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COMBATING DISPARITY: MATERNAL AND CHILD HEALTH IN TURKEY

Allison Prosswimmer



Introduction

Turkey has identified the health of its population, especially of its mothers and babies, as an area of paramount importance, as is evidenced by extensive reforms instituted between 2002 and 2007. Basic measures of maternal and child health, such as infant mortality, indicate improvement over time; yet, a striking regional disparity still exists. Health care access, utilization, and outcomes seem to be better in the urban and western regions of Turkey than in the rural and eastern regions (see Figure 1). Maternal education is arguably the most influential contributor to this stark difference; regional variations in maternal education are great, and herein lays an invaluable opportunity for progress. In the words of one Turkish nurse, “People first have to be educated. . . . If they were a little more educated, they could get better quality care.” (Turan et al., 2006, p. 55)

This article examines basic health indicators as well as the nature of the progress

resulting from the reform program. It suggests that Turkey focus primarily on a campaign of health literacy to resolve the regional disparities that continue to plague the health of the country.

Indicators of Health

Epidemiological Measures

Trends in various epidemiological measures provide a backdrop for understanding maternal and child health care policy in Turkey. Key measures include infant mortality, maternal mortality, and life expectancy — changes which are reflected in Table 1. Infant mortality is defined as the average number of infant deaths, from birth to age one, per 1,000 live births. Maternal mortality is defined as the average number of mothers who die per 100,000 live births. As shown in Table 1, as infant and maternal mortality have fallen between 1970 and 2008, life expectancy has risen. Although these

Figure 1
Map of Turkey



Source: Wikimedia Commons, Google Images.

overall trends are positive, there remains a troubling regional disparity in infant mortality. In 2008 only 16 percent of infants in the west of Turkey died before age one, compared to 39 percent of infants in the East. Furthermore, data collected between 1998 and 2003 show that the infant mortality rate is approximately 33 percent higher in rural areas than in urban areas. (*Turkey Demographic . . .*, p. 134) This disparity is important for guiding future action in maternal and child health.

Maternal Education by Region

The differing educational backgrounds of mothers can greatly affect regional maternal and child health practices and outcomes. Well-educated mothers understand the implications of birth intervals, household sizes, age of

mothers at first birth, prenatal care, hospital deliveries, and breastfeeding practices.

It is clear that more western and urban mothers are educated, and at higher levels, than eastern and rural mothers. For example, whereas the high school attendance rate for rural females was only 40.9 percent in 2008, for urban females it was 95.4 percent. (*Turkey Demographic . . .*, p. 29) Additional evidence comes from comparing levels of schooling attended or completed among females six years of age and older. In the west the median number of years of education completed was 4.7 but in the east it was only 2.6. (*Turkey Demographic . . .*, p. 25)

Another way to quantify the regional disparity is to look at variations in birth intervals, defined as the time elapsing between two consecutive live births. Birth intervals are

Table 1

Common Epidemiological Measures Applied to Turkey

Epidemiological Measure	1970	1983	1998	2008
Infant mortality (per 1,000)	150	-	< 40	19.4
Maternal mortality (per 100,000)	-	138	70	20
Life expectancy	-	-	70.8	71.8

Source: Imamecioglu et al., pp. 8, 10; Keskinkilic, May 2009, p. 30.

generally long in Turkey, which is fortunate since babies born within twenty-four months of a sibling are at risk for poorer health. Yet, it can be inferred that more-educated urban mothers are most aware of this, as their average birth interval in 2008 was 47.8 months, while the average birth interval for less-educated rural mothers was only 34.2 months. (*Turkey Demographic . . .*, p. 69) Moreover, there is an interesting regional phenomenon related to birth intervals and the age of mothers at first birth. In general, a higher proportion of dangerous short-birth intervals is found among younger mothers, and young mothers are most common in eastern Turkey. In 2008 the median age of childbearing mothers in urban areas was about one and one-half years higher than in rural areas. (Imamecioğlu et al., p. 6) Moreover, women with no education, most of whom reside in rural and eastern areas, began having children at 20.5 years. In comparison, those with some education began childbearing at 22.7 years. (*Turkey Demographic . . .*, p. 72) It is not surprising, then, that the average household size in rural areas was 4.2 persons compared to 3.8 persons in urban areas. Initiating pregnancy at a later age reduces family size, which allocates more resources for the care of each child and allows more time for maternal education. (*Turkey Demographic . . .*, pp. 21, 71)

An obvious step to ensuring healthy births for both infant and mother is the use of prenatal care. In 1993, 37 percent of Turkish women failed to make use of prenatal care (Celik and Hotchkiss, p. 1798); in 1998 the situation had not seen much improvement, with only about two-thirds of Turkish women receiving prenatal care. (Imamecioğlu et al., p. 9) By 2008 progress had been made in overall usage of prenatal care; still, regional variations remained pronounced. Whereas 94.7 percent of urban mothers and 96.9 percent of western Turkish mothers solicited prenatal care from a health provider, only 84.2 percent of rural mothers and 79.1 percent of eastern mothers did so. As has been consistently pointed out in the preceding paragraphs, maternal education plays an important role; the urban and western mothers who utilized prenatal care were likely to be more educated than the eastern and rural mothers who had lower prenatal care utilization rates. (*Turkey Demographic . . .*, pp. xix, 142–43)

Mothers who understand the significance of utilizing prenatal care are likely to acknowledge the importance of delivering in a health care facility with the help of trained health care personnel. In 2008, 94 percent of urban deliveries and 96 percent of western deliveries occurred in a health care facility compared to only 79 percent of rural deliveries. (*Turkey Demographic . . .*, p. 149) Despite the unsettling regional disparity, overall deliveries in medical facilities have increased over time. Whereas about one-fourth of deliveries still took place at home in 1998, by 2008 about 92 percent of births took place in hospitals. (Imamecioğlu et al., p. 9; Keskiniliç, May 2009, p. 30)

The regional data raise questions about the access and availability of professional birth assistance. The Department of Maternal and Child Health Services has established various centers and village health stations to provide mothers with easier access to prenatal care and monitoring services, as well as delivery assistance by medical personnel, including midwives. (Celik and Hotchkiss, p. 1798) It seems that western and urban mothers can more easily receive help from doctors, while rural and eastern mothers rely mostly on assistance from midwives and often have traditional home deliveries. Data from 2008 show that the highest rates of births assisted by a doctor were in the west, with rates descending as one moved further east; 82.5 percent of western mothers and 32.5 percent of eastern mothers benefitted from the assistance of doctors. In contrast, the highest levels of midwife-assisted births were in the east; 41.9 percent of eastern mothers and 15.5 percent of western mothers were assisted by midwives. (*Turkey Demographic . . .*, p. 151) Although demand for midwives to assist in delivery and to provide postnatal care is higher in the east, the availability of midwives there is lower compared to that in large western cities like Istanbul and Izmir. (Celik and Hotchkiss, p. 1798)

Mothers who deliver with assistance from health professionals, ideally in hospitals, are also most likely to adopt healthy breastfeeding practices. The medical personnel who help with delivery often educate mothers on advisable practices, such as breastfeeding exclusively and breastfeeding within one hour of delivery. Whereas 41 percent of urban mothers and 47.9 percent of western mothers initiate breast-

feeding within the first hour of their child's life, only 33.9 percent of rural mothers and 32.1 percent of eastern mothers do so. (*Turkey Demographic . . .*, pp. 170–71)

The Impact of Maternal Knowledge of Healthy Practices

Five interesting studies reveal disparities in health knowledge and outcomes stemming from regional differences in education. Moreover, they illustrate that regardless of whether a mother is educated institutionally, a lack of knowledge about healthy practices can have a deleterious effect on the health of babies.

The first study, done in 2001, focused on Kurdish mothers living in the southeastern region of Diyarbakir. Most deliveries in this region took place in homes, and mothers were unaware of healthy nutritional practices for their infants. For example, these mothers falsely assumed it was unsafe to breastfeed after being in the sun. Not surprisingly, 81.8 percent of the mothers who participated in the study were illiterate and unable to educate themselves about correct and healthy practices. (Ergenekon-Ozelci et al., pp. 144, 147)

In 2007 another study focused on childhood immunization in Umraiye, a suburb of Istanbul. The participants in this study were mothers who had migrated to Umraiye from eastern Turkey and who had completed a primary school education at best. Most mothers did not understand the importance of immunizing their children. Some thought that if their children survived for a year, no additional shots were necessary. Mothers who did immunize their children often did so only because they witnessed other children becoming sick or dying from the diseases, not because they were educated about the benefits of vaccination. Some mothers felt that the medical workers had condescending attitudes, and others complained of not understanding the technical names for the diseases against which their children were to be immunized, which again illustrates the obstacles resulting from a lack of education. (Topuzoğlu et al., pp. 348–51)

A third study analyzed the tie between maternal education and the pervasiveness of Hepatitis A among children in Edirne, Turkey. The Hepatitis A virus causes an infection that

can be prevented through simple hygiene practices, which are likely taught in school. Published in 2003, the study showed that children of uneducated mothers were 6.77 times more at risk of contracting the virus than children whose mothers had attained university degrees. Predictably, low rates of education and correspondingly high rates of Hepatitis A prevail in the eastern regions of Turkey. (Erdoğan et al., pp. 267, 269, 272)

The fourth study is different in that it showed that many Turkish mothers desire to learn about healthy practices. The study, done in 1995 among low-income couples living in Istanbul, revealed that 43 percent of postpartum women desired information related to infant care and that 22 percent wanted information on breastfeeding. However, the least educated women were also the least likely to ask for information and may not have realized they needed guidance. (Bulut and Turan, pp. 96–97) The findings indicate, first, that there is a real opportunity to improve maternal and child health care awareness primarily in the east, where education is poorest and mothers are least aware of their lack of knowledge. Secondly, the findings indicate that before it is feasible to educate mothers about specific healthy practices, they must first understand why it is important to become aware of such practices.

The findings of a fifth study conducted in 1998 show that educating mothers about healthy practices is effective and benefits the health of their babies. In this study women who received prenatal instruction as part of a community-based prenatal education program in Istanbul readily adopted healthy practices after the births of their children. These women initiated breastfeeding early, breastfed exclusively, and were 3.63 times more likely than the control group to bring their babies in for a check-up within a week of birth. (Turan and Say, p. 395) Though most attempts at promoting maternal education occurred in the west, the evidence of the mothers' receptiveness and the effectiveness of the programs hold promise for application in the east.

Turkey Health Transformation Program

In response to its recognition of the issues related to maternal and child health, the Min-

istry of Health determined to establish a program of reforms. The Turkey Health Transformation Program, which was implemented between 2002 and 2007, has made impressive strides in prioritizing and improving maternal and child health in Turkey. The next sections will address each of the following reforms: infrastructure and personnel improvements (including baby-friendly hospitals, newborn care infrastructure, and medical training) and additional successful programs and initiatives related to newborn screening, vaccination, nutrition, and encouraging the utilization of care.

Infrastructure and Personnel Improvements

The Ministry of Health acknowledged that to execute its programs and to have the ability to care for the anticipated increase in mothers seeking care as a result of these programs, the reform initiative had to improve infrastructure and increase medical personnel. Consequently, there was a significant increase in “baby-friendly hospitals,” hospitals that provide an environment that encourages healthy breastfeeding and provides the assistance of trained medical experts. The growth has been remarkable. While there were only four baby-friendly hospitals in 1991, there were 141 in 2002, 546 in 2006, and 665 in 2009. Moreover, by 2006, 91 percent of hospital deliveries took place in such hospitals. (Akdağ, 2007, p. 38; Akdağ, 2009, p. 53)

Although in theory increasing the number of deliveries in hospitals, especially baby-friendly hospitals, should result in lower rates of childbirth complications, the Ministry of Health took measures to prepare for complications that might arise even in a hospital setting. The reform initiative also substantially increased the number of newborn transport incubators, ventilators, and intensive care beds. In 2002 there were just 665 newborn intensive care beds in Ministry of Health hospitals, but by January 2009 there were 2,918. Additionally, between 2002 and 2009 the number of transport incubators rose from 158 to 440, and the number of ventilators from 252 to 491. (Akdağ, 2009, pp. 56, 58)

Since the effectiveness of baby-friendly hospitals depends on their trained staff, train-

ing was also improved as part of the initiative. While only 100 people were trained to resuscitate newborns in 1998, by 2002 the number had risen to 4,000, and by January of 2009 it had risen to 22,606. (Akdağ, 2009, p. 55) Moreover, in 2007 it was reported that trained medical professionals were available in all delivery facilities. (Akdağ, 2007, p. 39)

Additional Successful Programs and Initiatives

The increase in newborn screening initiatives has been substantial. For example, the Ministry of Health began to focus on screening for phenylketonuria disease¹ and congenital hypothyroidism, both of which can cause mental retardation. Moreover, as of 2007 when the Hearing Screening Program was implemented, 158,000 infants were tested in one of the Hearing Screening Units present in 39 Ministry of Health hospitals, 26 of which were provincial. (Akdağ, 2007, pp. 38–39) By January 2009, 176 Ministry of Health institutions in 76 provinces conducted hearing screening for 750,000 infants. (Akdağ, 2009, p. 56)

Like the Hearing Screening Program, the vaccination campaign catered to infants in most regions of Turkey. In 2002 the vaccination rate for children was 78 percent, but some southeastern provinces had vaccination rates as low as 50 percent. (Akdağ, 2009, p. 60) However, by 2006 the vaccination rate had reached 93 percent, and the lowest vaccination rate in any single province was 80 percent. (Akdağ, 2007, p. 43) Remarkably, by 2008 the vaccine rate was purported to have risen to 96 percent, reaching infants all over Turkey. (Akdağ, 2009, p. 60)

One particularly inventive and successful program that deserves mention is the Iron-Like-Turkey Program. The program was designed to combat anemia and vitamin-D-dependent rickets among Turkish children. (Akdağ, 2009, p. 54) The initiative has effectively educated society on which breastfeeding practices help prevent anemia. Moreover, it has provided one million pregnant women each year with free iron support for all babies aged four to twelve months as well as iron treatment for anemic

¹Phenylketonuria is a genetic disorder in which the body cannot properly metabolize phenylalanine. (“Phenylketonuria”)

children one to two years of age. Before the program, 50 percent of children up to age five had anemia, while only 7.6 percent of this cohort had anemia by 2007. (Akdağ, 2007, pp. 40–41) Similarly, while 61 out of every 1,000 children up to age three had rickets in 1998, by February 2008 this number had declined to one in every 60,000. From May 2005 to January 2009, about 5.3 million infants were given iron support under this program. (Akdağ, 2009, p. 54)

The Ministry of Health has also taken effective steps to encourage more women to utilize services offered at baby-friendly hospitals. For example, whereas in the past hospitals would often refuse to care for the poor, now the poorest six percent of the population are offered 17 Turkish liras each month if they commit to mandatory medical visits to monitor the health of both mother and baby. Moreover, to encourage mothers to deliver at public hospitals, those who do are awarded 55 Turkish liras in aid. (Akdağ, 2007, p. 40) Between March 2004 and January 2009, 1.6 million women had benefited from this incentive program. (Akdağ, 2009, p. 58)

The Ministry of Health has designed still other programs whose aid is not financial. For example, the Conscious Mother, Healthy Baby Program educates mothers who give birth at inpatient facilities about matters of post-delivery infant health and growth. As many as four million mothers have been educated through this program as of 2009. (Akdağ, 2009, p. 60)

A Regional Look at the Program's Progress

The advances associated with the Turkey Health Transformation Program are many, and therefore the regional gap in standards and outcomes is no longer as severe as it once was. Yet the regional gap still exists and steps must be taken to close it. Although grouping regional areas into east, west, rural, and urban is sufficient for the analysis conducted in this paper, officials have identified forty-nine priority regions for development when deciding how to allocate the benefits from the reforms of the Turkey Health Transformation Program. Although twenty-five of these priority regions fall in what has been referred to thus far as

the eastern part of Turkey, not all of the eastern regions of Turkey were considered high priority. (Keskiniliç, December 2009)

Childhood vaccination provides a valuable example of the regional gap that still exists. As discussed earlier, this is an area in which the reform initiative has achieved remarkable success. Yet, when the overall success of the vaccination campaigns is broken down, it is obvious that the success has been most striking in the western and urban areas of Turkey. Only 71 percent of children in rural regions and a mere 64 percent of children in the eastern areas are fully vaccinated.² (*Turkey Demographic . . .*, p. xix) The study on immunization conducted among mothers in Umraiye points to the cause of these differences. As was mentioned earlier, a lack of maternal understanding contributes to under-immunization in rural and eastern Turkey. Yet those mothers who did understand the importance of full preventative vaccination faced additional problems getting to a health center. Several mothers were too afraid to leave their homes, some did not know where the health center was, and others did not have access to or money for transportation. (Topuzoğlu et al., p. 350)

Accessing health care centers in the east is an obstacle that may help to explain the disparity in the iron and vitamin D support administered in the eastern regions compared to that in the rest of Turkey. According to the General Directorate of Mother and Child Health and Family Planning, whereas only 70.4 percent of pregnant women in the twenty-five priority provinces in the east of Turkey are given iron support, 80.3 percent of mothers in other provinces benefit from this service. Similarly, while 78.2 percent of babies in the eastern provinces receive iron support and 78.6 percent receive vitamin D support, 97.3 percent of babies in other regions get iron support and 99.9 percent get vitamin D support.³ Moreover, there is significant variation among the twenty-five provinces in the eastern section of Turkey. For

²The exact definition of “fully vaccinated” is unclear and may differ between sources.

³It is important to note that the disparities can be partially ascribed to administrative barriers, like the competency and resolve of the individuals serving as regional directors, which vary from region to region. (Keskiniliç, December 2009)

example, whereas only 59.3 percent of babies in Diyarbakir are given iron support, in Hakkari the percentage is 128.6.⁴ Yet, although some disparities exist among the eastern regions, it is evident that the Ministry of Health has the potential to significantly help the eastern region of Turkey in general. (Keskiniliç, December 2009)

Resolving Regional Differences

To continue expanding the progress achieved thus far under the Turkey Health Transformation Program, it is necessary to focus efforts to improve maternal and child health care on the eastern and rural areas of Turkey. Although one may have expected to see a sharper distinction in maternal and child health care availability and outcomes simply between the east and west, a closer examination of the regions for priority development suggests that rural areas in *all* regions of Turkey as well as provinces recently settled by migrants from the east are deserving of attention in coming years.

Certainly the differences in infrastructure and the distribution of health personnel among regions according to need have narrowed significantly in recent years, and these improvements must continue in order to maximize the benefits of valuable maternal and child health programs. Similarly, both the overall number of health professionals and total health care spending must increase.⁵ A health literacy campaign for existing, expectant, and potential mothers in eastern and rural Turkey, however, seems to have the greatest potential.

Health Personnel

Turkey suffers from a chronic human resources shortage. Overall, there are just 1.4 physicians for every 1,000 people in Turkey, placing Turkey 52nd out of the 53 countries in the European Region of the World Health Organization. Also, Turkey should have 14,000

medical school students graduating each year based on its population, but in reality only about 4,500 Turkish medical students graduate annually. (Akdağ, 2009, pp. 84, 86)

The reform program has enjoyed some success in alleviating this shortage. Between 2003 and 2008 alone, public health institutions benefited from the services of 111,000 new health care workers, which overshadowed the 39,000 new health care workers who were recruited between 1999 and 2002. More broadly, while there were only 272,000 people, ranging from physicians to housekeeping staff, employed in Ministry of Health and Social Insurance Institution hospitals in 2002, by January 2009 this number had grown to 414,000. (Akdağ, 2009, pp. 88–89)

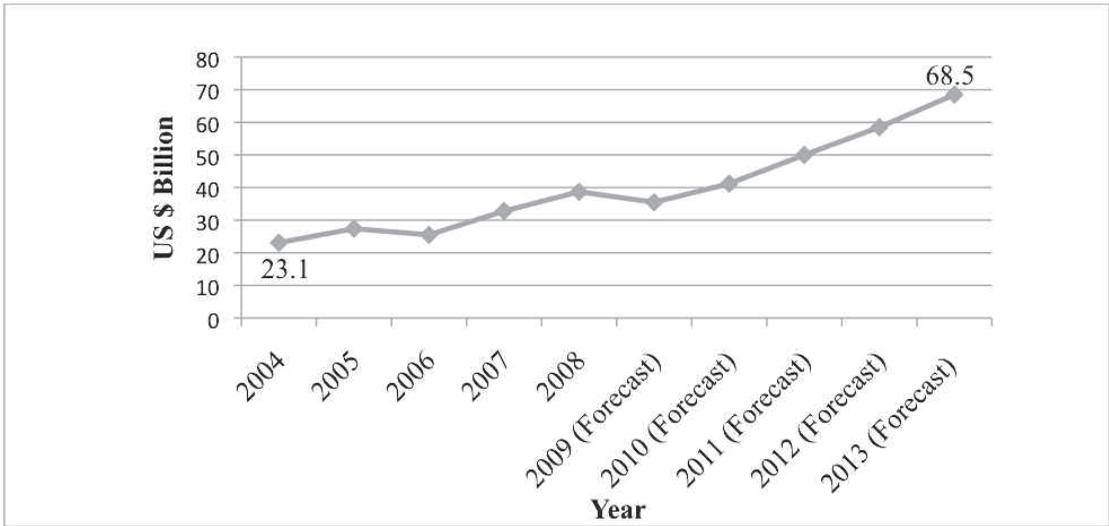
Fortunately, if the Ministry of Health is correct in its predictions, Turkey will continue to make strides to overcome the problems of personnel recruitment and distribution. Officials approximate that by 2023 Turkey may have 400,000 nurses and 200,000 doctors, which would mean 500 nurses and 250 nurses per every 100,000 persons, thereby reaching the European standard. (Akdağ, 2009, p. 87) Moreover, regional disparities in numbers of doctors and midwives have diminished; there is now one doctor for every 2,366 individuals and one midwife for every 1,655 individuals in the east, which is almost equivalent to the one doctor per 2,463 individuals and one midwife per 1,637 individuals in the rest of Turkey. (Keskiniliç, December 2009)

Furthermore, the Ministry of Health has implemented two policies to deal with the challenge of not having enough doctors willing to work in the eastern region of the country. First, under the Directive on Assignment and Transfer, physicians employed by the Ministry of Health are randomly assigned to various regions of the country, including the east. (Akdağ, 2009, p. 91) Second, the Ministry of Health has instituted a performance-based pay system in which compensation is determined not only by the physician's title and performance but also by his or her working conditions and duration. Also, the more deprived the area in which a physician practices, the higher the remuneration. (Aydin, p. 59) Such a financial incentive encourages physicians to begin, and continue, to practice in the east. Before the performance-based pay sys-

⁴These percentages can exceed 100 because some mothers travel to different provinces to deliver their babies. For example, it is common for women living in Diyarbakir to travel to Hakkari to deliver. (Keskiniliç, December 2009)

⁵Although increased health care spending is recommended by the author of this paper, the cost may be unaffordable.

Figure 2
Turkish Health Expenditures



Source: Graph constructed by author from data from the World Health Organization in *Turkey Pharmaceuticals . . .*, p. 39.

tem, there was little incentive for private practice doctors, who generally locate in or near urban centers, to work for the state because their salaries are generally much higher than those of state physicians. (Metz, pp. 143–44) However, the new system has led more doctors to seek employment with the Ministry of Health, which now has more physicians whom it can induce to work in the east.

The success of these two policies is apparent. Between 2004 and 2009, there were 16,000 health care workers placed in areas that previously had none. Also, as a result of Law No. 4924, which increased the compensation of health personnel who signed a contract agreeing to work in whatever part of the country they were assigned, the eastern and southeastern regions of Turkey were provided with 7,000 new health care workers. (Keskinkiliç, December 2009; Akdağ, 2009, p. 89) The health of the Turkish people would benefit from the continuation of both of these Ministry of Health policies.

Health Care Spending

Figure 2 indicates that Turkish health expenditures have recently increased and are expected to continue to increase in the foreseeable future, which will be essential for con-

tinued improvement in health. As is evidenced by the nature of the reforms in the Turkey Health Transformation Program, the country has begun to more strongly emphasize preventative care. Accordingly, just as Turkish health expenditures have grown over time, the preventative and primary health budget has also grown, albeit on a smaller scale, from \$71 million in 1983 to about \$1.7 billion in 2007. (Akdağ, 2007, p. 25) The Ministry of Health reported that the allocation for the preventative and primary health budget in 2009 was nearly \$4 billion. (Akdağ, 2009, p. 40)

Health Literacy

Turkey is also on the right track towards ensuring that sufficient human resources and infrastructure exist to carry out the positive initiatives of the Turkey Health Transformation Program in all regions of the country. However, if mothers do not understand the importance of maternal and child care, the programs that are available, and the ways to access those services, then the Ministry of Health's efforts are largely in vain. It is obvious that mothers with formal schooling, mainly mothers in urban and western areas of Turkey, have a better understanding of maternal and child health. These

mothers are most likely to utilize and benefit from maternal and child health care services. Although it is clear that the best solution would be to make formal schooling for mothers more widespread, this is unfeasible. Therefore, a program of health literacy is more promising. Health literacy is defined, in this case, as a mother's aptitude for acquiring and comprehending information about maternal and child health and for making proper decisions aimed at protecting her health and that of her child. The challenge for Turkey is to design an initiative through which the health literacy of pregnant women and mothers, especially those in rural and eastern Turkey, could be improved.

Perhaps Turkey can expand the health literacy campaign it has begun in baby-friendly hospitals. Although it is beneficial to have trained personnel in these hospitals educate mothers on healthy breastfeeding practices, these efforts are more likely to reach mothers who already understand the importance of utilizing maternal and child health services. Yet this model has potential. Perhaps midwives or the health care workers in rural health clinics can venture into villages and explain to mothers the importance of care and the ways to access services. The media could also be used to disseminate maternal and child health care information. The Ministry of Health could even commission educated representatives to travel to various schools and work with their administrations to incorporate maternal and child health into their curricula.

Health literacy campaigns can be quite effective, as shown by a study done by Janet Molzan Turan among low and middle income couples living in Istanbul. Since the parents felt

they did not receive enough information on pregnancy, delivery, and post-natal care, programs were created to educate them about these matters. The results were promising. For example, whereas only about five percent of the expectant fathers correctly answered questions about baby-friendly hospitals on the pre-test, about 55 percent answered the same questions correctly on the post-test administered after the educational programs were completed. (Turan, 2001, p. 122)

In whatever form a campaign of health literacy is carried out, the potential benefits are tremendous. Certainly health literacy initiatives must be tailored to each region, taking into account cultural and religious beliefs as well as the overall level of maternal knowledge. Once a few mothers in a community understand the importance, availability, and means of accessing maternal and child health in that area, word of mouth will become a powerful contributor to the nationwide drive to achieve health literacy.

Conclusions

As a result of the remarkable Turkey Health Transformation Program, the basic indicators of Turkish health have improved over time. Nevertheless, regional disparities in maternal and child health continue to exist. As has been pointed out, the infrastructure, personnel, finances, programs, and services providing the groundwork for resolving these regional disparities are largely in place. Achieving further health literacy among mothers, thereby enabling them to utilize and benefit from those resources, will prove advantageous for Turkish maternal and child health.

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