

The Effect of Prenatal Exposure to Ramadan on the Educational Outcomes of Individuals: Evidence from Turkey

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Abstract:

'Fetal programming' is the hypothesis suggesting that what happens in utero has permanent effects on the offspring; in other words, changes in fetal nutrition and endocrine status lead to consequent adjustments in the fetus that result in irreversible transformations in the structure, physiology and metabolism of the offspring. As a result, individuals are born with different assets of which some are already determined in the utero hence allowing only a rather narrow action set for the individual to compete with the others who have different fetal origins. This study aims to analyse the effect of prenatal exposure to certain nutritional and lifestyle changes in utero on the educational outcomes of the individuals. We use the Islamic holy month of Ramadan – during which observers abstain from eating and drinking completely between sunrise and sunset – as a natural experiment to assess the effects of fasting during pregnancy on the cognitive abilities of the individuals by using the level of education as a proxy variable. By using the data from the TurkStat questionnaire from 2016 on "Turkish Family Structure Survey", we compare the level of education of individuals who were prenatally exposed to Ramadan with those who were not. Controlling for the effect of the change in the compulsory schooling law in Turkey, preliminary findings suggest that men who were exposed to Ramadan in utero on the first or third trimester are less likely to attend high school compared to other males who were not exposed. No significant effect is found for women in terms of level of education which might be attributed to the trend of women having persistently lower level education than men in Turkey. The results are significant when the individuals with overreported dates of birth are dropped from the sample. The findings might suggest that the prenatal exposure to Ramadan on the first or third trimester onwards has persistent effects on individuals.

Keywords: prenatal exposure, pregnancy, Ramadan, fetal origins, education

JEL Codes: I10, I12, I20