

NEONATAL OUTCOMES AMONG WOMEN RESIDING NEAR POWER LINE STATIONS GENERATING ELECTROMAGNETIC FIELD

Abstract

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The aim of this correlational study is to examine the effect of residing near power line stations generating electromagnetic field on neonatal outcomes.

Methods. Sample. One hundred and fifty women were recruited for this study. Then the sample was divided into two groups, both groups were constituted of 75 women.

Setting. The two groups were followed up during labor and delivery in the hospitals (Kasr El Aini University Hospital & El Kanater El Khiria General Hospital).

Tools. Data were collected through an interviewing questionnaire designed to collect data related to socio-demographic characteristics, family history and obstetric profile (used for both groups); and the neonatal assessment sheets to collect data regarding the neonatal condition after birth, neonatal anthropometric measurements, neonatal physical and neuromuscular maturity (used for both groups).

Results. Findings of the study revealed that, women who live near the power line station (in the polluted area) had higher incidence of abortion ($P = 0.000$), preterm delivery (0.001), still birth ($P = 0.006$), neonatal congenital anomalies ($P = 0.002$), neonatal low birth weight ($P = 0.012$), and cesarean section delivery ($P = 0.000$) in the previous deliveries than women who live away from the power line station (in the non-polluted area). At the same time, women who live in the polluted area had neonatal congenital anomalies ($P = 0.000$), neonatal death ($P = 0.000$) and cesarean section delivery ($P = 0.000$) in the present delivery than women who live in the non-polluted area.

In conclusion, electromagnetic field may have the effect on neonatal outcomes in the polluted areas than in the non-polluted areas.

Subject: Human.

Key words: Power line station; Electromagnetic Field; Neonate.