



Universität Zürich
Pädagogisches Institut

z-proso Zürcher Projekt zur sozialen Entwicklung von Kindern

University of Cambridge
Institute of Criminology



Technical Report

Parent Wave 2

Relationship to Sibling & Sibling's Aggression

Source/Developer	z-proso Project Team / R. Tremblay
Description	A brief assessment of each sibling's <ul style="list-style-type: none">• quality of relationship with the target child• physical aggressiveness (Physical-Aggression subscale of the Social Behaviour Questionnaire)
Number of Items	7 per sibling
Response Categories	5-point Likert scale (from "never" to "very often")
Item Example	"TARGET CHILD and SIBLING play with each other."
Administration History	Wave 2

Relationship to Sibling & Sibling's Aggression Scale – Subscale “First Sibling’s Relationship with the Target Child”

- Variable Values**
- 5-point Likert scale
 - 1- never
 - 2- rarely
 - 3- sometimes
 - 4- often
 - 5- very often

 - 7- Does not apply (*MISSING*)
 - 8- Don't know/ Can't remember (*MISSING*)
 - 9- No answer/ Answer refused (*MISSING*)

Variable Wording & Case Summary

Variable Name	Label	Wording	Missings (%)
P2_14110_1	Relationship with the target child 1	<?> and <?> play with each other	0 (0.0%)
P2_14110_2	Relationship with the target child 2	<?> and <?> get along with each other	0 (0.0%)
P2_14110_3	Relationship with the target child 3	<?> and <?> have an argument	1 (0.1%)
P2_14110_4	Relationship with the target child 4	<?> and <?> physically attack each other	0 (0.0%)

Total N = 832

Descriptive Statistics

Variable Name	Label	Mean	Standard Deviation	Min.	Max.	Skewness	Kurtosis	Item-Scale Correlation	α If Item Removed ($\alpha = .605$)
P2_14110_1	Relationship with the target child 1	4.05	.931	1	5	-.752	-.061	.259	.633
P2_14110_2	Relationship with the target child 2	3.97	.782	1	5	-.417	-.074	.534	.433
P2_14110_3r	Relationship with the target child 3	2.84	.850	1	5	.406	.309	.416	.512
P2_14110_4r	Relationship with the target child 4	3.61	.924	1	5	-.064	-.575	.365	.551

Comments: The variables P2_14110_3 and P2_14110_4 have been reverse-scored.

Sum Index Descriptive Statistics

First Sibling’s Relationship with the Target Child Subscale (P2_S1getalong)

Group	N	Mean	Standard Deviation	Min.	Max.	Skewness	Kurtosis	ANOVA		
								df	F	p
Full sample	832	3.62	.591	1.25	5.00	-.221	.417			
Gender								1	7.33	.007
Girls	376	3.68	.551	2.00	5.00	-.068	-.015			
Boys	456	3.57	.619	1.25	5.00	-.263	.528			
Treatment								3	.985	.399
Control	222	3.60	.573	2.00	5.00	-.049	-.038			
Triple P	185	3.65	.593	1.50	5.00	-.355	.940			
PATHS	246	3.58	.586	1.50	5.00	-.161	.571			
Combination	179	3.66	.619	1.25	5.00	-.379	.415			
Language								8	13.26	.000
German	562	3.50	.556	1.25	4.75	-.299	.741			
Albanian	53	4.08	.561	2.75	5.00	.091	-.670			
Bos./Cro./ Serb.	62	3.91	.626	2.50	5.00	-.365	-.512			
English	11	3.66	.422	3.00	4.25	.093	-.119			
Italian	12	3.29	.797	2.00	4.50	-.303	-.533			
Portuguese	41	3.95	.463	3.00	5.00	.164	-.441			
Spanish	26	3.56	.526	2.25	4.50	-.637	.155			
Tamil	34	3.94	.502	3.00	5.00	.118	-.846			
Turkish	31	3.68	.606	2.25	4.50	-.851	.287			

Comments:

- 1) The variables P2_14110_3 and P2_14110_4 have been reverse-scored and then the scale has been constructed by taking the average of

all the variables. The maximum number of missing values allowed was 1. For the purpose of rescaling, 1 has been subtracted from the total scale.

2) The results of the ANOVA are significant for the gender groups ($F(1,830) = 7.33, p < .01$) and the language groups ($F(8,823) = 13.26, p < .001$). ANOVA yielded no significant results for the treatment groups ($F(3,828) = .985, p > .05$).

Correlations with Subscales & DVs *First Sibling's Relationship with the Target Child Subscale (P2_S1getalong)*

Variable	r	Full Sample P2	N	r	Girls P2	N	r	Boys P2	N
Subscales									
<i>First Sibling's Physical Aggressiveness</i>	-.312	***	831	-.304	***	376	-.315	***	455
Parent SBQ									
<i>Aggression</i>	-.372	***	830	-.370	***	375	-.361	***	455
<i>Prosociality</i>	.282	***	828	.235	***	372	.297	***	456
Teacher SBQ									
<i>Aggression</i>	-.083	*	812	-.073	ns	370	-.064	ns	442
<i>Prosociality</i>	.080	*	813	.068	ns	371	.045	ns	442
Child SBQ									
<i>Aggression</i>	-.156	***	822	-.043	ns	372	-.205	***	450
<i>Prosociality</i>	.024	ns	822	-.055	ns	372	.037	ns	450

1 *** $p < .001$, ** $p < .01$, * $p < .05$, ns $p > .05$

Comments :First Sibling's Relationship with the Target Child has a moderate and negative correlation with the First Sibling's Physical Aggressiveness. This measure is also correlated with child aggression and prosociality with the expected signs, though the correlations are higher for the parent-reported measures of child aggression and prosociality. Overall, the subscale yields higher predictive validity for the parent-reported measures.

Relationship to Sibling & Sibling's Aggression Scale – Subscale “First Sibling’s Physical Aggressiveness”

- Variable Values**
- 5-point Likert scale
 - 1- never
 - 2- rarely
 - 3- sometimes
 - 4- often
 - 5- very often

 - 7- Does not apply (*MISSING*)
 - 8- Don't know/ Can't remember (*MISSING*)
 - 9- No answer/ Answer refused (*MISSING*)

Variable Wording & Case Summary

Variable Name	Label	Wording	Missings (%)
P2_14110_5	First Sibling's physical aggressiveness 1	<?> gets into fights	3 (0.4%)
P2_14110_6	First Sibling's physical aggressiveness 2	<?> kicks, bites, hits other children	0 (0.0%)
P2_14110_7	First Sibling's physical aggressiveness 3	<?> physically attacks people	2 (0.2%)

Total N = 832

Descriptive Statistics

Variable Name	Label	Mean	Standard Deviation	Min.	Max.	Skewness	Kurtosis	Item-Scale Correlation	α If Item Removed ($\alpha = .770$)
P2_14110_5	First Sibling's physical aggressiveness 1	1.68	.863	1	5	1.08	.387	.533	.789
P2_14110_6	First Sibling's physical aggressiveness 2	1.54	.737	1	5	1.14	.457	.663	.627
P2_14110_7	First Sibling's physical aggressiveness 3	1.47	.697	1	4	1.35	1.03	.637	.662

Sum Index Descriptive Statistics *First Sibling's Physical Aggressiveness Subscale (P2_S1PHYAGGR)*

Group	N	Mean	Standard Deviation	Min.	Max.	Skewness	Kurtosis	ANOVA		
								df	F	p
Full sample	831	1.56	.637	1.00	4.00	1.20	.921			
Gender								1	.847	.358
Girls	376	1.54	.621	1.00	4.00	1.25	1.16			
Boys	455	1.58	.650	1.00	4.00	1.15	.759			
Treatment								3	1.59	.190
Control	221	1.62	.662	1.00	3.33	.901	-.332			
Triple P	185	1.58	.640	1.00	4.00	1.38	2.20			
PATHS	246	1.56	.665	1.00	4.00	1.25	.917			
Combination	179	1.48	.554	1.00	3.67	1.27	1.40			
Language								8	2.97	.003
German	561	1.60	.633	1.00	4.00	1.09	.742			
Albanian	53	1.62	.720	1.00	4.00	1.34	1.42			
Bos./Cro./ Serb.	62	1.30	.464	1.00	3.00	1.90	3.30			
English	11	1.76	.474	1.33	2.67	.949	-.402			
Italian	12	1.35	.668	1.00	3.33	2.77	8.34			
Portuguese	41	1.40	.528	1.00	3.00	1.33	1.16			
Spanish	26	1.63	.768	1.00	3.33	1.19	.206			
Tamil	34	1.37	.543	1.00	3.00	1.50	1.60			
Turkish	31	1.72	.808	1.00	3.67	.865	-.423			

Comments:

1) The scale has been constructed by taking the average of all the variables. The maximum number of missing values allowed was 1. For the purpose of rescaling, 1 has been subtracted from the total scale.

2) The results of the ANOVA are highly significant for the language groups ($F(8,822) = 2.97, p < .001$). ANOVA yielded no significant results for either the gender groups ($F(1,829) = .847, p > .05$) or the treatment groups ($F(3,827) = 1.59, p > .05$).

Correlations with Subscales & DVs *First Sibling's Physical Aggressiveness Subscale (P2_S1PHYAGGR)*

Variable	Full Sample			Girls			Boys		
	r	P2	N	r	P2	N	r	P2	N
Subscales									
<i>Relationship to Sibling 1</i>	-.312	***	831	-.304	***	376	-.315	***	455
Parent SBQ									
<i>Aggression</i>	.280	***	830	.294	***	375	.266	***	455
<i>Prosociality</i>	-.157	***	827	-.124	*	372	-.175	***	455
Teacher SBQ									
<i>Aggression</i>	.022	ns	811	-.010	ns	370	.037	ns	441
<i>Prosociality</i>	-.035	ns	812	.010	ns	371	-.062	ns	441
Child SBQ									
<i>Aggression</i>	.122	***	821	.116	*	372	.121	*	449
<i>Prosociality</i>	-.045	ns	821	-.039	ns	372	-.040	ns	449

¹ *** $p < .001$, ** $p < .01$, * $p < .05$, ns $p > .05$

Comments : First Sibling's Physical Aggressiveness has a moderate and negative correlation with the First Sibling's Relationship with the Target Child. This measure is also positively and significantly correlated with the child aggression but only when the informant is either the parent or the child and the correlations are relatively higher for the parent-reported measures. First Sibling's Physical Aggressiveness is also negatively associated with the target child's prosociality, but only when the informant is the parent. Overall, the subscale yields higher predictive validity for the parent-reported measures

Frequencies Number of Siblings*	Variable	Target Child
		N (% of total valid cases at parent interview 1)
	<i>Number of Siblings</i>	
	0 Sibling	308 (25.8%)
	1 Sibling	600 (50.3%)
	2 Siblings	222 (18.6%)
	3 Siblings	45 (3.8%)
	4 Siblings	12 (1.0%)
	5 Siblings	4 (0.3%)
	6 Siblings	1 (0.1%)

* Includes only those who were born before 2003.