






Paper Discussion Symposium: SIENA Models for Negative Relationships and Behavior Dynamics 14th Biennial Meeting, Society of Research on Adolescence (SRA), March 8-10, 2012, Vancouver, Canada	
Defenders of victims – Selection and Influence Effects	
What role do teachers' self-efficacy and school climate play?	
S. Ruggieri ¹ , T. Friemel, ² F. Sticca ³ , S. Perren ⁴ & F. D. Alsaker ⁵	
¹ University of Bern, Switzerland ² IPMZ University of Zürich, Switzerland ³ Jacobs Center for Productive Youth Development, University of Zürich, Switzerland	


	
Introduction I	
<ul style="list-style-type: none"> > Bullying is a group phenomenon (Salmivalli, 2010; Sutton & Smith, 1999) > Participant role approach (Salmivalli et al., 1996) <ul style="list-style-type: none"> — Reinforcer – Assistants – Outsiders – Defenders > Victims with defenders are less anxious and have a higher self-esteem than victims without defenders (Sainio, Veenstra, Huitsing, & Salmivalli, 2011) 	


	
Introduction II	
<ul style="list-style-type: none"> > A majority of bystanders is negative toward bullying and has positive attitudes towards the victims (Boulton, Bucci, & Hawker, 1999; Menesini et al., 1997; Rigby & Slee, 1991) > Bystanders do not often intervene and help the victims (Hawkins et al., 2001) > About 20% of students usually intervene to stop bullying (Salmivalli et al., 1998) 	


	
Defending Behavior	
<ul style="list-style-type: none"> > Is a particular type of prosocial behavior (Pozzoli & Gini, 2010) > Is a risky behavior (Pozzoli & Gini, 2010) <ul style="list-style-type: none"> — Bullies have power and support from assistants and reinforcers (Pozzoli & Gini, 2010) — Fear of becoming the (next) target of bullying (Lodge & Frydenberg, 2005) — Lack of confidence without support of others (Lodge & Frydenberg, 2005) > Defenders do not receive peer support for their behavior (Camodeca & Goossens, 2005; Salmivalli et al., 1996) 	


	
Defending and peer support	
<ul style="list-style-type: none"> > Emotional support as central factor (Porter & Smith-Adcock, 2011) > Defenders associate with similar children (Salmivalli et al., 1997) > Having similar friends may be important for defenders > H1: Similarity between peers in defending behavior <ul style="list-style-type: none"> — Selection = <i>behavior</i> remains similar, but <i>relationship</i> changes. — Influence = <i>relation</i> remains stable, but <i>behavior</i> changes. 	


	
Defending and teachers' self-efficacy	
<ul style="list-style-type: none"> > 30% of students believe that teachers are not interested in stopping bullying (Rigby, 1996) > Lack of interest -> teachers' lack of perceived self-efficacy? > Predictor for teacher intervention in bullying -> self-efficacy (Novick & Isaacs, 2010) > H2: High teacher self-efficacy fosters similarity in defending behavior between peers 	


Defending and school climate	
<ul style="list-style-type: none"> > Sense of safety -> positive school climate > Sense of safety in class is higher when students defend the victim (Gini, Pozzoli, Borghi, & Franzoni, 2008) > H3: A positive school climate fosters similarity in defending behavior between peers 	

Methods Sample	
<ul style="list-style-type: none"> > N= 478 seventh graders > Seven schools (23 classrooms) > Two waves (t1: Oct. 2010 & t2: Mai 2011) > Mean age = 13.2 (SD = 0.64) > 51% females > This research was supported by the <i>Swiss National Science Foundation (SNF 100014_130193/1: Perren & Alsaker)</i> 	

Methods Measurement (1)	
<ul style="list-style-type: none"> > Defending (adapted from Sutton & Smith, 1999) <ul style="list-style-type: none"> — I try to help the victim — I try to comfort the victim and to encourage her/him — I ask someone else for help (adults or other adolescents) <ul style="list-style-type: none"> — t1: $\alpha = .766$, $M=2.95$ ($SD = .98$) — t2: $\alpha = .750$, $M=2.79$ ($SD = 1.02$) > Peer Dyads <ul style="list-style-type: none"> — „With whom do you hang out with after school?“ 	

Methods Measurement (2)	
<ul style="list-style-type: none"> > Teachers' self-efficacy (Alsaker, Nägele, Valkanover, & Hauser, 2008) <ul style="list-style-type: none"> — 4 items on a 4-point likert scale (not true – always true) — Sample item: <i>Teachers have the power to stop bullying behavior</i> — $\alpha = .658$; $M= 3.17$ ($SD = .32$) > School climate (Alsaker et al., 2008) <ul style="list-style-type: none"> — 4 items on a 4-point likert scale (not true – always true) — Sample item: <i>The students feel comfortable in my class</i> — $\alpha = .880$; $M= 3.66$ ($SD = .24$) 	

Methods Measurement (3)	
<ul style="list-style-type: none"> > Control variables <ul style="list-style-type: none"> — Gender (Male=1, Female =2) — Reciprocity of nominations — Class (is there a preference for own class peer?) 	

Methods Analysis (1)	
<ul style="list-style-type: none"> > Actor-based models of Network and Behavior Dynamics (Snijders, Steglich, & van de Bunt, 2010) > Simulation Investigation for Empirical Network Analysis (SIENA) in R (Snijders, Steglich, & Schweinberger, 2007) > Allows to test selection and influence effects while controlling for each other (Burk, Steglich, & Snijders, 2007; Steglich et al., 2010) 	

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Results
Descriptives of 7 Networks (Schools)

School					T1	T2
	Jaccard Index	Distance Network	Distance Behavior	Reciprocal dyads	Density	Density
N=58	.47	459	39	57%	.23	.22
N=48	.39	389	40	57%	.21	.22
N=80	.45	641	57	45%	.14	.14
N=66	.43	567	16	51%	.17	.18
N=78	.39	654	59	46%	.15	.13
N=59	.30	493	27	48%	.15	.13
N=89	.38	690	68	47%	.10	.12

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Results
SIENA Meta-Analysis I: Selection Part

		Estimate	SE	Estimated between school SD	variance of parameter is 0
Selection Part					
1	Rate	18.60	1.95	4.78	<.001
2	Outdegree (Density)	-1.875***	.109	.289	<.001
3	Reciprocity	1.108**	.201	.530	<.001
4	Transitive triplets	.185***	.022	.057	<.001
5	3-cycles	-.195***	.026	.069	<.001

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Results
SIENA Meta-Analysis II: Selection Part

		Estimate	SE	Estimated between school SD	variance of parameter is 0
Selection Part					
6	Gender alter	.025	.060	.160	<.05
7	Gender ego	.044	.083	.220	<.001
8	Gender similarity	.499***	.058	.155	<.05
9	Same class	.357**	.095	.252	<.001
10	Defending alter	.065	.039	.102	.298
11	Defending ego	-.016	.048	.128	<.05
12	Defending similarity	1.120	.569	1.313	<.05
13	Defending similarity x reciprocity	-.236	.497	1.219	.470
14	Gender x defending similarity	.672*	.327	.829	.476

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Results SIENA Meta-Analysis III: <i>Behavior Part</i>					
		Estimate	SE	Estimated between school SD	variance of parameter is 0
Behavior Part					
15	Rate	1.79	.353	.866	<.05
16	Linear Shape	-.106	.046	.114	.885
17	Quadratic shape	.079	.08	.196	.857
18	Average similarity	1.939	1.201	1.023	.934
19	Gender (female)	.05	.09	.240	.902

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Methods Analysis (2)

> Meta-analytic multiple regression
(Lipsey & Wilson, 2001)

- AV = SIENA parameters (*defending selection similarity and defending average similarity*)
- UV = *teachers` self-efficacy and school climate*

Results Meta-Analytic Multiple Regression					
	Beta	B (unst.)	SE	Z-value	
<i>Defending selection similarity</i>					
Self-efficacy	-.746	-2.75	1.236	-2.82*	
School climate	.271	5.11	1.70	3.08*	
<i>Defending average similarity</i>					
Self-efficacy	-.125	-.731	5.41	-.073	
School climate	-.113	-.701	4.39	-.071	

Note: z-value > +/- 1.96 is significant on 5 percent level

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Conclusion

- > H1: Similarity in defending behavior between peers
 - Selection = *behavior* remains similar, but *relationship* changes
Hypothesis not confirmed in the meta-analysis (*but in 5 from 7 schools*)
 - Influence = *relation* remains stable, but *behavior* changes
Not confirmed
- > H2: High teacher self-efficacy fosters similarity in defending behavior between peers
Low teacher self-efficacy is associated with defending similarity
- > H3: Positive school climate fosters similarity in defending behavior between peers
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Discussion

- > School context -> similarity in defending behavior between peers
- > Power of defender for intervention
- > Grouping of defenders -> intervention?

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Thank you for your attention!

sabrina.ruggieri@psy.unibe.ch

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Results
Ego-alter Selection Table for Gender Similarity



		Alter		
		Male	Female	
Ego	Male	.308	-.110	
	Female	-.016	.484	


Results
Ego-alter Selection Table for Defending Similarity



		Alter				
		1	2	3	4	5
Ego	1	.242	-.543	-.515	-.488	-.461
	2	-.567	.028	-.512	-.485	-.458
	3	-.563	-.536	.302	-.482	-.455
	4	-.561	-.533	-.506	.333	-.452
	5	-.558	-.530	-.503	-.476	.366


Note: 1 (low defending) – 5 (high defending)

Results
Ego-similarity Table for Gender x Similarity Defending




		Similarity		
		Low (1)	High (2)	
Ego	Male (1)	.37	.53	
	Female (2)	.07	.81	

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Descriptives of 7 Networks (Schools)




School					T1	T2
	Jaccard Index	Distance Network	Distance Behavior	Reciprocal dyads	Density	Density
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


Network	T1		T2		Average Degree
	Jaccard Index	Density	Average Degree	Density	
N=58	.47	.23	12.9	.22	11.19
N=48	.39	.21	9.60	.22	10.19
N=80	.45	.14	11.24	.14	11.27
N=66	.43	.17	11.25	.18	11.88
N=78	.39	.15	11.59	.13	10.07
N=59	.30	.15	8.83	.13	7.54
N=89	.38	.10	8.62	.12	10.53
Total 478					

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