

# Mental health promotes children's physical activity during lockdown

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According to the Motorik-Modul-Längsschnittstudie (MoMo, Motor Module Longitudinal Study) of Karlsruhe Institute of Technology (KIT) and Karlsruhe University of Education (PHKA), mental health of children and adolescents decreased during the first lockdown. For children aged between four and 10 years and for girls irrespective of their age, mental health was found to promote physical activity during COVID-induced lockdown in spring 2020. This is reported in *Children*.

"The impacts of the lockdown on children and adolescents is discussed widely," says Dr. Kathrin Wunsch from Institute of Sports and Sports Science of the KIT. Already in December did a study of the KIT and PHKA team reveal that physical exercise of children and adolescents increased during the lockdown. However, they were also found to spend more time in front of the screen "Additionally, we have now studied to what an extent mental [health](#) plays a role," Wunsch says. The sports scientist is the first author of the

latest scientific publication written within the MoMo research project.

To determine the interrelation of mental health, physical activity, and increased [screen time](#), the team evaluated the corresponding data collected for the previous study from August 2018 to spring 2020. 1,711 children and adolescents had answered questions relating to their physical activity and psychic well-being. In the MoMo activity survey, they had been asked for the number of days, on which they were physically active for at least 60 minutes (according to the recommendation made by the World Health Organization WHO) during a usual week and during a lockdown week. To determine the well-being, the researchers used the questionnaire of the EU-funded KIDSCREEN project, which focuses on the five criteria of physiological well-being, psychic well-being, autonomy / parents, friends / social support, and school environment. For analysis, the researchers used so-called "cross-lag models" that reflect changes of mutual effects between two or more measurement times. The data were then evaluated separately as a function of age and gender.

## Overall, Mental Health Decreases Considerably

"We work with a scoring system to express mental well-being. The average for children and adolescents is 50 points. Already before the pandemic did boys and girls in Germany reach bad values of 44 and 45 points, respectively, compared to the European average," Wunsch says. The team found that these values decreased further during lockdown. "Current mental health values are 40 for boys and 41 for girls. We can see clearly that the pandemic has a negative impact on mental health of children and adolescents. This further decrease means an additional strong reduction of mental health." Considering potential consequences, a much stronger focus must be placed on psychic well-being of children and adolescents in future, the sports scientist says.

## Mental Health Promotes Physical Activity

"Our analysis shows that physical activity and mental health of children, who already had a good mental health before the lockdown, even improved during the lockdown. Children, who ranked in the top 5 percent in terms of mental health prior to the pandemic, increased their physical activity during the lockdown by half a day more than children of the 5 percent with the worst mental health. Physical activity of children before the pandemic helps them being more active during the lockdown, as does a previously good mental health," Wunsch says.

"This effect of mental health on physical activity is obvious for children aged between four and 10 years. It is no longer visible for children from 10 to 17, which might be due to increased stress during home schooling."

The work reported here is part of the MoMo project of KIT and PHKA and represents the first study of the direct influence of COVID-19 lockdown on such interrelations. Recently, data collection during the second COVID-19 lockdown was completed. These data will now be used to quantify the interrelation of mental health and physical activity. The researchers plan to study the different behaviors of children and adolescents with a bad or good [mental health](#) relative to their activity levels. The study will be continued after COVID-19 [lockdown](#) to analyze the long-term effect of the pandemic on [physical activity](#) and its relation to physical and psychic health of [children](#) and adolescents.

**More information:** Kathrin Wunsch et al. The Impact of COVID-19 on the Interrelation of Physical Activity, Screen Time and Health-Related Quality of Life in Children and Adolescents in Germany: Results of the Motorik-Modul Study, *Children* (2021). [DOI: 10.3390/children8020098](https://doi.org/10.3390/children8020098)

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