Is There a Negative Night or Weekend Effect on the Child’s Postnatal State Among Migrant Women?

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Reviews and population-based studies have shown increased mortality, at least for Europe and North America, in patients who were hospitalized outside of the so-called core working hours or on the weekend. This so-called night and weekend effect was also tested for the first time in an obstetric collective at the end of the 1970s. Only a few studies from the German-speaking world examined the possible negative effects of time of birth, and socio-demographic factors were barely addressed. We hypothesized that cultural and linguistic communication problems could lead to increased neonatal morbidity in this collective due to the “weekend effect” outside the so-called core working hours.

Based on prospective data collected in 2011/2012 in 3 maternity clinics in Berlin, a data analysis was carried out. Here, a 5-min. Apgar score ≤ 5, an arterial umbilical cord pH < 7.10, or a transfer of the newborn to a pediatric clinic was used as a proxy parameter for perinatal morbidity. In addition to various other influencing factors that may be associated with an unfavorable neonatal condition, migration status has also been included as a further predictor in the logistic models. The datasets of 2,014 1st-generation migrant women and 771 2nd-generation migrant women as well as 2,564 women without a migration background were included in the birth time analyses for the “weekend effect” (total n = 5,349). The chance of an umbilical cord artery pH < 7.10 or a 5-min Apgar score ≤ 5 in the newborn (model 1) was increased in births in the evening, at night, on weekends, and on public holidays (OR 1.84; 95 % CI 1.23–2.76, p = 0.003), as well as in operative vaginal births (OR 3.36, 95 % CI 2.07–5.46, p < 0.001) and in a secondary cesarean section (OR 1.94, 95 % CI 1.28–2.96, p = 0.002). The chances of a postnatal transfer of the newborn (model 2) were, among other things, significantly increased in a premature birth (OR 6.12, 95 % CI 4.64–8.07, p = 0.001), low in the presence of a so-called high-risk pregnancy (OR 1.23, 95 % CI 1.02–1.48, p = 0.03) as well as after an operative vaginal birth (OR 1.95, 95 % CI 1.43–2.66, p = 0.001) and after a secondary cesarean section (OR 2.39, 95 % CI 1.95–2.93, p = 0.001). The migration status had no relevant influence. We conclude that, despite possible intercultural and linguistic communication problems, the care provided to delivering women with a migrant background is just as good as that provided to delivering women without a migration background regardless of time of day and weekday.