decline of infant mortality has lost its momentum and the discrepancy between rural and urban areas has begun to increase. In this respect I shall focus on the specific cause of infant deaths in Turkey and analyse main factors affecting receiving prenatal care in the rest of the chapter.

3.3. Major Reasons for Infant Deaths in Turkey

Apart from general differentials in infant mortality, that is, demographic factors, socio-economic factors, and health care, the determination of major diseases that cause infant death are fundamentally important for health policy.

Congenital anomalies and placenta deficiencies are the most common reasons for infant mortality (Neyzi, Ertugrul, 1989: 15). Although the reasons for infant deaths vary in developing countries and developed ones, chromosome anomalies and obstetrical problems constitute major causes of death within the first few months. In spite of the similarity in apparent death causes, epidemic analysis reveals differences in reasons for such anomalies. For instance, exposure to

radioactivity would be an important factor in one of developed countries while the prevalence of marriage with relatives which is a very common practise of endogamy would gain importance for evaluating the congenital anomalies in Turkey.

The second cause of diseases in infant mortality is infections. In developed countries these infections are mostly related to the respiratory system, while in developing countries gastroenteritis is prevalent (Neyzi, Ertugrul, 1989: 15). Although the treatment for gastroenteritis is quite successful, the problems related to access to health services and ignorance result in infant deaths in many areas. Unhealthy living conditions and malnutrition increase the incidence of gastroenteritis in undeveloped regions.

Accidents are also an important factor in infant deaths. Compared to infections, the impact of accidents is rather low in developing countries. Nonetheless, falls, poisoning, asphyxiation, and traffic accidents are common reasons in this group. Especially if we consider the increasing rate of traffic accidents, the number of infant deaths in accidents becomes significant.

Although a distinction has been made roughly between developing and developed countries, the significance of each cause of death may change in individual countries. Whatever the reason for infant deaths, it is quite obvious that these deaths are preventable. Prevention does not only involve the treatment of disease but also, and even more importantly, entails prevention of disease. Protective measures are related to primary health care and despite its pronounced importance, the protective health care system, or community health care, is substandard in Turkey.

3.4. Factors for Receiving Primary Health Care During Pregnancy

As indicated in the first chapter health care services have great deal of impact in reducing infant mortality. The primary health care service constitutes the major health service that affects the health status of society. Although it includes both protective and curative health care, its main emphasis is on public health issues. This service is the first level of health care that provides counseling, information, education, and communication. In addition to these public services, clinical services for reproductive health including antenatal and postnatal care, safe delivery, family planning, monitoring the development of children less than six years of age, immunisation and mother and child care services. Moreover, another significant service is the early diagnosis and treatment of common infectious diseases. Despite the importance of primary health service, Turkish health policy is based on secondary service, which is hospital based curative care. Nonetheless, we can consider the socialization process as an attempt to direct policy towards primary level health service. In this sense, the previous discussion of historical trends in infant mortality reflects this shift of emphasis towards preventive policies. Furthermore, the evaluation of prenatal and post-natal health care services may reveal the origin of recent problems regarding the high infant mortality rate and discrepancies between different groups.

The literature on the infant mortality rate and prenatal care refers to many factors affecting access to health services and living conditions. These factors are usually classified as demographic factors, socio-economic factors and cultural factors (Sandhya, 1991). The studies of expert groups in a research project on infant and

childhood mortality in the Third World in 1983 pointed to the importance of maternal education in determining the likelihood of access to prenatal care (Behm, 1983). Indeed maternal education is the leading factor in analysing infant deaths. Edmonston and Andes have pointed out the variation in infant mortality between different altitudes in their study of Peru (Edmonston and Andes, 1983). Apart from the importance of maternal education in access to health services, economic considerations such as poverty and urbanization are other factors in determining the level of access (Edstrom, 1992; Wilkinson, 1996). In addition to differences in income levels, studies conducted in America reveal variation of prenatal care related to ethnicity. The research conducted by Zuvekaz and Lefkowitz indicated that infants of Mexican American descent have a lower mortality rate than infants born to non-Hispanic blacks and non-Hispanic whites because of the manner of traditional care of infants in Mexican Americans and their social cohesion (Zuvekaz and Lefkowitz, 2000: 243).

In regard to the infant mortality in Turkey, research has been mostly concentrated in clinical studies. Nonetheless, Cindoglu and Sirkeci analyzed the significance of ethnicity in explaining the variation in prenatal-care in Turkey (2001). They pointed out that after controlling for social class, ethnicity does not explain the variation in pre-natal care. On the other hand, Celik and Hotckiss indicated that Kurdish women are most unlikely to use assistance from health care professionals, perhaps due to cultural and economic factors that they were not able to control in their study (2000). Nevertheless maternal education appears an important factor in explaining high infant mortality rate in Turkey (Cindoglu and Sirkeci, 2001; Celik and Hotckiss, 2000; Aksit and Aksit, 1989).

I shall make an empirical analysis of the determinants of receiving prenatal and post natal care in order to evaluate the characteristics of infant mortality in Turkey in the rest of this chapter, while the previous section of the chapter focused on the historical trend of the infant mortality to asses the relationship between reduction and Turkish health policy changes. Indeed once the importance of health care in the reduction of infant mortality is stated, my attempt will be to explore the problematic factors in receiving health care to draw a line for health policy to decrease the infant mortality. I have used Turkish Demographic and Health Survey (TDHS) which was conducted by the Hacettepe Institute of Population Studies in collaboration with the MEASURE/DHS in 1998. The interviews were carried out in 8,059 households, with 8,576 women, and 1,971 husbands. There were three questionnaires from which I use the "ever-married" woman questionnaire.[1]

3.5. Statistical Model

My dependent variable is the index of prenatal care. This index is composed of seven different variables. The widely used variable in such studies is the place of delivery. However, the extent to which prenatal care is provided is also significant, especially for reduction of infant mortality. Therefore, I also included whether respondent received prenatal care and the timing of this prenatal check in my index. In addition, in order to evaluate the actual care, medical support during pregnancy is added, along with the questions regarding taking vitamins, iron tablets, and tetanus injections. In regard to delivery of birth, the assistance of health personnel is also added to the

[1] See for the details of the survey, Turkish Demographic and Health Survey, 1998 Ankara: Hacettepe Institute of Population Studies

index. Overall the index of prenatal care becomes a seven point variable, ranging from no care to very good. Most of the respondents are clustered around the upper levels of the index (Table 3.1). For clarification I recoded the variable into a four-point index for cross tabulations.

The independent variables affecting access to prenatal care are: having no education, type of place of residence, region, ethnicity, religion, covered by health insurance and poverty. In relation to infant mortality rates the most significant variables seem to be region and type of place of residence (Table3. 2). Type of place of residence includes urban and rural regions. Religion and ethnicity are included in the model to control cultural variables. Since there is no direct question of ethnicity, the mother tongue variable is used to reflect ethnicity and this variable is grouped into Turkish, Kurdish and its dialects (Kırmanca, etc) Arabic and others. Regarding the poverty variable, I only used the question of total household income below 50.000 million Turkish Liras. Although this variable may not reflect accurate measure for poverty, it may introduce control for income to some extent.

Table 3.1: Descriptive Statistics for Variables

Variables		N	%
Region			
	West	582	22
	South	511	19
	Central	527	20
	North	351	13
	East	698	26
Type of place of residence			
	Urban	1774	66
	Rural	895	34
Religion			
	Sunni-Muslim	1182	44
	Alevi-Muslim	91	3
	Other-Muslim[2]	1151	43
	Other Religions	245	9
Mother tongue for Ethnicity			
	Turkish	1973	74
	Kurdish	582	22
	Arabic	82	3
	others	32	1
Have Education			
	yes	2095	78
	no	574	22
Covered by health insurance			
	no	1328	50
	yes	1341	50
Total income in the household<50 million			
	no	1877	71
	yes	763	29
Index of prenatalcare			
	None	233	9
	Very inefficient	117	4
	Inefficient	260	10
	Moderate	207	8
	Fair	260	10
	Efficient	391	15
	Good	586	22
	Very good	615	23

[2] Those who do not report their sects.

Taking into account the relationship between infant deaths and the provision of health care, I developed an index for prenatal care and tested which variable is significant in determining access to prenatal care. Unfortunately, I could not analyze the factors of infant mortality rate due to the structure of the data file and my proposition regarding the relationship between prenatal care and infant mortality rate still needs to be tested. Nonetheless, according to the results of the 1998 TDHS, 95 of 1,000 infants whose mothers did not receive any antenatal care or delivery care died. Indeed receiving one of these reduces the death rate to 50 and having access to both decreases the infant mortality rate to 29. The infant mortality rate in the rural areas is 55 while it is 35 in the urban regions. Interestingly, the infant mortality rate is almost twice as high in the East as in the West. Furthermore the infant mortality rate with respect to mother's education also reveals a great difference (Table 3.2).

Table 3. 2: Infant Mortality Rate in 1998 DHS

Socio economic factors	Infant mortality
Residence	
Urban	35
Rural	55
Region	
West	33
South	32
Central	41
North	42
East	61
Education	
No educ.	60
Pri.comp	36
Medical maternity care	
Received no ANC or DS	95
Received either ANC or DS	50
received both ANC and DS	28
Total	42,7
ANC= Antenatal care DS= Delivery services	

I created the prenatal care index by using the responses for the last birth in the 5-year period prior to the survey, although the target population would be all the births within specified time, due to the way the survey was designed. Nonetheless, this inefficiency may not create a problem since the sample size seems to be sufficient to analyze the data.

3.6. Results and Discussion

In this model adjusted R square is .38, a good fit for a model based on survey data. In other words, the model explains 38 % of the dependent variable with these independent variables. The number of observations in the model is 2639. In this model the regression equation is:

$$Y: 5.579 - .120X_1 - 302.X_2 - .543X_3 - 1.084X_4 - 1.256X_5 - 1.010X_6 - .798X_7 - 566X_8 - .221X_9 - .124X_{10} - .345X_{11} + .744X_{12} - .643X_{13} - .499X_{14}.$$

Y: receiving prenatal care; X_1: South, X_2: North, X_3: Central, X_4: East, X_5: No education, X_6:Kurdish and dialects, X_7:Arabic, X_8: Other languages,X_9: Alevi-muslim, X_{10}: Other Muslim, X_{11}: Other religions, X_{12}: Covered by insurance, X_{13}: Rural area. X_{14}: Poverty

An analysis of the standardised coefficients reveals that the major significant variables in explaining access to prenatal care are education and the residence in the East. The strength of no education and the East are similar and the effects of these variables on the dependent variable is significant at $p<.001$. In regard to regional disparities all dummy variables for each region have negative coefficients. West is the excluded referent variable, hence the women living in the East have the least likelihood to receive prenatal care. Moreover, the Central

Anatolia also has a significant coefficient. In addition to the regions and no education variables, Kurdish ethnicity is also strong and statistically significant. However, other ethnicity variables have weak but significant Beta's. These coefficients suggest that ethnicity is another significant variable in explaining receiving prenatal and postnatal care and Kurdish ethnicity has the strongest one. Regarding the religion variables, the referent variable is Sunni- Muslim, and all variables have a negative relation with the dependent variable with respect to Sunni- Muslims but only the other-Muslim category is statistically significant ($p<.01$). However, we need a clarification of the other Muslim category, which is quite problematic due to the structure of the question, in order to explain this result. The strength of the rural variable is also important and it also is significant ($p<.001$), like the other important variables. Health insurance is also significant factor in determining prenatal and post-natal cares. Controlling the other factors, the correlation is .17, making this variable influential on the dependent variable. Lastly the coefficient of the poverty variable also has significant strength controlling all other factors in the model.

Table 3. 3: Regression Model

		Unstandardized Coefficients		Standardized Coefficients	Sig.
Model		B	Std. Error	Beta	
1	(Constant)	5.58	.10		.000
		.58			
	SOUTH	-.12	.11	-.02	.29
	NORTH	-.30	.12	-.05	.02
	CENTRAL	-.54	.10	-.10	.000
	EAST	-1.1	.12	-.20	.000
	No Education	-1.26	.10	-.23	.000
	KURDISH	-1.01	.11	-.19	.000
	ARABIC	-.80	.21	-.06	.000
	Other languages	-.57	.31	-.03	.08
	ALAWI	-.22	.20	-.02	.26
	Other Muslim	-.12	.08	-.03	.10
	Other Religions	-.35	.13	-.04	.008
	Covered by insurance	.74	.07	.17	.000
	Poverty	-.50	.08	-.10	.000
	Rural	-.64	.08	-.14	.000

a Dependent Variable: index of prenatal care
b Adjusted R square: .38

In conclusion these findings suggest that the level of education, regional disparities, geographic place, Kurdish identity, coverage of health insurance and poverty are the dominant factors in determining the level of access to prenatal care controlling for other variables. The importance of education can be related to women's sense of empowerment and control over their bodies, which may result in more demand for health care during pregnancy (Cindoglu and Sirkeci, 2000: 266). However, education may also reflect income levels and social class, which can determine the access to health service. Indeed the significance of having health insurance may also reflect the importance of income in receiving prenatal care. In

addition, those women who live in rural areas and in the East seem to be less likely to receive health care. Indeed not only the East but also Central Anatolia has a negative relation with prenatal care. One can say that the least likely woman to receive prenatal care and delivery service is an uneducated and uninsured Kurdish woman, living in a household with less than 50 million TL in monthly income, residing in a rural area of the East, in other words, perhaps the most marginalized member of Turkish society. Of course, one also has to state that all these defining variables are highly correlated with each other but regression analysis allows us to separate their influence.

One weakness of my model is that it cannot control for income levels as noted. Given that the regression analysis only includes a tentative measure of income, I have included a separate cross tabulation of the prenatal care index with income figures that were available in the data set. The results are presented in Tables 3.4-3.7.

Table 3.4: Prenatal care index (Total income in the household < 50 million T.L.)

			Total income in the household < 50 million	
			No	Yes
Prenatal care index	None	%	6	18
	Inefficient	%	24	31
	Fair	%	46	36
	Efficient	%	24	16
Total		%	100	100

Table 3.5: Prenatal care index (Total income in the household > 100 million T. L.)

			Total income in the household > 100 million	
			No	Yes
Prenatal care index	None	%	11	5
	Inefficient	%	27	11
	Fair	%	42	55
	Efficient	%	20	29
Total		%	100	100

Table 3.6: Prenatal care index (Total income in the household > 300 Million T.L.)

			Total income in the household > 300 million	
			No	Yes
Prenatal care index	None	%	5	2
	Inefficient	%	11	11
	Fair	%	54	64
	Efficient	%	30	23
Total			100	100

Table 3.7: Prenatal care index (Total income in the household > 500 Million T.L.)

			Total income in the household > 500 million	
			No	Yes
Prenatal care index	None	%	2	5
	Inefficient	%	12	5
	Fair	%	60	76
	Efficient	%	26	14
Total		%	100	100

These crosstabulations reveal the significance of income levels in receiving prenatal care. While 49% of those from households with less than 50 million Turkish lira as total income receive either no care or inefficient care, the figure is just the opposite for the highest income levels in that 90% of women from households with higher than 500 million receives fair or efficient health care. Indeed the Pearson correlation between prenatal care and income level below 50 million is -.214, which is moderately strong, and it is unlikely that this relationship is produced by chance.

Table 3.8: Correlation of Prenatal care index and income variables

		prenatal-care index	Total income in the household >100 million	Total income in the household >300 million	Total income in the household >500 million	Total income in the household < 50 million
Prenatal-care index	Pearson Correlation	1.000	.188**	-.002	-.071	-.214**
	Sig. (2-tailed)	,	,000	.959	.515	.000
	N	2669	2643	796	86	1836

** Correlation is significant at the 0.01 level (2-tailed).

Note: missing values for total income in the household>300 million and >500 million T.L are too much that may distort the correlation.

The variables for income are problematic in that they are not mutually exclusive. Thus, we can only be sure that the least and the highest values are correlated with prenatal care. Nonetheless, given the significance of education, we have to attempt to take into account income levels and regional discrepancies in evaluating the level of prenatal care in Turkey. In the regression model, although

regional and residential variables and education are strongly causally related to the dependent variable, there is a weaker correlation between religion and prenatal care. In addition ethnicity also is weakly related to prenatal care. However, in order to understand what education refers to, there has to be further study of the effects of socio-economic levels and income. In addition, further analysis regarding reasons for not receiving prenatal care is necessary, as well as an analysis of the extension of health care services and the impact of preventive policies, including the provision of health education, in order to formulate policy which can further reduce the infant mortality rate in Turkey.

As this empirical analysis reveals the problems of receiving prenatal and postnatal care are very much related to the socio-economic conditions of the Turkish society. The next chapter will attempt to emphasise the need for policy formulation in a wider socio-economic and political context.

CHAPTER IV

THE STUDY OF HEALTH IN SOCIAL CONTEXT

This chapter starts with an attempt to put the concept of health in a social context and after a comparison of health status of Turkey with some of developing countries continues with the analysis of the policy alternatives for prenatal and post natal care from wider perspective.

Health is an important aspect of our life. Although to be healthy may have a different meaning to everyone, the existence of disease is considered to be a state of unhealthiness without doubt. The Alma-Ata meeting of the World Health Organization pointed out the complexity of the concept and acknowledged that health is not only an absence of disease but also " a state of complete physical, mental, and social-well-being". This understanding implies that the study of health also includes socio-economic factors ".... health is not a thing apart which can be studied or understood separate from the general organization of society" (Blane et al., 1996).

In the above sense, the place of individual within society may determine his/her health status. In addition, the organizational practices and the accepted values of the health system are subject to the socio-economic and cultural characteristics of the society.

4.1. Social Determinants of Health

Despite this complexity of determinants embedded in the social system, most analysis in the field has used mortality levels as an indicator of health. The cross-national comparison of mortality levels indicates the controversial differences between nations. For instance, in 1990 women in Japan could expect to live an average of 81.9 years, while Canadian women could expect to live 80.4 years. This expectation is 78.8 years for American women. However, the differences between these countries in infant mortality rates are striking: 4.6 infants died for every per 1,000 live births in Japan, while the rate was 6.8 for Canada and 9.1 for the United States in 1990. The reason for the figures of these countries one of interest is that although Japan has comparatively good indicators, the amount of money spent on health was much less than the other two. Japan spent only 6.8 per cent of their gross domestic product on health care, while Canada spent 10 per cent and United States spent 13.2 per cent (Sullivan & Lavis, 1999: 315). Although further analysis is required to analyze the correlation between the level of health expenditure and health indicators, we can tentatively conclude that factors other than the health care also determine health status.

A number of researchers in the health policy studies have explored these other factors. Related to the discussion in the first chapter, the determinants of health are grouped in to three: individual characteristics, environmental conditions and medical interventions. The environmental conditions involve social factors in the model of classification. The social environment, which consists of income, work, and social networks, becomes crucial in the studies of health from a wider perspective other than the medical one.

In regard to work environment, the effects of working conditions on health constitute one of the clear examples of non-medical intervention factors. Nobel Latuareate Gunnar Myrdal articulated the notion of a vicious cycle of poor health and low income. His point was that people were sick when they were poor; they became poorer when they were sick and sicker because they were poor (Drache &Sullivan et.al. 1999: 3). Apart from the traditional focus on occupational health, recent studies have focused on the wider social and economic context of work (Marmot & Feeney, 1996; Lawis Sullivan, 1999; Phillips and Verhasselt, 1994). Siergist has suggested four important reasons for the central role of work in industrialized societies (Marmot & Feeney, 1996: 236). First, work provides a major source of income, which has an impact on living standards and opportunities. Second it affects social and psychological well being. Third, work may both promote and limit personal development, and lastly, it indicates social status. Regarding these characteristics work may affect health via different mechanisms apart from physical conditions of working environment. It may be argued that the differences between occupational groups are a result of different living styles and standard of living. Acknowledging the difficulty in separating the unique contribution of work, the research conducted by Marmot has revealed another dimension of work related to health in that a strong predictor of differences in heart disease between occupational groups is tied up with structural factors like individual control of the job (Marmot et. al., 1997). This conclusion implies that in addition to income provision, the psychological aspects of work become important factors in the health status of societies. Furthermore, the impacts of unemployment and job security on health are also further areas for research on this topic.

Another social factor affecting health is public policy. The application of a wider conceptual framework of health proposes a relationship between education policy and health. In addition to education, economic and social policies of the state are areas which have implications for health (Lavis & Sallivan, 1999: 318). The role of government in health is not restricted to the issue of health care provision in this context. Labor, trade, and fiscal policies also have health dimensions. The Alma-Ata conference had already declared the importance of governmental action in providing health for all by the year 2000. Although recent discussions have focused on the decreasing role of the state, the neoliberal arguments acknowledged the need for regulation in the health market under the name of "managed market" (Ham, 1994).

In addition to widening the scope of health policies, the concern for health has shifted towards equality in recent years (Philips &Verhasselt, 1994; Wilkinson, 1996; Tarlov, 1994). In a world system where inequalities persist or one even exacerbated with the effects of globalisation, economic development policies increasingly have included concerns for disparities. A World Bank Report (1993) states: "... Government policies which promote equity and growth together will therefore be better for health than those that promote growth alone"

Respectively, structural adjustment policies have been subjected to calls for " adjustment with a human face" (Weil et al., 1990). Adjustment policies, on the one hand, degrade the living conditions of the poor by increasing food prices and the cost of living as a result of abolishing subsidies and price controls. On the other hand, the austerity measures also demand decreasing expenditures for social services such as health which further creates problems in the health sector (Philips &Verhasselt,

1994: 23). However, further studies have to be made to assess the impact of structural adjustment policies on health, which is beyond the scope of this thesis.

Proposing the need for studying health in a broad social and economic context, I do not wish to imply that one may neglect the importance of health care provision. Indeed I propose that the starting point for any such analysis is the health system, but we need to assess health policy within its wider context. In other words, the structure of health policy is embedded in the social organization of society. In this respect, I will touch upon briefly the well-known sociological theory of epidemiological transition to analyse the reasons for improvements in health status of the societies.

4.2. Epidemiological Transition

The historical evaluation of diseases and mortality rates has shown that societies have witnessed a gradual change in their mortality and disease patterns. The nature and the speed of this change may vary both between societies and within them. The epidemiological transition, as Omran states, focuses on the shifting web of health and disease patterns in population groups and their links with several demographic, social, economic, ecological, and biologic characteristics" (Philips &Verhasselt, 1994: 13).

Epidemiological change envisages a shift in the leading causes of death from epidemics of infections and famine, to a pre-eminence of degenerative or sometimes "human-made" diseases (Gobalet, 1989). This theory envisaged one way of movement and corresponds with the modernist theories of development. Theory is also applicable for differentiating the health indicators of developed and developing countries. The modification of theory enables one to explain why some

developing countries experience deaths from infections, while degenerative diseases also become predominant at the same time. The defined epidemic periods may even overlap or may reverse (Philips &Verhasselt, 1994: 15).

Although epidemiological theory may have inefficiencies in explaining the variations among countries, the main controversy appears in explaining the reasons for this change. According to McKeown (1979), the economic and nutritional conditions are the explanatory factors for the transition. However, Preston (in Gobalet, 1989) argues that nutritional improvements and other indicators of living standards cannot have been responsible for more than 25 % of the rise in life expectancy at birth during much of the twentieth century. On the other hand, the historical evaluation of mortality reduction implies a threshold for both the effects of economic factors and public health measures. By the 1930s the invention of antibiotics had a great deal of influence on mortality reduction and changing disease profiles. However, in the later periods living standards became the relatively dominant factor since these antibiotics cured most endemics (Adelman & Schultz, 1987).

The analysis of the mortality decline also entails another question that envisages the role of the state in providing health care services. Although state is not the only actor in the sphere of health services, I shall concentrate on the rationale for state involvement in the health market.

4.3. The Role of the State

Health is one public service in welfare state policies. In the liberal sense the provision of health is considered to be necessary to increase production. Indeed the acceptance of health care as a socio-economic right may be linked to class struggles as well. Whatever the reason, the role of the state in the health market is rather related to the nature of health itself (Bennet, 1997; Drache et. al., 1999; and Philips, 1996).

Although the role of the state in the health sector has been acknowledged, the nature of this involvement changed after the 1980s neoliberal emphasis on the small state. The failure of state policies in responding to the demands of the public during recession periods increased the tendency towards privatization (Drache and Sullivan, 1999).

The arguments on privatization assert that although the market approach to health may be far from perfect, state regulation would be efficient for managing market failures. Health care as an economic commodity does not 'trade' like other goods and services (Evans, 1997). This is because demand for health care is not determined by desires but by necessities, and it is not subjected to the relationship of supply and demand. Therefore the market remains under the control of providers. In addition, the asymmetrical relationship between providers and patients affects the balance in favor of the providers. Despite these structural characteristics, the involvement of a third party, the insurance companies and the state, may reduce this disparity. In addition to the need for regulating the provision of health care, private insurance mechanisms are subjected to strict regulation of the state. On the one hand, the exclusion of high-cost diseases from the schemes diminishes the access of most

vulnerable groups like HIV patients or those who need continuous care. On the other hand, the administrative costs of private insurance mechanisms have increased dramatically (Kutnerr, 1997).

What has been emphasized in the World Bank Report of 1997 is an effective state that can regulate the market. This regulatory activity would ensure the universality of minimum level of health care. Hildebrand and Grindle (1994) suggest that while the 1960 and 1970 were the era of the developmental state, and the 1980 was the decade of the minimal one, the 1990s has become the era of the capable state (quoted in Bennett, 1998:10).

In the era of globalisation, no state is left alone to formulate its unique health policy. Apart from the debates on privatization and effective government, another aspect may relate the issue to regional integration politics. While early attempts of UNICEF and WHO were based on projects initiated through existing health systems, integration policies entail the transformation of the health structures of the member countries. In addition, health problems have extended beyond the boundaries of the nation-states like in the case of mad-cow disease and HIV have necessitated the cooperation between states. In other words, the scope of health policy has expanded beyond state boundaries through the increase in the mobility of goods, services and labor and the actors in policy making are no longer only the states. Indeed many non-profit civil society organisations have increasingly get involved in the policy formulations.

Nevertheless the role of the state is still significant factor in especially developing countries like Turkey which have experienced serious health problems. In this sense, the comparison of health indicators of Turkey with other developing

countries will reveal the importance of policies to decrease infant mortality in the rest of the chapter.

4.4. Health Indicators of Turkey and Health Policy

The analysis of the infant mortality rate in Turkey revealed in previous chapters that Turkey witnessed a high rate of decline from the 1960s to the 1980s. However the speed of this decline has slowed down in 1988. Indeed Turkey is one of the worse of developing countries. As it can be seen in Table 4.1, compared to countries at a similar stage of development, Turkey has a low life expectancy at birth and a high mortality rate under 5-year. However, the decline in the child mortality rate has still been dramatic. Despite this, figures for infant mortality rate and the percentage of the immunized 1-year olds are the lowest ones in Table 4.2. Nonetheless, infant mortality rate in Turkey is below the average of 115 for all developing countries (Philips &Verhasselt, 1994). Moreover, maternal mortality is also very high in Turkey and although the number of people per doctor and per nurse is not so different from for similar countries these percentages may not reflect the nature of the health service in Turkey. Another interesting figure is related to smoking, considered to be an unhealthy habit. One half of the population smokes in Turkey that may reflect the difference in terms of life styles. Although the analysis of health indicators and health system requires a detailed examination of socio-economic differences and cultural variations, these figures may help in pointing out the place of Turkey within developing countries.

Table 4. 1: Health Indices of Selected Developing Countries

	Population Urbanised (%) *1990*	U5 MR *(Per 1,000)* *1960*	*1990*	*Life expectancy at birth (years)* *1960*	*1990*	*GNP Per capita (US $)* *1989*
Jamaica (MHD)	52	89	20	62	73	1,260
Malaysia (MHD)	43	105	29	54	70	2,160
Mexico (HHD)	73	140	49	57	70	2.010
Thailand (MHD)	23	149	34	52	66	1,220
Turkey (MHD)	61	258	80	50	65	1,370

Sources: World Bank (1991); UNDP (1992); UNICEF (1991)
NOTE: HHD= High human development; MHD= Medium human development (UNDP categories, 1992)

Table 4.2: Infant Mortality Rate and Immunisation in Selected Developing Countries

	Infant mortality rate[3] *(Per 1,ooo live births)* *1990*	*Percentage of 1-year-olds immunized* *1981*	*1990*
Jamaica	16	38	86
Malaysia	22	69	93
Mexico	40	50	78
Thailand	26	48	91
Turkey	69	57	72

Source: UNDP (1992)

[3] The IMR in Figure 2.1 is different from Table 4.2. This discrepancy may be related to the difference of the data source used to estimate IMR in each statistics.

Table 4.3: Contraceptive Prevalence, Maternal Mortality, Smoking and Population per Health Personnel of Selected Developing Countries.

	Contraceptive Prevalence (%) 1985-7	*Maternal Mortality 1980-7*	*Adults who smoke (%)*	*Population Per Doctor 1984*	*Nurse 1984*
Jamaica	-	110	-	2,040	490
Malaysia	51	59	29	1,930	1,010
Mexico	53	82	32	1,240	880
Thailand	66	-	36	6,290	710
Turkey	77	210	50	1,380	1,030

Source: UNDP (1991)

The infant mortality rate in Turkey remains rather high when compared to other countries (Tuncbilek, 1989). Although the first chapter deals with the determinants of infant mortality extensively, we can briefly point to socio-economic , demographic, and policy related factors. Proposing the importance of prenatal care and delivery service in reducing the infant mortality rate, the factors that influence receiving prenatal care have become one of the crucial points in the analysis. Despite the fact that the determinants of health are related to the general context of the social system, the contribution of health care to the reduction of the infant mortality rate cannot be ignored. Indeed prenatal care is not only involves monitoring pregnancies but also providing support for possible problems like anemia. In this sense, the approach to prenatal care needs to be extended from delivery services and monitoring to support mechanisms as well. The extension of care would entail the education of mothers in baby care too.

The determinants of receiving prenatal care resemble the characteristics of infant mortality in Turkey. There is a discrepancy between the East and West, and the urban and the rural. In addition, another factor affecting infant mortality,

maternal education, is also an important factor in receiving prenatal care. However, all these three factors are related to each other and they require an integrated approach of study. As a general policy agenda, education has due importance together with health insurance coverage that is also a significant factor in receiving healthcare.

The historical trend of infant mortality is another concern of this thesis. Although Turkey has a relatively high level of infant mortality, the decline in the 1960s and 1970s was important. Indeed Turkey had experienced one of the fastest declines among developing countries (Department of international Economic and Social Affairs, 1983: 154). The socialization policy, which was initiated in 1961, made an important contribution to this decline. The establishment of health centers especially in the East and the rural areas provided basic health services to these regions. What was crucial in this process is that health policy was formulated from a wider perspective and health centers dealt with social and environmental issues as well. For example, the provision of clean water, which is an effective measure in preventing infections and diarrhea, was one of the targets of the socialization process. Furthermore, the maternal and childcare centers specialized in providing prenatal and postnatal care in the urban regions were established. However, starting in the 1980s the system lost its holistic approach and preventive measures began to be neglected (Soyer, 1996). The deterioration in the economy further affected the health system negatively and has exacerbated the problems in the system.

4.5. The Development of Mother and Child Care

The recognition of the socio-economic determinants of health has shifted the policy agendas towards public health considerations. Turkey, being one of the developing countries has declared the importance of primary health care (PHC) in development plans. Maternal and child healthcare also was to be one of the essential components of PHC.

The WHO conference at Alma Ata, Kazakhistan in 1978 , declared to be the turning point for PHC, put providing PHC for member countries on the agenda. Campaigns were initiated in many countries including Turkey to expand PHC. The emphasis was on children and mothers. UNICEF launched a "child survival and development revolution" that reached relative success within a short time (Price, 1996:140). This program involved four simple measures known as GOBI-EFF corresponding to Growth monitoring, Oral rehydration therapy, Breastfeeding and Immunization. In addition to these four components, the program involved food supplements, family spacing and female education. The strength of the movement comes from its holistic approach, but after the 1980s the program was criticized for being insensitive to the demands of individual countries (Price, 1996: 140).

Although the principles of the Alma-Ata declaration were widely accepted in many countries, the envisaged policies had to be employed at a time of recession and debt crisis in many of the Third World countries. While the PHC approach envisaged the provision of primary care at the community level with an integrated approach, many governments could not sustain universality of services at a time of recession. Indeed the scope of activities remained limited in many countries (Asthana, 1996: 183). For instance, in regard to GOBI-EFF, many states employed

mostly cost-effective measures such as the oral rehydration therapy and immunization. As a result, the comprehensive PHC turned out be a selective PHC that contradicted the integrated approach of the movement. The selective strategies were criticized for taking the issue at its face value undermining the substantive causes of diseases (Asthana, 1996: 184). In addition this selective approach further diminishes the impact of PHC by shifting resources towards tertiary care, that is, hospital-based service (Price, 1996: 144).

Turkey also experienced this shift of emphasis towards hospital-based service. The socialization process was criticized as being too idealistic in its approach (Dirican, 1994). During the 1980s many immunisation programs were initiated. However, these programs could not be integrated into the existing health system structures, and therefore were not sustainable (Soyer, 1996).

In response to the inadequacies of PHC, community participation has been encouraged in later programs. The developed projects involve stages such as planning, implementation, control, and evaluation (Aguledo, 1983). In the first stage, the role of the community in determining health needs and discussion of priorities are important. Secondly, the implementation is based on the training of community health workers and traditional midwives. In addition, provision of vaccines and the oral rehydration therapies are important facilities of the service. More importantly health education and home visits decrease the problems of accessibility and availability in these projects. The extension of the project requires taking measures for community development such as water, sanitation, and housing, or income generation. Thirdly, both local and central authorities take responsibility for control and supervision of the community health projects. Nonetheless, the development of

such projects requires a political commitment that is lacking in many developing countries, and the major problem of the community development project is related to the finance of these projects (Asthana, 1996).

In conclusion, on the one hand the literature on the determinants of health emphasis as the need for a comprehensive approach for achieving health for all and asserts that a prosperous economy which has a reasonably equitable distribution of wealth and social cohesion is necessary to achieve good health (Evans, 1999; Wilkinson, 1996; and Sullivan, 1999). Accordingly development policies have also aimed at growth with equity. In regard to the provision of health care, the role of the state has been acknowledged due to the nature of health as a commodity but the merits of the market need further study. In line with these arguments, Turkey also is in need of health system reform and the analysis of infant mortality reveals that the disparities between regions and certain sections of the society continue and have even exacerbated the problem of the health status of the society. In addition, the analysis of access to prenatal care indicates the necessity of an integrated approach, providing evidence that education is an important factor in receiving prenatal care.

CONCLUTION

Socio-economic factors affect health as does biology. The recognition of the socio-economic determinants of health raises the political aspect of the issue. In line with the analysis of health within a wider socio-economic and cultural context, the concept of health also can be extended to the wider notion of a complete state of well being. Nevertheless, the analysis of basic indicators like mortality rates is still an accurate method of determining the general health status of a society. In this sense, exploring the various determinants of the infant mortality rate may help reveal major contributing factors to the more general health problems of a country.

Compared to countries at a similar stage of development, Turkey has a high infant mortality rate. Although Turkey experienced a rapid decline in the infant mortality rate from the 1960s to the 1980s, major problems regarding the factors affecting the rate have remained. One major factor is related to the disparities between the East and the West. In addition the difference between the urban regions and the rural ones is still significant. Taking into consideration the socio-economic determinants of infant mortality, I propose the necessity of a comprehensive health policy based on a political commitment to decreasing the infant mortality rate in Turkey. Indeed the socialization process, which had such a comprehensive approach and political commitment in its initial years, contributed to the rapid decline in the recent past. Thus, the context of health care should include preventive measures focusing on the improvement of the community as well. Indeed the analysis of prenatal care has revealed similar characteristics to infant mortality in Turkey. This

similarity implies that one major problem regarding the high infant mortality rate is related to the regional disparity in receiving prenatal and postnatal care. In addition, education is another important factor in receiving prenatal and postnatal care. Although providing education at schools may require an extensive extension of education policy outside the purview of health policy, preventive health measures themselves would provide health education directly.

Given the importance of social organization on health, the role of the state becomes crucial to improving the health status of societies. Although the nature of health as a commodity requires the regulation of the health market even in a liberal context, the role of the state in developing countries such as Turkey regarding their continuing health problems is even more important. Indeed, market mechanisms alone cannot solve health inequalities since the origins of such health disparities are embedded in a wider context of socio-economic and cultural structures. Thus, it must be recognized that the importance of economic development that addresses the question of equity requires a continuing extensive involvement of the state in order to provide for such basic social needs such as health care which market forces have proved inadequate to meet.

SELECT BIBLIOGRAPHY

Aksakoglu, G. (1994) "Denenmeyen model: sosyallestirme", *Toplum ve Hekim,* 60(9): 52-56.

Aksit, B and Aksit, B., T. (1989) "Socio- cultural determinants of infant and child mortality" *Social Science and Medicine,* 28(6): 591-579.

Asthana, S. (1994) "Economic crisis, adjustment and the impact on health", in D.R. Phillips and Y. Verhasselt (ed) *Health and development.* London: New York: Routledge.

Asthana, S. (1994) "Primary health care and selective PHC: Community participation in health and development" in D. R. Phillips and Y. Verhasselt (ed) *Health and development.* London: New York: Routledge.

Behm, H. (1983) Committee for international cooperation in national research in demography: inter-centre cooperative research programme: final report on the research project on infant and child mortality in the third world. Paris: Cicred, Who/Oms.

Bellek, I., Onurogullari, H., Nalcacı, E., and Ardıc, F. (1992) *Turkiye Icin Saglık Tezi.* Istanbul: Sorun Yayıları.

Bennett, S (1997) "Health care markets: defining characteristics" in S. Bennett, B. Mcpare, and A. Mills (ed) *Private Health Providers in Developing Countries: Serving the Public Interest.* London: New Jersey: Zed Books.

Bennett, S., McPake B., Mills, A., (1998) " The public/private mix debate in health care", in S. Bennett, B. McPake, and A. Mills (ed) *Private health providers in developing countries: Serving the public interest?.* London: New Jersey: Zed Books.

Celik, Y. and Hotchkiss, R. (2000) "The Socio-Economic determinants of maternal health care utilization in Turkey', *Social Science and Medicine,* 50: 1797-1806.

Cindoglu, D. and Sirkeci, I. (2001) "Variables that explain variation in prenatal care in Turkey; social class, education and ethnicity re-visited', *Journal of Biosocial Science,* 33: p.261-270.

Department of international economic and social affairs. (1984) *International conference on population, 1984 " Mortality and health policy" proceedings of the expert group on mortality and health policy.* New York: United Nations Press.

Dirican, R. (1994) "Saglik hizmetlerinin sosyallestirilmesi ve basarisizlik nedenleri", *Toplum ve Hekim.* 60(9): 59-51.

Drache, D., and Sullivan,T., (1999) "Health reform and market talk: rhetoric and reality", in D. Drache and T. Sullivan (ed) *Health reform: public success and private failure*. London: Routledge.

Edmonston, B., and Andes, N. (1983) *Community variations in infant and child mortality in Peru: a social epidemiological study*. Paris: Cicred, Who/Oms.

Edstrom, J. (1992) "Indicators for women's health in developing countries- what they reveal and conceal: IDS Bulletin", *Ins. Dev.stud.* 23(1): .38-49.

Ege, R. (1998) *Ataturk ve Cumhuriyet Donemi Saglik Hizmetleri. 1923-1998.* Ankara: Turk Hava Kurumu.

Evans, R. (1999) "Health reform: what 'business' is it of business?" D. Drache, and T. Sullivan (ed) *Health reform: public success and private failure*. London: Routledge.

Fidaner, C. (1994) "Otuzuc yil sonra sosyallestirme yasası", *Toplum ve Hekim.* 60(9):56-59.

Garcia y Garma, I. (1983*) Some factors associated with infant mortality in Mexico.* Paris: Cicred, Who/Oms.

Gobalet G. (1989). *World Mortality Trends Since 1870* . New York: London: Garland Publishing Inc.

Green, J., & Thorogood, N. (1998). *Analysing Health Policy: A Sociological Approach*. London: New York: Longman.

Illsey, R. (1977) "*Everybody's Business? Concepts Of Health And Illness*" in Social Science Research Council, Health And Health Policy Priorities For Research (SSRC).

Kerman, U. (1999) "1980 Sonrasi Siyasal Iktidarlarin Saglik Politikalari". Unpublished master's thesis. Isparta: Suleyman Demirel Universitesi.

Lalonde, M. (1974) *A New Perspective On The Health Of Canadians*. Government of Canada.

Lavis,J., and Sullivan, T. (1999) " Governing health", in D. Drache and T. Sullivan (ed*) Health reform: public success and private failure*. London: Routledge.

Marmot, M., and Feeney, A. (1996) " Work and health: implications for individuals and society", in D. Blane, E. Brunner, and R. Wilkinson (ed) *Towards a health policy for the twenty-first century*. London: New York: Routledge.

Mazgit, I. (1998) "Ekonomik Kalkinma Surecinde Turkiyede Saglik Sektorunun Yeniden Yapilanmasi" Unpublished Phd thesis. Izmir: Dokuz Eylul Universitesi.

Mc Keown, T. (1979) *The Role Of Medicine.* Princeton: New Jersey: Princeton University Press.

Metin, B. and Avci, N. (1997) *Saglik Alaninda Dis Iliskiler.* Ankara: TC. Saglik Bakanligi.

Navarro, V. and Shi, L. (2001) "The political context of social inequalities and health" *Social Science and Medicine.* 52: 481-491.

Neyzi, O. and Ertuğrul, T.(ed) (1989) *Pediatri.* Istanbul: Nobel Tıp Kitabevi

Phillips, R., D., and Verhasselt T. (1994) " Introduction: health and development", in D.R. Phillips, and T. Verhasselt (ed) *Health and development.* London: New York: Routledge.

Price, P. (1994) "Maternal and child care strategies", in D. R. Phillips, and T. Verhasselt (ed) *Health and development.* London: New York: Routledge.

Price Waterhouse. (1990) *TC Devlet Planlama Teskilati Saglik Sektoru Master Plan Etudu.* Ankara: DPT.

Republic of Turkey Ministry of Health. (1997) *Country Health Report.* Ankara: Health Project General Coordination Unit.

Ross, A., Mauldin, P., Green, S., Cooke, R. (1992) *Family Planning And Child Survival Programs.* New York: The population council.

Sandhya, S. (1991) *Socio economic and cultural correlates of infant mortality: A demographic appraisal.* New Delhi: Concept Publishing Company.

Schofield, R., & Reher D. (1991) *The Decline Of Mortality In Europe.* Oxford: Clarendon Press.

Soyer, A. (1996) "Turkiye'de Saglik Hizmetleri: 1980-1995" in *Yuzyil Biterken Cumhuriyet Donemi Turkiye Ansiklopedisi.* Istanbul: Iletisim Yayinlari.

Stacey, M. (1977) *Concepts of Health and Illnesses*: A Working Paper on the Aspects and Their Relevance for Research in Social Science Research Council.

Tarlov, R.,A., (1996) "Social determinants of health: the sociobiological translation" D, Blane, E. Brunner, and R. Wilkinson (ed) *Towards a health policy for the twenty-first century.* London: New York: Routledge.

Toros, A. (ed) (1993) *Turkiye'de Nufus Konulari: Politika Oncelikleri.* Ankara: Hacettepe Universitesi Nufus Etutleri Enstitusu.

Tuncbilek, E. (ed) (1988) *Infant Mortality in Turkey; Basic Factors*. Ankara: Hacettepe University Institute Of Population Studies.

Turk Tabibler Birligi Konseyi. (1992) *Saglikta Gundem: Herkese Esit Firsat Mi? Serbest Piyasa Egemenligi Mi?* Ankara: TTB.

Waldmann, R. (1992) "Income distribution and infant mortality", *Quarterly Journal of Economic*. Nov: 1282-1302.

Wennemo, I. (1993) "Infant mortality, public policy and inequality-a comparison of 18 industrialized countries 1950-85", *Sociology of Health and Illness*. 15(4): 429-445.

Wilkinson, R.G. (1996) *Unhealthy Societies: The Afflictions Of Inequalities*. London: Routledge.

Zuvekas, A. and Lefkowitz, B. (2000) "Mexican American Infant Mortality Rate: Implications for Public Policy" *Journal of Health Care For The Poor & Undeserved*. 11(2): 243-258.