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The Impact of Family Stress and Family Investments During the COVID-19 Shutdown on Child's Skill Development in Primary School Age in Germany

In mid-March of 2020, when the first wave of COVID-19 was sweeping across the globe, Germany closed its schools completely to curb the spread of the pandemic. Face-to-face teaching resumed in May and June, often limited to a few hours per week. With schools closed and social contacts heavily restricted during the pandemic, students' learning environments were essentially limited to the home. Concerns were expressed that the lack of classroom instruction would increase social inequalities in child development.

According to the family stress model (FSM), originating in Elder's work on the Great Depression (Conger et al., 1992; Elder & Cox, 2019), economic crisis and hardship place pressure on families that lead to parents' emotional distress and interparental conflicts with negative impacts on parenting and finally child development. Studies also showed working from home during the pandemic was associated with an increase in stress in parents, especially for women with simultaneous childcare responsibilities (Li et al., 2022). Therefore, we hypothesize, that parental mental strain during the shutdown exerts a negative effect on child's skill development (H1) and working from home negatively affects the development of child's skill development due to the mental strain on parents (H2). The family investment model (FIM) focuses on the impact of the relatively stable structure of family resources on children's development (Conger & Donnellan, 2007) and assumes that parents' investment in child development mediates social origin effects on children's cognitive and academic outcomes (H3).

The analyses used data from Starting Cohort 1 of the German National Educational Panel Study, a survey on children born in the first term of 2012. Since 2012/13, main caregivers have been interviewed and children have been tested annually. In June and July 2020, after the first shutdown, mothers (very seldom fathers) were interviewed by telephone with specific questions on the situation during the COVID-19 shutdown. In the following weeks children participated in online tests. The sample is restricted to children with results in mathematical tests (n= 1,512 children; ~8 years of age).

We regressed mathematical skills measured after the shutdown on parental mental strain during (and before) the shutdown, changes in working conditions during the shutdown and learning support during (and before) the shutdown controlling for parents' socio-economic status, demographic indicators and children's skills assessed in the years before the COVID-19 pandemic.

In line with the FSM, we found a negative effect of mental strain during the shutdown on the development of mathematical skills. Working from home due to the COVID-19 pandemic negatively correlated with children's mathematical skills. There was a slight, but statistically significant decrease in the coefficient on working from home, when mental strain during the shutdown was controlled for. These findings contribute to life course research with its compelling evidence on the impact of historic crises on (child) development (Elder & Cox, 2019). For parental investments during the shutdown, we did not find any effects on the development of mathematical skills. Nevertheless, investments in stimulating activities prior to the shutdown show a noteworthy positive effect in our study. From a theoretical point of view, one could assume that the effects of investments unfold over time within a stable environment. Therefore, transient investments in times of rapid change might be less effective.

References

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