

# The quality of life of the children in the Rhine-Main region



The NORAH-scientists were not only interested in the reading performances, but also in the general health and quality of life of the children. The questions they asked the children and their parents concerned, for example, the sleep quality or the mental and physical wellbeing.

The results show that the quality of life of the children in the investigation area is generally very high. The children and parents with relatively high exposure to aviation noise, however, assessed the health and quality of life of the children as slightly poorer than those with low exposure.

Although the difference is small, it is statistically significant (L Glossary "Significance"): with an increase of the aviation noise by ten decibels, the quality of life fell on the three to five-point assessment scales by an average of 0.1 scale points.

## The quality of life from the point of view of the children

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## Sleep and mental wellbeing



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## More medication and speech or language disorders

A total of 1,185 parents answered the scientists' questions about the health and the wellbeing of their children. They also provided information on the disorders which their children suffer and about absence times from school. In most of these answers the scientists were unable to identify any differences that could be attributed aviation noise.

For two questions, however, there proved to be a connection between the parents' answers and the aviation noise exposure. Ten percent of the parents in areas with relatively high noise exposure state that their children are currently taking prescribed medication. In the residential areas with medium exposure it was only four percent, and in the regions with low exposure just under six percent.

In areas with relatively high noise exposure, 14 percent answered "yes" to the question: "Has a doctor ever diagnosed a language or speech disorder in your child?" In areas with low noise exposure, only 10 percent gave this answer, in the residential areas with medium exposure it was 8 percent.

These results are statistically unequivocal. It was not asked, however, what the exact nature of the disorder was. By comparison: in Germany as a whole the frequency of speech or language disorders in children ranges, depending on the diagnosis criterion, between 2 and 15 percent. The connection should thus be made the subject of further investigation. It is important to know that the children described as being diagnosed by their parents did not differ in their reading performance to the rest of the group.

## How happy are the children at school in the Rhine-Main Region?

Some studies show that a high level of noise exposure at school can also influence the attitudes of the children to school and learning. This is why the NORAH Study also looked at the "school-related quality of life". For this purpose the children responded to statements such as for example "I am happy learning new things" and "I feel well at school". The result showed a statistically significant (L Glossary "Significance"), but very low influence of aviation noise on the responses. Children exposed to relatively high levels of aviation noise are slightly less positive towards learning and school. The difference amounts to just one eighth of a scale point on a four-point scale.

The parents and teachers were also asked about the school satisfaction of the children and about the atmosphere in the classroom. This did not show any significant connection with aviation noise.



## Do you have any questions?

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