

Life at home affects kids at school

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Some children are more susceptible to changes than others. They carry the relationship with their parents to school with them. Genetics can help explain why.

When kids are happy at [home](#) and have a good [relationship](#) with their parents, children will also have a good relationship with their teachers. But the opposite is also true.

"When the situation changes at home for these children, the relationship with their teacher changes too," says researcher and PhD candidate Beate W. Hygen at NTNU Social Research and the Norwegian University of Science and Technology's (NTNU) Department of Psychology.

This means that when things are going well at home and in the parent-child relationship, the relationship between the child and the teacher is correspondingly good. However, the teacher-child relationship deteriorates when the child's home life becomes more difficult.

Genetic explanation

"Some children seem to soak up environmental factors at home. This in turn affects the relationship with the teacher. For other children, the conditions at home don't have much influence on their relationship with the teacher," says Hygen.

The explanation may be partly genetic. Hygen is the first author of a

recent article that considers whether certain environmental factors affect children's social development differently depending on what kind of genetic variants the child has.

Hygen says the researchers are finding a link between children's susceptibility to such factors and differences in a gene that regulates how individuals are affected by oxytocin. The differences found by the researchers were located in a variant of a receptor gene called OXTR, rs 53576. You can read more about this gene at www.snpedia.com/index.php/Rs53576

Oxytocin is well known, even outside research circles. It is often called the "love hormone," because it's triggered when we're together with someone we love, like a romantic love or our child. But oxytocin levels also increase when a relationship appears to be in danger, so the nickname isn't totally accurate.

Oxytocin release, the level of oxytocin in the brain and how oxytocin affects us play a significant role in our human relationships and how we interact and engage with others.

Study looks at ambience

Genetic differences in how we are affected by oxytocin can thus create differences in the way we relate to each other. Biology largely determines how we behave, but this study shows that this happens in conjunction with our surroundings.

Previous surveys that have studied conditions at home versus in school have usually primarily looked at the parents' situation. Social learning models, Hygen says, approach the issue from a starting point of "if there's just yelling and negativity at home, some children can take these experiences into other relationships, such as with their teachers."

But the researchers in this survey start with the child itself and ask the question, "How vulnerable is the child to [environmental factors](#)?"

"The most susceptible children will bring their home situation – both good and bad – into the school setting," says Hygen.

The Norwegian researchers examined 652 children in two age groups: four-to-six year olds and six-to-eight year olds. This data is part of the long-term Tidlig Trygg i Trondheim study conducted by the Regional Centre for Child and Youth Mental Health and Child Welfare (RKBU) of Central Norway. The survey goes into detail about the home ambience. The study aims to identify risk and protection factors for psychosocial development and development of mental health problems in children.

The researchers also asked the children's teachers to assess the relationships they had with the children. This last component might be a source of error in the study, the researchers said.

Different result in the United States

The Norwegian researchers collaborated with American researchers, who conducted the same analysis in the US. The American researchers included 559 children from different locations in the United States. They did not find the same connection between home and school relationships.

Hygen believes she has an idea why the Norwegian and American researchers have gotten divergent results.

"In the United States, the stability of the relationship between teacher and child is often not the same in this age group," she says.

Norwegian children in the six-to-eight-year age group often have the

same teacher for several years. In the United States, teachers change more often, and a change in the child's relationship with their teacher over time may therefore be due to a change of teacher, not necessarily an improvement or worsening of the relationship with the same teacher.

So, according to Hygen, researchers are less sure whether they are able to accurately measure relationship improvement or deterioration in the US, and the more frequent teacher changes may explain why the study doesn't capture the effect of changes in the parent-child relationship.

The researchers also assume that the quality of teachers varies a lot more in the United States than in Norway, since the funding of the school system differs from state to state. Greater social inequalities in the United States, which can influence relationships between teachers and children, may also affect the US results.

The study has been published in the professional journal *Developmental Psychology*.

More information: Beate Wold Hygen et al. Change in parenting, change in student–teacher relationships, and oxytocin receptor gene (OXTR): Testing a gene- \times -environment (G \times E) hypothesis in two samples., *Developmental Psychology* (2017). [DOI: 10.1037/dev0000333](https://doi.org/10.1037/dev0000333)

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