

Supplemental Materials
Detecting Bullying in Early Elementary School With a Computerized Peer-Nomination Instrument

by M. Verlinden et al., 2013, *Psychological Assessment*
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Figure S1. Flow-chart of the sampling procedure.

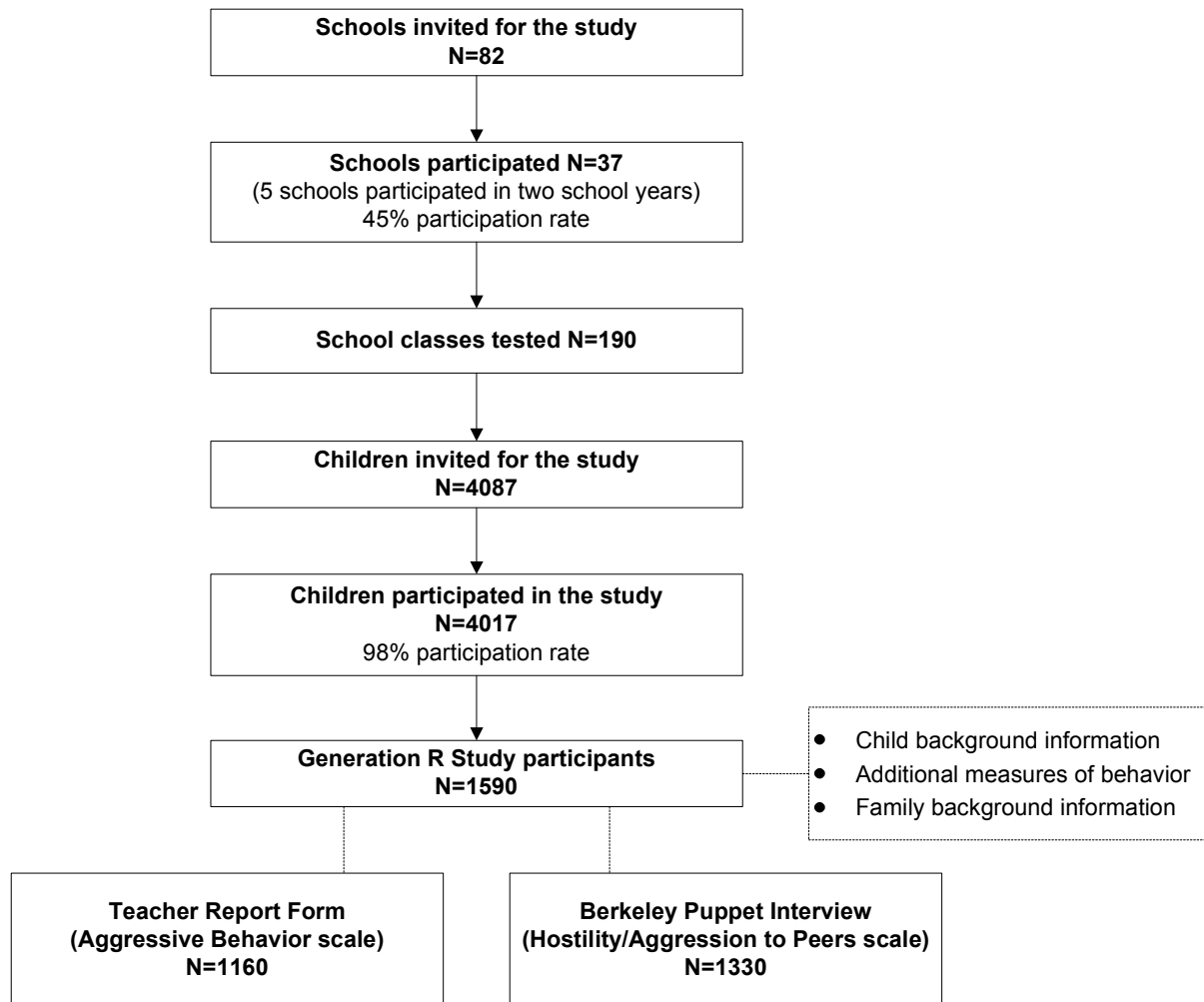


Table S1. *Mutually Adjusted Child and Maternal Characteristics and Bullying Involvement*

Socio-demographic characteristics	Bullying (mean, SD)	p-value*	Victimization (mean, SD)	p-value*
Age of the child	7.64 (9.12)	0.02	7.68 (9.12)	0.001
Gender				
Boy	0.07 (0.06)	Ref	0.06 (0.09)	Ref
Girl	0.04 (0.04)	<0.001	0.06 (0.08)	0.94
<i>Indicators of cultural background</i>				
National origin of the child:				
Dutch	0.04 (0.05)	Ref	0.05 (0.07)	Ref
Other Western	0.05 (0.04)	0.37	0.06 (0.10)	0.20
Non-Western:	0.07 (0.06)	0.41	0.07 (0.09)	0.12
National origin of the mother				
Dutch	0.04 (0.04)	Ref	0.05 (0.07)	Ref
Other Western	0.05 (0.05)	0.59	0.05 (0.07)	0.18
Non-Western:	0.08 (0.06)	0.001	0.08 (0.10)	0.09
<i>Indicators of socioeconomic status</i>				
Education of the mother:				
Low	0.07 (0.07)	<0.001	0.08 (0.11)	0.93
Mid-low	0.06 (0.06)	<0.001	0.06 (0.09)	0.72
Mid-high	0.04 (0.04)	0.88	0.05 (0.07)	0.93
High	0.04 (0.04)	Ref	0.04 (0.07)	Ref
Income:				
Below social security level: <€1200	0.07 (0.06)	0.25	0.08 (0.10)	0.22
Average: €1200 to €2000	0.06 (0.06)	0.44	0.06 (0.09)	0.28
Modal income: >€2000	0.04 (0.04)	Ref	0.04 (0.07)	Ref
<i>Indicators of family structure</i>				
Marital status				
Married/living together	0.05 (0.05)	Ref	0.05 (0.08)	Ref
Single	0.07 (0.06)	0.07	0.08 (0.11)	0.55
Birth order:				
First-born	0.05 (0.05)	Ref	0.05 (0.08)	Ref
Older siblings in the family	0.06 (0.06)	0.73	0.06 (0.09)	0.06

Note. Values presented are means and standard deviations. Peer nomination scores were based on ratings by multiple peers.

**p*-values are derived from regression analyses adjusting for clustered nature of the data.

Instructions Prior to the Start of the PEERS Measure¹

You will now be asked to do an interesting computer task. This task is about friendships and bullying. You will have to answer different questions about yourself and your classmates. It is important that you listen very carefully to all the questions. You should answer honestly; you should tell about things in the way they really are. It is important that you are sure about your answers. The questions in this task are about children at school. Many children have got friends in their class but sometimes it can also happen that some children get bullied. **Bullying means that one child offends another child time after time and that he/she does that on purpose. The child that is bullied doesn't like it but often doesn't know how to stop it. If something not nice happens only once, or when it happens by accident then it is not bullying. Also when, for example, two friends are teasing each other a bit in a friendly way, then it is not bullying, because both of them are playing and enjoying it. So, bullying is when a child does something not nice to another child time after time and on purpose, and the child that is bullied doesn't really know how to stop it.**

Bullying can be different. I have got some pictures to show and explain this to you. Bullying can, for example, be like this (*show the first picture*), that's when one child does something painful to another child, like for example hitting or pushing (*show the picture from the PEERS Measure*). It can also be like this (*show the next picture from the instructions book*), that's when one child takes away, breaks or hides another child's things. Bullying can also happen when a child says ugly and mean things to another child, laughs at that child or calls him/her names (*show illustration of verbal bullying*). And do you see on this picture (*show the photo closer*) that this child really doesn't like it, the child is upset and looks down? And here you see two children who are going to play together and this other girl wants to play with them (*point*), but these two children do not allow her to play with them. Do you know how this kind of bullying is called? (*Wait for the children to answer*). Yes, correct, it's called excluding someone. Indeed. This is when children leave out another child of activities time after time and do not let him/her play with them.

¹The information presented here is an example of a part of the protocol. The entire protocol is not presented here. Technical instructions are omitted for reasons of brevity.

The PEERS Measure Questions²

Transcript of the audio “Peer acceptance”:

On a screen a child sees a school bus arriving. A child hears: *“Look, there is a school bus and you are the driver! (a child’s photo can be seen at the driver’s seat). You are going on a nice school trip to a zoo! And here are your classmates (photos of all the participating children are displayed). You can choose whom you would really like to come with you! Who would you like the most to go with you on the trip? Click on the photos of the children you would like to come with you. When you’ve finished, click on the green arrow!”*

Transcript of the audio “Peer rejection”:

On a screen a child sees the school bus and the photos of the nominated children (i.e., accepted peers) are seen through the windows, seated in the bus. A child hears: *“Oh this trip is really fun! But unfortunately it’s not possible to take everybody along. Whom would you rather not take with you on the trip? Click on their photos. As soon as you are done and ready to go, click on the green arrow!”* Once a child clicks on the green arrow, the bus drives away and a child hears children singing a song and sees the bus driving through the streets. The bus stops at school. The part of the assessment where questions about bullying, defending and prosocial behavior are asked begins when children see a classroom.

Transcript of audio “Verbal bullying”:

A child sees a picture of verbal bullying on the screen and hears the following:

“You know, some children are not very nice to other children, just as you can see on this picture. Have a look. They are saying mean things to this boy; they are calling him names. This is not the first time they are doing this; they’ve been often saying ugly things to him. They are doing this on purpose and this boy feels like he cannot do much about it. Does anyone in your class do such things to you?” Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class often says*

² Only parts of the transcript of the audio from the PEERS Measure are presented here as an example of the phrasing of the questions. The following parts of the audio were omitted for reasons of brevity: “Introduction” and “Familiarization task”.

mean or ugly things to you. Click on the no-shaking icon if no one in your class says mean or ugly things to you.” If a child clicks on ‘no’, then the next question of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on the pictures of those classmates who often say mean things to you. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next question of the PEERS Measure follows.

Transcript of audio “Material bullying”:

A child sees a picture of material bullying on the screen and hears the following:

“Oh look at this, her things are being taken away from her! Sometimes he hides her things and once he also broke something that belonged to her. She is really upset about that. He takes her things away from her on purpose and she finds it very difficult to do something about it. Does anyone in your class often do such things to you?” Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class often takes away your things from you, hides your things, damages or breaks them. Click on the no-shaking icon if no one in your class does such things to you.”* If a child clicks on ‘no’, then the next question of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on the pictures of those classmates who often take away things from you, hide them or break them. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next question of the PEERS Measure follows.

Transcript of audio “Physical bullying”:

A child sees a picture of physical bullying on the screen and hears the following:

“Oh do you seen that? That child is being pushed by the classmate. This happens quite often; they often hit, kick or push him. He finds it very difficult to do something about it. Does

anyone from your class often do such things to you: hit, kick or push you? Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class often hits, kicks or pushes you. Click on the no-shaking icon if no one in your class does such things to you.”* If a child clicks on ‘no’, then the next question of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on the pictures of those children who often do such things to you. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next question of the PEERS Measure follows.

Transcript of audio “Relational bullying (i.e. social exclusion)”:

A child sees a picture of relational bullying (social exclusion) on the screen and hears the following: *“Oh have a look! This child is not allowed to play along with them. She is often left out of things by these classmates. Also, they often say that she is not allowed to sit close by. Do children in your class often do such things to you? Do not allow you to play with them or to sit with them?”* Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class often says that you are not allowed to play with them or to sit with them. Click on the no-shaking icon if no one in your class does such things to you.”* If a child clicks on ‘no’, then the next question of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on their pictures. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next question of the PEERS Measure follows.

Transcript of audio “Defender’s role”:

A child sees a picture of a child being defended on the screen and hears the following: *“When children behave mean to another child it’s called bullying. There are also children who try to help a bullied child – have a look. Here you can see that a child in the middle stops the bully and says that he should not bully his classmate. Another way to stop bullying is to go and tell*

the teacher about what is happening. Are there children in your class who would help you if you get bullied? Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class would help you if you get bullied. Click on the no-shaking icon if no one in your class would help you if you get bullied.”* If a child clicks on ‘no’, then the next question of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on the pictures of those classmates who would help you if you are bullied. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next question of the PEERS Measure follows.

Transcript of audio “Prosocial behavior”:

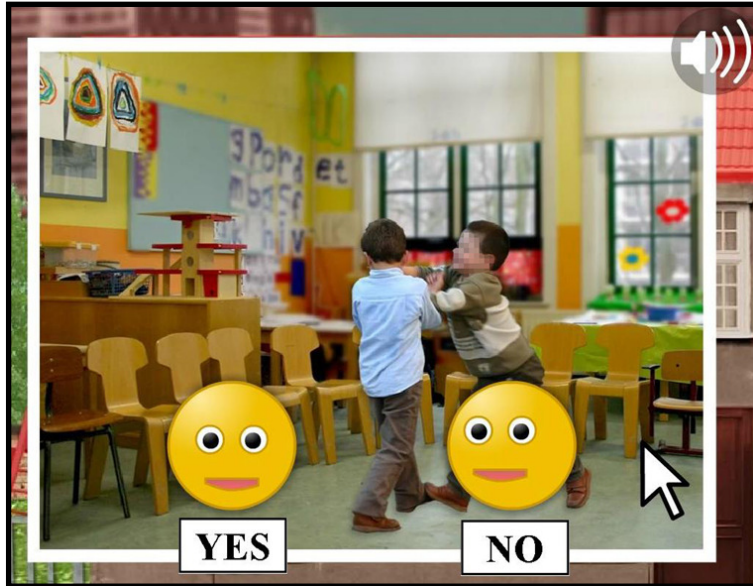
A child sees a picture of prosocial behavior on the screen and hears the following: *“You probably also know children who are kind and nice to other children. They often share things with others, or they comfort a classmate who is sad, just like you see on this picture. Does anyone in your class do such nice things for you?”* Two animated icons appear on the screen (one, a ‘yes-icon’, is nodding for ‘yes’ and the second one, a ‘no-icon’, is shaking head for ‘no’). A child hears the following: *“Click on the yes-nodding icon if someone in your class does such nice things for you. Click on the no-shaking icon if no one in your class does such things for you.”* If a child clicks on ‘no’, then the next part of the PEERS Measure follows. If a child clicks on ‘yes’, then a child sees the photos of the classmates and hears the following: *“Click on the pictures of those classmates who often do nice things for you. You can’t click on more than 10 photos. If the photo of a classmate you want to choose is not there, click on the empty picture underneath. When you’ve finished, click on the green arrow to go further.”* When a child clicks on the green arrow, the next part of the PEERS Measure follows.

Transcript of audio “Ending of the PEERS”:

A child sees the bus arriving to the zoo. A sign ‘the end’ appears on the screen. A child hears: *“Oh there is the zoo already! And you have also finished the computer task. I hope you’ve enjoyed it. I’ve really enjoyed talking to you. You did really well answering all the questions! Bye!”*

Illustration of the PEERS Measure

An illustration of a yes-no question about physical victimization.



An illustration of a child answering a peer nomination question.

