Schools have low coronavirus infection rate, German study finds

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Author: Ellyatt, Holly
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EXCERPTS

A study of 2,000 children and teachers at a school in the German state of Saxony has found very few coronavirus antibodies among them, suggesting that schools and young people do not play as big a role in transmission as previously feared.

The study was carried out in May by the Medical Faculty of the TU Dresden and University Hospital Carl Gustav Carus and the results of the first test phase were released Monday.

The results showed that out of 2,045 blood samples collected from students and teachers from across 13 secondary schools in the region only 12 samples were found to contain antibodies against Covid-19.

Tests were carried out in several schools where there had been known outbreaks of the virus, and 24 of the participants had at least one confirmed coronavirus case in their household. Nonetheless, only one of those 24 participants was found to have antibodies, the study noted.

It is the largest study in Germany to date and was carried out after the country reopened schools after lockdown, with the aim of assessing how many students and teachers carry antibodies against the virus and how its spread changes over time.

The results showed that "the dynamics of virus spreading have been overestimated," the universities said, adding that the study suggested that schools did not become the coronavirus "hotspot" after reopening, as had been feared.

"The numbers provide information about the current immunity status of teachers and students ... (and) provide important clues as to how school operations can continue after the summer holidays," the Medical Faculty of the TU Dresden said in a statement Monday.

"Corona cases were confirmed in three of the schools examined. Nevertheless, above average antibodies were not detectable among the teachers and students of the institutions concerned, which suggests that the schools have not developed into hotspots," the statement noted.

Professor Reinhard Berner, director of the Clinic and Polyclinic for Pediatrics and Adolescent Medicine of the University Hospital Carl Gustav Carus, said the study suggested that children did not spread the virus as much as had been believed.

"We are going into the summer vacation 2020 with an immunity status that is no different from that in March 2020. Of the more than 2,000 blood samples examined, only 12 were able to detect antibodies, which corresponds to a share of well below one percent. This means that a silent, symptom-free infection in the students and teachers we examined has so far occurred less frequently than we had suspected," he said.

Speaking at a news conference Monday, Berner reportedly stated that "children may even act as a brake on infection," according to Reuters, saying infections in schools had not led to an outbreak and that the spread of the virus within households was also less dynamic than previously expected.

"These results of the investigation provide evidence that virus transmission in families is not as dynamic as previously thought," Berner said in a comment within the study.

"More than 20 of the examined subjects had at least one proven corona case in the family; however, antibodies were found in only one of these study participants, which would mean that the majority of schoolchildren did not go through an infection themselves despite an infection in the household. This finding must also be taken into account when it comes to deciding on measures to limit contact."

He added that the study was representative for the state of Saxony, however, which has a relatively low rate of infection compared with other parts of Germany.

The study is the latest to analyze the presence of antibodies among individuals and there is an increasing amount of evidence to suggest that coronavirus antibodies might wane over time, as WHO officials noted Monday.

A U.K. study published Saturday suggested that immunity to Covid-19 may only last a few months, with research showing that the antibody response to the virus peaked around three weeks after the first onset of symptoms but then began to decline in as little as two to three months.

Going into the methodology of the German school study in more detail, physicians from the Dresden University Hospital Carl Gustav Carus examined a total of 2,045 blood samples from schoolchildren and teachers from 13 secondary schools in Dresden and the districts of Bautzen and Görlitz. Of the 2,045 samples, 1,541 came from schoolchildren, mostly in grades eight to eleven (13-16 years old).

In addition, a total of 504 teachers participated, their ages ranged from 30 to 66 years. The proportion of male and female study participants was roughly the same among schoolchildren. Coronavirus cases were diagnosed in some of the 13 schools, the study noted.

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