ORIGINAL ARTICLES

Effect of maternal education on the rate of childhood handicap

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ABSTRACT

Objectives: The objectives of this study were to determine the relation between maternal education and various maternal risk factors, identify the impact of maternal education on the risk of childhood handicap and estimate the proportion of childhood handicap that can be prevented by maternal education.

Methods: Data was collected from all married women attending the two major maternity and child hospitals in Jeddah during April 1999. Women with at least one living child were interviewed for sociodemographic factors and having at least one handicapped child. The risk of having a handicapped child and the population attributable risk percent were calculated.

Results: Some potential risk factors are dominant in our society as approximately 30% of women did not attend school and 84% did not work. Consanguineous marriages accounted for about 43%. Pre-marriage counseling was limited as only 10% of women counseled before marriage. The proportion of unemployment and consanguineous marriages decreased significantly by increase in maternal education level. Conversely, the proportion of women reporting pre-marriage counseling increased significantly by increase in maternal education level. Approximately, 7% of women reported having at least one handicapped child. The risk of having a handicapped child showed a significant sharp decline with increase in maternal education level. At least 25% of childhood handicap can be prevented by achieving female primary education and up to half of cases can be prevented if mothers finish their intermediate education.

Conclusions: Female education plays a major role in child health. The results of this study suggest investment in female education, which would have substantial positive effects in reducing incidence of childhood handicap in Jeddah.

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Childhood handicap is a major public health concern especially in developing countries as over three quarters of the world's handicapped children under 15 years of age are estimated to live in this area.1 It is very difficult to define where child health begins. In dealing with child health, one should recognize that it is an outcome of many intervening factors that start as early as the parent's early childhood and adolescence. In the last decades, this discipline has developed tremendously. The health professionals have begun to move from a narrow concept of maternal health to a more inclusive one that recognizes the role of much more fundamental issues substantially influencing child health.2 Among these conditions, are all factors affecting maternal development that are consequently reflected on her offspring. The economic, social, cultural and educational environment in which girls grow to womanhood, marry and child-bear affects their future reproductive health and children.

In the Arab World, some potential risk factors issue of the traditions and beliefs still exist. Women's illiteracy, early marriage, multiparity and consanguineous marriages are still dominant.3-6 Saudi Arabia has undergone tremendous economic development in the recent years. Consequently, there has been marked improvement in the health care services and frank decline in infant morbidity and mortality. Development of health care services has emerged the problem of handicapped children as more feeble children survive. The prevalence of major disabilities was estimated to be around 4%.7 Female education has advanced and more girls are urged to attend schools. However, the level of illiteracy among women remains elevated and about 39% of girls do not attend schools.8 Also traditionally, girls marry at a young age,4,6 which interrupts their education at an early stage. This phenomenon is not unique for the Kingdom but is dominant in the Middle East Area.4-6 Female education has been previously recognized as a major risk factor for child health. At present, our understanding of risk factors are mostly derived from studies in the Western Countries where maternal illiteracy does not exist. Few experiences come from the Third World Area and need to be strengthened through research.

The objectives of this study were to: 1) Determine the relation between maternal education and various maternal risk factors in Jeddah; 2) Estimate the impact of maternal education level on the risk of childhood handicap and 3) Calculate the population attributable risk percent (PAR%) of childhood handicap that can be eliminated by maternal education.

Methods. Study site and data source. Jeddah city is one of the largest cities of the Kingdom of Saudi Arabia with a population of 2.1 million.9 In Jeddah, there are two major governmental maternity and child hospitals that drain around 60%3 of women of low and medium social class in Jeddah City. These two hospitals contain 290 inpatient beds and serve around 2000 patients per month. A cross-sectional study was performed in these two maternity hospitals to collect data on all married women with at least one living child during April 1999 either as patient (inpatient or outpatient) or healthy (who accompanied their child, any family member or a friend). Two trained medical students, under direct supervision of the medical staff, using structured questionnaires, interviewed women who accepted participation in the study in each hospital. A pilot study was carried out to test the questionnaire. Information on sociodemographic factors and having a handicapped child were collected. A total of 914 women were identified. In all, 826 (90%) were eligible for the study a

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