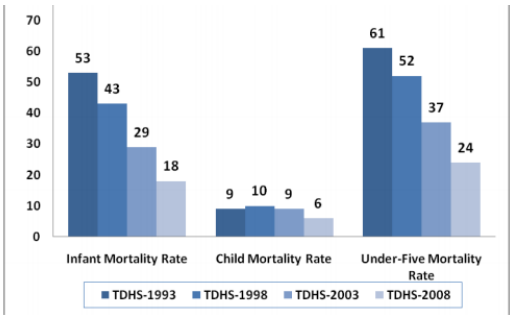
Applying the Ready-Willing-Able Conceptualization to Mortality Transitions in Turkey

Introduction:

At least until the end of 1990's, persistently high infant and child mortality rates in Turkey were described as a "demographic puzzle" given the country's relatively high levels of socioeconomic development and low fertility rates. What was equally persistent was the urban/rural and regional variations in these rates, usually explained as a result of uneven exposure to secularization and modernization, and by the uneven distribution and public use of effective modern health care services among the population. By the start of the century, there were significant improvements in comparison to the 90's and before, as shown in the following figure (DHS, 2008):



Even though the rates have fallen today, previous investigations on infant and child mortality change in Turkey have found that the typical socio-economic determinants such as education, income-level, occupation and housing (as well as the broader socio-economic development) may have less explanatory power than cultural determinants. According to these studies, gender-related and cultural attitudes, especially of mothers, are most significantly related to the health of children, and therefore to reductions in infant and child mortality.

Against this background surges the possibility that in a developing country context, an ideational and attitudinal change at the level of families is as much relevant to mortality declines as socio-economic improvements. If one assumes that in pre-transitional (high mortality) societies individuals already engage in a number of traditional preventive and curative health care behaviors, one requirement to produce sustained mortality decline would be the redirection of these traditional practices to the modern health care system. Such redirection depends on individual perceptions and social definitions, which shape beliefs about the relative efficacy of modern health care as compared to traditional alternatives. In a country like Turkey, individual perceptions on mortality risks might be very diffuse, and it is very likely that there have been cultural lags between the changing empirical risks of child mortality (parallel to medical improvements), on the one hand, and the perceptions of these risks, on the other. The cultural lag may have resulted from parents' distorted mortality probability perceptions or from lack of access to effective social learning mechanisms, but also from resistance to modern institutions and methods because of individual religious beliefs and fatalistic attitudes.

This paper models the parental decision-making about the use of modern health services after a child's illness as an adoption of a new form of behavior. The approach is novel in the sense that the goals are a) to identify the economic as well the attitudinal and cultural dimensions in familial decision-making processes regarding treatment options, b) to develop measures and indices to capture the decision processes, and c) to assess the relative importance of these changes for infant and child mortality reductions that have took place in Turkey over the last twenty years.

Background:

When we look at the large and sustained reduction in mortality that has taken place in virtually all developed countries, we see that much of the decline is due to decreased mortality from infectious diseases, that is, infectious diseases to which children are most vulnerable, Although many theories have been advanced to explain why and how mortality levels change in human populations, the classic debate posits improved living standards due to economic growth instead of the application of modern health technologies as powerful determinants of mortality improvement. More recently, though, socio-cultural and behavioral factors have been advanced to account for declines of mortality across diverse societies. These more recent theories of mortality decline (originally proposed by Caldwell and applied to less developed countries) emphasize the role of culture and personal behavior in health improvement. A focus on the importance of cultural attitudes and beliefs particularly by women regarding their children's well-being, as well as the examination of actual health behaviors are used to delineate the mechanisms through which cultural, social and behavioral factors influence health. Furthermore, maternal education is a crucial factor in explaining reductions in child mortality, as it is associated with a greater autonomy of women within the

family with important health benefits for children in addition to other socio-economic advantages that it brings to the family.

For Caldwell, maternal education is significant because it is a driver of social change (1986), and social change is different from economic and technological change because it increasingly makes parents part of a new culture – a global culture of largely Western origin. As a result, parents opt out of traditional culture, rejecting to accept traditional explanations of illness and traditional cures. Shift from traditional to modern practices in order to avoid child mortality is also discussed by Montgomery (1998), who applies the diffusion explanation to mortality changes in developing countries. A central concern for Montgomery is mortality risk conceptions, which have somehow failed to engage the interest of demographers perhaps because in demography the passage from socioeconomic change to individual perceptions of change has been assumed to be immediate, or to involve lags of little consequence. Montgomery argues to the contrary by stating that in the case of mortality decline in developing countries, individual perceptions are likely to be diffuse, are possibly biased upward in relation to the empirical risks, and are probably rather slow to adjust to declines in those risks. When laypersons attempt to understand mortality decline, they are likely to bring to the task a great variety of rules of thumb and heuristic standards of judgement. Individuals' understanding of probabilities and risks are not perfect, especially so when the probabilities are changing. The usual perceptual difficulties are greatly amplified in the case of mortality by the fact that mortality decline is not fully exogenous, but rather involves a new set of social and political actors and institutions constituting the modern health care system, whose methods may not be initially accepted. In other words, mortality decline is not just a matter of correct assessment of the external environment by individuals, but also a matter of how such new institutions establish credibility and win the trust of their patients. Individual perceptions of mortality risk are not likely to track the improving empirical realities without an intervening period of upward bias and uncertainty, and it is here that social learning is the key, as information can be drawn from interactions with social network (involving discussion with peer groups and conversations with the better-educated), as well as from media messages and the modern health sector itself.

Research Question:

For Turkey, previous studies on infant and child mortality have found that the typical socio-economic determinants such as education, income-level, occupation and housing (as well as the broader socio-economic development) may have less explanatory power than cultural determinants. According to these studies, gender-related and cultural attitudes, especially of mothers, are most significantly related to the health of children, and therefore to reductions in infant and child mortality. For example, one anthropological study based on in-depth interviewing conducted in 1988 on a sample of 1000 households in an Istanbul inner suburb found that women's attitudes towards abortion had more explanatory power than their levels of schooling, which, according to the author, suggested that the influence of education should not be considered in isolation from the wider societal and cultural context (Gursoy, 1992) Based on the results of their quantitative study, Behar et al (1999) stressed the significance of cultural attitudes and practices by arguing that child mortality is a silent and significant reflection of the lifestyles of the local community under study, relative values attached to gender and age, and cultural norms governing the balance of power between generations.

Building on the socio-economic and diffusionist explanations on mortality declines in developing countries explained above, I ask the following question: Given the reductions in infant and child mortality during the last twenty years in Turkey, are the declines mostly attributable to improvements in socioeconomic factors, or to attitudinal changes that have taken place and distanced individuals and families from traditional beliefs, and from fears related to the modern health care system? In other words, I attempt to understand the relative contributions of economic and moral change to early life mortality transitions, and how such contributions have shifted over time.

Research Approach:

The model used to describe the adaptation to new form of behavior (referring to the parental decision on the use of modern health care when a child gets ill) is taken directly from the formulation of Coale (1973). The model applies to fertility transitions, where the outcome variable success refers to the use of modern contraceptive methods by couples. The theory is based on a set of three preconditions, *readiness, willingness and ability* that have to be jointly met for a modern fertility transition to take place.

$S = R \cap W \cap A$

Under to the *readiness* condition, couples adopt a new form of behavior only if this yields a number of benefits for them and for their already born children. These new forms of behavior must be advantageous to the actor, in other words, their utility must be evident and outweigh their disutility. Formulated this way, the condition of readiness simply refers to the micro-economic cost-benefit calculus that actors utilize in decision-making processes.

The notion of *willingness* refers to the considerations of legitimacy and normative (mainly ethical and religious) acceptability of the new pattern of behavior. This evaluation occurs against the backdrop of internalized normative structures existing in societies at any point in time. The basic question addressed by willingness is to what extent new forms of behavior run counter to established traditional beliefs & codes of conduct, and to what extent there is a willingness to overcome moral objections and fears. The willingness condition represents the moral dilemma and cultural lag during the transition into a new mode of behavior. Even though the European Fertility Project has linked it to the concept of secularization, referring to the reduced credibility given to religious prescriptions, the condition may be conceptualized more generally to refer to the legitimacy of interfering with nature / with a 'natural order' as a cultural construction. This way, it deals with the belief in the power that individuals have to alter this natural order, therefore depends on dimensions such as 'fatalism versus self-directed destiny'. Lastly, it takes into account individuals' trust in modern institutions and their public services as one component of acceptability. Perceptions and social definitions play a key role in the acceptability of the new mode of behavior as they shape beliefs about the relative efficacy of modern health care methods when compared to the traditional alternatives.

Coale's last condition of *ability* requires that the effective means of achieving the desired outcome are available and accessible, and procedures that will produce fertility limitation are known by the couples. The ability condition represents the economic dimension with an emphasis on the technical means, which are material, legal and organizational (often at the macro-level).

The application of this model to study mortality change is a new approach in the sense that the Ready-Willing-Able conceptualization has only been applied to fertility transitions in the demographic literature. Lesthaeghe and Vanderhoeft (2001) who provided further modeling by introducing the heterogeneity of R, W and A scores at the level of individuals in order to trace how new innovations are adopted under different conditions of shifting population distributions of R, W and A, argue that the model can be applied to any matter that has both an economic and a moral dimension. I therefore apply the model to mortality transitions in Turkey, and interpret the Readiness, Willingness and Ability conditions the following way for fertility:

In the case of infant and child mortality, it is hard to think that parents would not be Ready to prevent the death of their children or see the aversion of death as beneficial to themselves and their other children. For this reason, it might help to think about the Readiness condition more broadly for mortality, and to include the notions of agency and individual autonomy. Because the only respondents of the DHS surveys are ever-married women, Readiness then becomes related to the issues of female empowerment and autonomy, and its absence implies not being able to control although might be willing and/or able.

Montgomery argues that in a developing country context one situation that a family might face when their child falls ill depicts a "health decision environment" where many social and perceptual issues are faced by family members as they attempt to evaluate mortality risks. Parents and sometimes other family members enter this health decision environment in order to evaluate the different treatment options, and while doing so act as rational actors who choose either traditional / no treatment or modern health treatment for the child. The Ready condition may not to be met when the mother does not enter this health decision environment and thus not participate in the decision-making process as one of the rational actors, and therefore lacks agency that other family members (particularly the father) have.

Mother's lack of agency results from relative powerlessness in comparison to the father or to other family members, and is more common in societies where patriarchal social relationships and institutional arrangements are still prevalent. In such contexts, it is more likely for mothers to be excluded from decision-making processes taking place at the household-level and these involve decisions related to children's health matters. Autonomy as a key concept here is defined as 'the control women have over their own lives, the extent to which they have an equal voice with their husbands in matters affecting themselves and their families, control over material and other resources, access to knowledge and information, the authority to make independent decisions, freedom from constrains on physical mobility and the ability to forge equitable power relationships within families'. Having no latitude for individual decision and experimentation after the child has become ill indicates that the mother lacks autonomy, and for the same reason, probably had no control as well over the causes of illness prior to disease. On

the contrary we expect that mothers with a high autonomy are cooperating to a larger extent with both preventive and curative health services, and more active in the household and everyday life to ensure that the child does not become sick or have an accident in the first place (through nutrition and supervision, for example.) If we focus on the 0-1 age group only and think about women who recently gave birth, it is documented in literature that the level and differential in the women's autonomy determines the utilization of maternal and child health care services in most developing countries (R). In sum, autonomy which the main idea here behind the condition of Readiness is causally related to both infant and child mortality.

The Willingness condition for mortality, on the other hand, will not be sufficiently met when there are ethical or religious objections, fatalistic attitudes, and health fears and beliefs. When this is the case, the use of modern health methods will fail, but by the choice of the respondent (assuming the ready condition is met): The individual will refuse modern health care for preventing or treating child's health problems, even though has decision-making power in health matters of her children. The DHS question on the ideal number of children will be used to identify the fatalistic attitudes among women with response categories '6+' and 'Non-numeric answer'. This is the key component for measuring non-willingness for both treating and avoiding morbidity and mortality, since fatalism contradicts the idea of interfering with the natural order of things, therefore the idea of self-directed destiny that is relevant to both. Other items under willingness include personal opposition to family planning or to the use of modern health treatments, religious objections, rules imposed by traditions, and fear of or distrust in health institutions and personnel in general. Finally, exposure to modern media which is an important source of social learning for women is included in the W condition, assuming that social learning would increase the acceptance of the idea that both high mortality and high fertility are preventable through the use of modern health care methods and treatments. Exposure to media may correct the gaps or lags between the changing empirical risks of mortality on the one hand and the perception of these risks on the other, and media may run counter to established traditional beliefs and religious objections, and may help individuals to overcome their fears related to modern health services.

Finally, the Ability precondition requires that the effective means of reducing mortality and are available and accessible, and procedures that will prevent births and deaths are known by the couples. Lack of knowledge about maternal and child health care services, difficulty of access to and the non-affordability of these services (especially in the absence of social insurance) all contribute to non-ability.

Following the work of Lesthaeghe and Vanderhoeft (2001), I formulate that a score is available for each respondent of the DHS on all three preconditions, and assume that R, W and A are continuous, taking a score between 0 and 1. Later by using an index, I convert these scores into a dichotomy (controller/non-controller) if the score on the outcome variable is larger than a given cutting point, for example, 0.5. The values larger than 0 but smaller than 0.5 would be converted as not-ready, not-willing and non-able, whereas scores belonging to the other half of the scale would be converted as ready, willing and able. If two of the three preconditions take a value above the cutting point, then the lagging precondition would be the bottleneck, that is responsible for delaying the adoption of the new behavior.

Data: I use the Demographic Health Surveys (DHS) to capture the change over time in infant and child mortality rates in Turkey, and apply the Ready-Willing-Able model to four datasets from 1993, 1998, 2003 and 2008.

Policy Implications

The modeling of parental decision-making about the use of modern health services as an adoption of a new form of behavior may provide research results with important policy implications. Whereas the economic dimension in familial decision processes represented by the Ability condition underlines the importance of socio-economic development both at the level of families and society, the cultural and moral dimension represented by the Willingness condition emphasizes the empowerment of women, their increasing autonomy, and a broader attitudinal change that take place within the same society. For this reason, the answer to the question on which set of factors contribute to gains in child survival to a greater extent has many important messages for other less developed countries which have not yet completed their mortality transition.

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