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Self- and other-oriented social skills: Differential associations with children's mental health and bullying roles

Abstract

We conceive of social competence as the ability to use social interactions to satisfy one's own goals and needs while at the same time considering the needs and goals of others. To assess these two dimensions, a questionnaire was developed (SOCOMP: Self- and Other-oriented social COMPetences). The aim of the current study was to establish reliability and construct validity of the parent report of the SOCOMP-measure. 428 10-13-year-old children participated in a follow-up assessment of a longitudinal study. Children reported on their mental health and bullying roles and parents completed the SOCOMP-measure. The SOCOMP had also been completed by kindergarten teachers about six years before.

Internal consistency of the parent-reported social skills scales was moderate to high. Longitudinal analyses showed significant associations between parent-reports and (former) teacher-reports within the same dimension but not across dimensions (self and other). Parent-reported deficits in other-oriented social skills were associated with conduct problems, bullying perpetration and lower levels of defender behavior in bullying situations, whereas deficits in self-oriented social skills were associated with depressive symptoms and peer victimization. The current study provides further support for the importance of distinguishing between the suggested two dimensions of social skills.

Keywords

Social skills; Mental health; Bullying; Peer victimisation

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Selbst- und fremdbezogene soziale Fertigkeiten: Differentielle Zusammenhänge mit der psychischen Gesundheit und mit Mobbingrollen von Kindern

Zusammenfassung

Wir verstehen unter sozialer Kompetenz die Fähigkeit, in sozialen Interaktionen die eigenen Bedürfnisse und Ziele zu befriedigen, bei gleichzeitiger Berücksichtigung der Bedürfnisse und Ziele der anderen. Zur Erfassung dieser beiden Dimensionen von sozialen Fertigkeiten wurde ein Fragebogen entwickelt (SOCOMP: Self- and Other-oriented social COMPetences). Das Ziel dieser Studie ist, die Reliabilität und Konstruktvalidität der Elternversion des SOCOMP-Fragebogens zu ermitteln. 428 10- bis 13-jährige Kinder nahmen an einer Folgeuntersuchung einer Längsschnittstudie teil. Kinder schätzten ihre psychische Gesundheit und ihre Mobbingrollen ein. Eltern füllten den SOCOMP-Fragebogen aus. Derselbe Fragebogen wurde von den Kindergartenlehrpersonen bereits etwa 6 Jahre davor ausgefüllt. Die interne Konsistenz der Skalen der Elterneinschätzung der sozialen Fertigkeiten war mittel bis hoch. Längsschnittanalysen konnten signifikante Zusammenhänge zwischen der Elterneinschätzung und der Einschätzung der damaligen Kindergartenlehrperson innerhalb derselben Dimension, aber nicht dimensionsübergreifend (selbst- vs. fremdbezogen) aufzeigen. Die durch die Eltern berichteten fremdbezogenen sozialen Kompetenzdefizite waren mit Verhaltensproblemen, Ausüben von Mobbing und einem niedrigeren Niveau an Verteidigungsverhalten in Mobbingsituationen assoziiert, wogegen Defizite in selbstbezogenen sozialen Fertigkeiten mit depressiven Symptomen und Peer-Viktimisierung assoziiert waren. Die Befunde der vorliegenden Studie unterstützen die postulierte Bedeutsamkeit, die beiden Dimensionen selbst- und fremdbezogene soziale Fertigkeiten zu unterscheiden.

Schlagworte

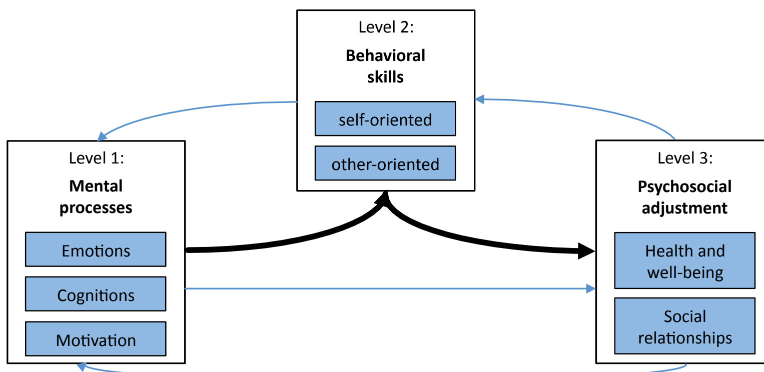
Soziale Kompetenz; Soziale Fertigkeiten; Psychische Gesundheit; Mobbing

1. Self- and other-oriented social skills: Differential associations with children's mental health and bullying roles

Generally speaking, social skills have been defined as behaviors that affect interpersonal relations. In our work, we conceive of social competence as the ability to use social interactions to satisfy one's own goals and needs while at the same time considering the needs and goals of others (Malti & Perren, 2011; Perren & Malti, 2008).

Perren and Malti (2008) developed an integrative tri-level model of social competence and psychosocial adjustment (Figure 1). In line with the conceptual model by Rose-Krasnor (1997), the model includes mental processes and social skills. In addition, it also includes the level of psychosocial adjustment, which is considered to be strongly connected to social competence. The model is intended to serve as a heuristic tool for guiding developmental research on social competence and to help connecting theory with practice by identifying the core dimensions of social competence and how they interact with one another (Malti & Perren, 2011).

Figure 1: An integrative tri-level model of social competence (adapted from Perren & Malti, 2008)



The three levels of the model are mental processes, behavioral skills, and psychosocial adjustment. The mental processes include the socio-cognitive, emotional, and motivational dimensions (e.g., social information processing, empathy, moral motivation, need for belonging). The most prominent model guiding this level of social competence is the social information processing model (SIP; Crick & Dodge, 1994; Lemerise & Arsenio, 2000). The second level of the model consists of behavioral skills (see below). The third level of the model encompasses two dimensions of psychosocial adjustment: health and well-being (internal adaptive outcomes) and positive social relationships (external adaptive outcomes) (Malti & Perren, 2011). The current paper investigates associations between level 2 (behavioral skills) and level 3 (psychosocial adjustment).

According to the definition presented above, social competence implies the ability to achieve one's aims and fulfill one's needs while considering the aims and needs of others. From this perspective, success – or in other words social competence – can be defined in two ways. On the behavioral level (social skills), people achieve their goals and fulfill their needs through social interaction (assertion and self-fulfillment), and people maintain positive relationships with others through cooperation and respect (adaptation and social orientation). This definition emphasizes a balance between the interests of the self and the interests of others, as well

as the ability to flexibly adapt one's own goals and needs to those of others, depending on the situational demands (Malti & Perren, 2011). The two-dimensionality of social skills and interpersonal behavior is somewhat comparable to the orthogonal axes of the interpersonal circumplex model (Wiggins, 1991), which distinguishes between agency (dominance/status) and communion (nurturance/affiliation/love). Agency and communion have also been differentiated in terms of their profitability for the self and for others (Abele & Wojciszke, 2007).

Therefore, on the behavioral level of social competence (i.e. social skills), we differentiate between two dimensions: self-oriented and other-oriented social skills. In our terminology, self-oriented social skills are aimed at satisfying one's own needs (i.e. assertiveness and social participation). According to Baumeister and Leary (1995), the need of belongingness is a fundamental human motivation; therefore, having the skills to initiate and maintain social interactions (i.e. social participation or sociability) is considered to be a self-oriented social skill. In contrast, other-oriented social skills are aimed at satisfying goals and needs of another person and include behaviors that take into consideration the welfare of others such as prosocial and cooperative behavior.

We assume that these dimensions operate on children's psychosocial adjustment through different mechanisms. Our own studies among 5- to 9-year old children have shown that deficits in self-oriented social skills are strongly associated with low emotional well-being and depressive symptoms, whereas deficits in other-oriented social skills are associated with negative peer relations such as peer rejection or victimization (Perren & Alsaker, 2006, 2009; Perren, Groeben, Stadelmann, & von Klitzing, 2008; Perren, Stadelmann, von Wyl, & von Klitzing, 2007; von Grünigen, Perren, Nägele, & Alsaker, 2010). To assess these two dimensions, we developed a 20-item questionnaire (SOCOMP) that can be completed by children, parents, and teachers. In our studies cited above, social skills were mostly assessed through teacher reports. The SOCOMP-subscales reported by teachers (prosocial behavior, cooperative behavior, social participation, leadership, and setting limits) show good internal consistencies (e.g., Perren & Alsaker, 2006; Perren et al., 2007; von Grünigen et al., 2010). Two studies also demonstrated the validity of the suggested two dimensions of social skills using factor and cluster analyses (Perren et al, 2007; Perren & Alsaker, 2009). In this study, we aim to investigate the psychometric qualities of the parents' version. Our second aim was to investigate the differential impact of former and current self- and other-oriented social skills on early adolescents' mental health (internalizing problems such as symptoms of anxiety and depression, and externalizing problems such as aggressive and rule-breaking behavior) and bullying roles (perpetration, victimization and defending).

1.1 Social skills and mental health

1.1.1 Self-oriented social skills

As outlined above, social participation and assertiveness, including leadership skills and the ability to set limits with peers, are skills that are based on the consideration of a person's own interests and benefits. Social participation represents the motivation and capacity to initiate and maintain social interactions and relationships (Rubin & Asendorpf, 1993). A lack of social participation (i.e. withdrawal) is considered as one of the main predictors of depressive symptoms in children (Henricsson & Rydell, 2006; Ladd, 2006). Likewise, low levels of assertiveness in children and adolescents were found to be associated with high levels of internalizing problems (Groeben, Perren, Stadelmann, & von Klitzing, 2011; Luthar, 1995; Öngen, 2006).

Regarding externalizing symptoms, a contrasting pattern of association can be found. Aggressive behavior is also strongly associated with high levels of assertiveness and social participation, e.g., at kindergarten age, aggressive behavior was found to load on the same factor as sociability and assertiveness (Perren et al., 2008). In general, aggressive children are socially active and more dominant (Pellegrini, Bartini, & Brooks, 1999; Pepler, Craig, & Roberts, 1998). Some bullies have also been found to have well-developed leadership skills (Perren & Alsaker, 2006).

1.1.2 Other-oriented social skills

Prosocial and cooperative behavior, including helping, caring and taking responsibility for another, tap children's attitudes and behaviors that are based on considering the interests and benefits of others in social interactions (Eisenberg & Fabes, 1998; Perren & Alsaker, 2009). Regarding other-oriented social skills and their associations with internalizing problems, the results appear contradictory. On the one hand, it has been suggested that prosocial behavior is negatively associated with emotional problems (Henricsson & Rydell, 2004; Wentzel & McNamara, 1999). On the other hand, further research suggested that high levels of prosocial behavior might even be a risk factor for the development of internalizing problems (Bohlin, Bengtsgard, & Andersson, 2000; Eisenberg & Fabes, 1998; Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000), especially when prosocial behavior is accompanied by low levels of social participation (Groeben et al., 2011).

Regarding the associations between other-oriented social skills and externalizing problems, the results are rather clear. Although there seem to be a subgroup of children who combine prosocial and aggressive means to reach their goals (Hawley, 2003), the general trends show that aggressiveness and externalizing problems are associated with lower levels of prosocial and cooperative behavior (Card & Little, 2006; Groeben et al., 2011; Hay & Pawlby, 2003). In sum, deficits in other-orient-

ed social skills are associated with externalizing problems, whereas the associations with internalizing problems remain unclear.

1.2 Social skills and peer relations

The role of social skills for children's and adolescents' peer relations has been intensely discussed from the perspective of peer rejection and popularity, i.e. a person's social status (liking or disliking) within his or her peer group (Rose-Krasnor, 1997). After decades of intense research on peer rejection, bullying became an important focus of peer relations research. Bullying is a group phenomenon whereby children can assume different roles (e.g., being victims, bullies, assistants of bullies, bystanders, or defenders of the victim). All children in the group can influence this process by intervening and helping the victim, supporting the bully, or choosing to ignore what they witness (Salmivalli, Lagerspetz, Bjoerkqvist, & Oesterman, 1996). In one of our former studies (Perren et al., 2008), we have shown that teacher-reported deficits in self- and other-oriented social skills are associated with peer rejection (assessed through peer nominations) and peer victimization. In this study, we investigated associations between social skills and different roles in bully/victim problems: being a perpetrator (bullying), being a victim (victimization) and being a defender (defender behavior).

1.2.1 Social skills and peer victimization

Social skills deficits may be a risk factor for peer victimization, for example when children lack skills to defend themselves against aggressive attacks. Furthermore, children may have deficits in certain social skills (e.g., sociability or ability to make friends) that could make them more vulnerable within a group (Alsaker & Gutzwiller-Helfenfinger, 2010). Two different pathways to victimization have been identified: aggressive-impulsive behavior and submissive-withdrawn behavior (Alsaker & Nägele, 2008; Hodges & Perry, 1999).

1.2.2 Social skills and bullying

There is an ongoing debate whether bullies have a social skills deficit (Sutton, Smith, & Swettenham, 1999). Most research has focused on bullies' deficits in perspective taking or theory of mind (Gasser & Keller, 2009; Gini, 2006). This line of research has shown that bullies do not have deficits in social intelligence but mainly regarding morality (Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Henderson, 2010). Only few studies investigated bullies' behavioral social skills. Bullies seem to have high self-oriented social skills (e.g., high leadership skills and

high social participation), but show lower levels of other-oriented social skills (low prosocial and cooperative behavior) (Perren & Alsaker, 2006).

1.2.3 Social skills and defender behavior

Until now, only few studies investigated associations between defender behavior and social competence. As defender behavior can be considered as a specific prosocial action (Pozzoli & Gini, 2010), it might be associated positively with general prosocial skills. Studies have shown that defending the victim is associated with higher levels of empathic responsiveness and social self-efficacy (Gini, Albiero, Benelli, & Altoe, 2008). As defending a victim requires a certain kind of assertiveness against the bully, we might also assume that there are positive associations between defender behavior and self-oriented social skills.

1.3 Research questions

Until now, mostly the teacher version of the SOCOMP-measure has been used with kindergarten and early school age children (Perren & Alsaker, 2006, 2009; Perren et al., 2008). Therefore, the aim of the current study was (a) to establish the psychometric quality of the parents' version of the SOCOMP-measure and (b) to analyze differential associations between parent-reported self- and other-oriented social skills and children's peer relations and mental health. To investigate convergent validity of the parents' version, we compared it with the teachers' version of the measure. In the current follow-up study, we did not use the teachers' version, thus we investigated associations with data from former kindergarten teachers.

As a further indication for the construct validity of the SOCOMP, we aimed to replicate well-established findings regarding differential associations between the social skills dimensions and different measures of psychosocial adjustment. We investigated two indicators of mental health (depressive symptoms and conduct problems) and three indicators of peer relationships (being a victim versus being a perpetrator of bullying and being a defender). We hypothesized that other-oriented social skills are negatively associated with bullying, victimization and conduct problems and positively with defender behavior, whereas self-oriented social skills are negatively associated with victimization and depressive symptoms. To avoid inflated correlations due to shared method variance, outcomes (adjustment) were assessed through child reports.

2. Method

2.1 Procedure

The data were assessed for a large longitudinal study of pathways to peer victimization with a representative sample of kindergarten and elementary school children from the German-speaking part of Switzerland (Alsaker, 2007). The study started at kindergarten age. At about age 12, a follow-up study was conducted. Written parental consent was obtained from all participants. Children themselves gave oral assent prior to the first interview and knew they could withdraw from the study at any time.

From the original sample of N = 1019 families who participated in the study as the children went to kindergarten in 2004, 904 (88.7 %) were contacted (valid addresses available) and questionnaires were sent to both parents and children. Participants were also given the option to fill out the questionnaire online and were therefore sent an individual password and link to our online survey. To reduce the age range, questionnaires were sent at two points in time of the year 2010, in April (n = 706) and in September (n = 198), at times when children were expected to be around 12. About two weeks after sending the questionnaires, a reminder letter was sent to all families that had not responded. Of the 904 families, 11.6 % (n = 105) actively declined to participate, 3.2 % (n = 29) had moved and letters were returned, and 37.8 % (n = 337) did not reply. The response rate of the 875 families that received our letter at T2 was 48.9 % (n = 428).

2.2 Sample

In total, 428 families participated in the follow-up study (50 % female children) and are included in the current paper. At T1 (kindergarten age), children were on average 5.9 years old (SD = 0.54, range: 4.6-7.5). At T2, children were on average 12.0 years old (SD = 0.60, range: 10.4-13.8). The time lag between the first assessment and the current follow-up was on average 6.1 years (SD = 0.40, range: 5.2 and 6.7 years).

The sample of the current paper includes 29 % children from families with migration background (i.e. one or both parents were born outside Switzerland). In general, parents (mothers or fathers) who completed the parent questionnaire had a rather high educational level (34 % had a college or University degree; 59 % had a professional or higher education degree; 7 % had basic education (maximum: 9 years of schooling)).

We found significant attrition effects regarding family background and children's social skills in kindergarten. Participating children are from families with a higher socio-economic status (less families with migration background) and were

rated by teachers as having higher levels of social skills than those who dropped out of the study.

2.3 Measures

2.3.1 Assessment of social skills

2.3.1.1 Parent report on social skills (T2). Parents completed a questionnaire on children's social behavior (SOCOMP: Self- and Other-oriented social COMPetences). The questionnaire was completed by mother or father (or both parents together). Items are shown in the Appendix. This questionnaire is identical to the teacher version of the SOCOMP questionnaire (Groeben et al., 2011; Perren & Alsaker, 2009). All items were rated on a four-point scale (1 = not at all true to 4 = definitely true). First, five different social skills scales were computed. The *cooperative behavior* subscale originally consists of five items (e.g., "Compromises in conflicts with peers"; a = .65). Due to the results of the confirmatory factor analysis (see below), the scale was reduced to three items. The *prosocial behavior* subscale consists of five items, covering helping, comforting, and sharing behavior (e.g., "Frequently helps other children"; a = .77). The *social participation* subscale, covering propensity to participate in social interactions, consists of four items (e.g., "Converses with peers easily", a = .71). The *leadership* subscale consists of three items ("Organizes, suggests play activities to peers"; a = .69). The *setting limits* subscale also consists of three items (e.g., "Refuses unreasonable requests from others"; a = .73).

In line with our theoretical model and former empirical results, the two dimensions self- versus other-oriented social skills were built using a combination of the items of the five subscales of social behavior patterns. *Other-oriented social skills* encompass all items from the cooperative and prosocial behavior subscale (8 items, a = .77). *Self-oriented social skills* encompass all items from the leadership, setting limits and social participation subscales (10 items, a = .82).

2.3.1.2 Teacher report on social skills (T1). The same questionnaire (SOCOMP) had been completed by teachers when the children were 5-6 years old (e.g., Perren & Alsaker, 2009): *Cooperative behavior* (a = .85); *prosocial behavior* (a = .88); *social participation* (a = .82); *leadership* (a = .83), *setting limits* (a = .71); *other-oriented social skills* (a = .90), *self-oriented social skills* (a = .90).

2.3.2 Assessment of mental health (child report, T2)

2.3.2.1 Depressive symptoms. Children completed an 8-item scale addressing depressive symptoms (α = .83). The scale has been validated in a longitudinal study (Alsaker, 1992; Holsen, Kraft, & Vitterso, 2000) and encompasses the constructs of

sad/depressed feelings, lack of positive feeling, lack of motivation/energy, valuing life as worthless. Items were rated on a 4-point scale (1 = not agree to 4 = agree).

2.3.2.2 Conduct problems. Children completed the conduct problems subscale of the Strengths and Difficulties Questionnaire (Goodman, 1997). Items were rated on a three-point-scale (not true, somewhat true, certainly true). The original scale consists of five items. One item was excluded due to its very low reliability (being obedient – reversed). The final scale encompasses lying, stealing, bad tempers, and fighting (α = .52).

2.3.3 Assessment of peer relations (child report, T2)

2.3.3.1 Bullying and victimization. In the following, we differentiate between *bullying* (= perpetration) and *victimization* (= being a victim of bullying). We used six items (three on bullying and three on victimization) from a well validated scale (Alsaker, 2003; Alsaker & Brunner, 1999) and added four new items to each domain. The latter items have been developed and tested in several studies (e.g., Perren, Gutzwiller-Helfenfinger, Malti, & Hymel, 2011; Zumthurm, 2007). The items were introduced through a general definition of what was meant with "bullying". Four different forms of bullying/victimization were assessed: physical (original item), verbal (original item and two additional items on comments concerning body appearance and direct threats), indirect forms (original item on exclusion and an additional item on rumors), and an item on property-related bullying (Perren & Alsaker, 2006). Participants reported on the frequency of bullying and victimization in the last three months (1 = never to 5 = almost every day). Internal consistency for both scales encompassing seven items each was good (victimisation: α = .78; bullying: α = .74). The validity of the scales has been demonstrated in former studies (Alsaker, 2006).

2.3.3.2 Defender behavior. Children also reported on their behavior as witnesses of bullying. The peer nominations measure by Sutton and Smith (1999) was transformed to a self-report form. Children were asked how frequently they displayed certain defender behaviors when witnessing bullying of another child (1 = never to 5 = always). The subscale defender behavior consists of three items (e.g., "I try to help a victim of bullying", α = .66).

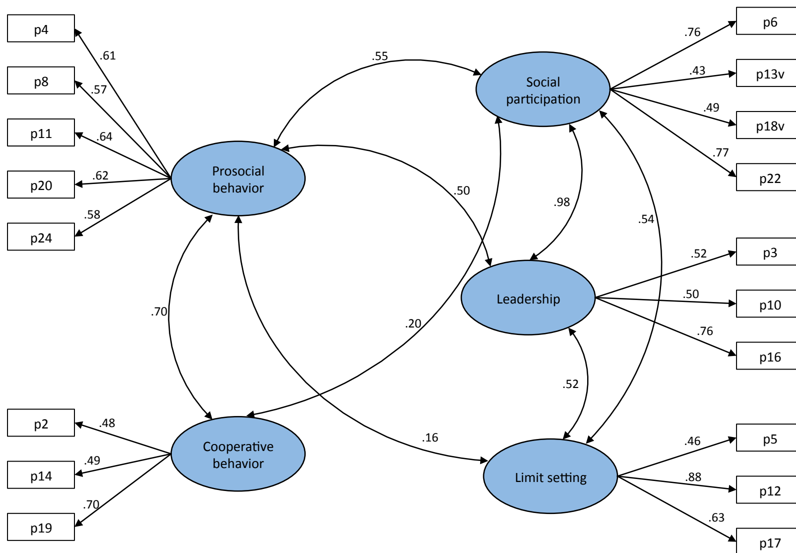
3. Results

3.1 Confirmatory factor analyses

Confirmatory factor analyses were computed to investigate the distinctiveness of the suggested five subscales and the two latent main dimensions. AMOS 20.0 was used to compute structural equation models.

First, a CFA-model with all 20 items and the corresponding five subscales were computed. The baseline model was modified based on empirically derived modification indices and theoretical justifications (Brown, 2006). Several error terms (only within a specific subscale) were allowed to covary. Moreover, two items from the subscale cooperative behavior were excluded from the model due to theoretically unjustified cross-loadings. The final model has an acceptable model fit (Chi² = 3.89, df = 120, p < .01; CFI = 0.943, RMSEA = 0.022). Parameter estimates (standardized) are shown in Figure 2. All depicted covariances and factor loadings are significant (p < .01).

Figure 2: Confirmatory factor analysis of the five subscales

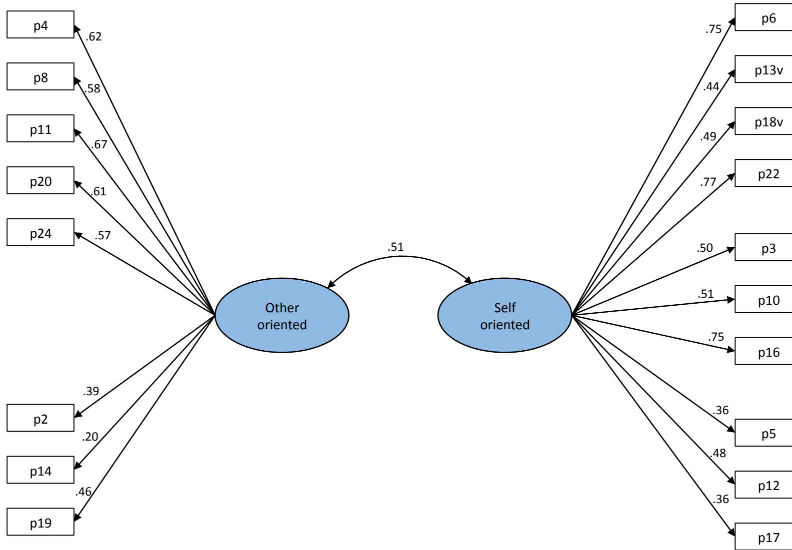


Note. Significant correlations between error terms: ep8-ep11, r = .375; ep13-ep18, r = .203, ep3-ep10, r = .269, ep17-ep5, r = .210; ep8-ep24, r = .167.

Second, a CFA-model with 18 items and two latent factors were computed. Some additional covariances between the error terms (within the hypothesized scales) were allowed to covary. The final model had a marginally acceptable model fit (Chi² = 267.3, df = 122, p < .01; CFI = 0.930, RMSEA = 0.052). Parameter esti-

mates (standardized) are shown in Figure 3. All depicted covariances and factor loadings are significant ($p < .01$).

Figure 3: Confirmatory factor analysis of the two main dimensions



Note. Significant correlations between error terms: ep8-ep11, r = .351; ep13-ep18, r = .196; ep3-ep10, r = .271; ep17-ep5, r = .249; ep8-ep24, r = .165; ep2-ep14, r = .215; ep24-ep14, r = .140; ep3-ep12, r = .123; ep14-ep19, r = .292; ep2-ep19, r = .177; ep17-ep12, r = .414; ep16-ep5, r = -.224.

3.2 Descriptive results

3.2.1 Gender differences

Table 1 shows means and standard deviations of all scales for boys and girls separately. ANOVAs yielded significant gender differences for most scales. In kindergarten, girls were rated by teachers as having higher self- and other-oriented social skills than boys; this applied to all social skills subscales. At age 12, the same gender differences regarding other-oriented social skills were reported by parents. However, differences in self-oriented social skills were less pronounced. Only the subscale limit setting reached significance in favor of girls. At age 12, girls reported higher depressive symptoms, lower conduct problems, lower levels of bullying but higher levels of defender behavior than boys.

Table 1: Descriptive results by gender

	Total			Girls		Boys		Gender differences	
	n	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
1. Self-oriented skills (T_T1)	428	2.87	0.63	2.95	0.67	2.80	0.59	6.639	.010
2. Leadership (T_T1)	428	2.59	0.90	2.69	0.93	2.49	0.85	5.210	.023
3. Setting limits (T_T1)	307	2.92	0.61	3.01	0.64	2.85	0.57	5.432	.020
4. Social participation (T_T1)	428	3.12	0.71	3.21	0.70	3.03	0.70	6.542	.011
5. Other oriented skills (T_T1)	428	3.09	0.66	3.33	0.62	2.84	0.61	68.551	.000
6. Cooperative (T_T1)	428	3.06	0.68	3.27	0.66	2.86	0.63	44.676	.000
7. Prosocial (T_T1)	307	3.00	0.63	3.25	0.58	2.79	0.58	48.648	.000
8. Self-oriented skills (P_T2)	428	3.06	0.46	3.10	0.46	3.02	0.46	3.195	.075
9. Leadership (P_T2)	428	2.80	0.63	2.83	0.63	2.78	0.62	0.605	.437
10. Setting limits (P_T2)	427	3.09	0.54	3.14	0.54	3.03	0.53	4.338	.038
11. Social participation (P_T2)	428	3.23	0.54	3.26	0.53	3.19	0.54	2.192	.140
12. Other oriented skills (P_T2)	428	3.29	0.38	3.40	0.34	3.19	0.38	36.140	.000
13. Cooperative (P_T2)	423	3.13	0.44	3.21	0.42	3.04	0.45	16.180	.000
14. Prosocial (P_T2)	428	3.39	0.44	3.51	0.40	3.27	0.45	33.828	.000
15. Depressive symptoms (C_T2)	416	1.38	0.45	1.43	0.47	1.33	0.41	4.872	.028
16. Conduct problems (C_T2)	418	1.25	0.29	1.20	0.26	1.29	0.32	10.848	.001
17. Victimisation (C_T2)	417	1.41	0.54	1.36	0.49	1.46	0.58	3.105	.079
18. Bullying (C_T2)	416	1.24	0.34	1.21	0.34	1.28	0.34	4.265	.040
19. Defender behavior (C_T2)	413	3.06	0.81	3.26	0.77	2.87	0.80	26.387	.000

Note. For some teacher scales n = 307 due to missing data due to screening (Alsaker, 2007).
T_T1: Teachers-report at T1; P_T2: Parents-report at T2; C_T2: Children's-report at T2.

3.2.2 Age differences

In kindergarten (T1), child age was significantly associated with teacher-reported other-oriented social skills and its relevant subscales (*r*s between .16** and .33**), other-oriented skills (r = .10*) and prosocial behavior (r = .13*), but not with co-operative behavior. At T2, actual child age was not associated with parent-reported social skills. However, age was significantly associated with depressive symptoms (r = .10*) and defender behavior (r = -.12*).

3.3 Bivariate associations between social skills ratings

Table 2 shows bivariate correlations between teacher- and parent-rated social skills subscales.

Table 2: Bivariate associations between teacher (T_T1) and parent reports (P_T2) of social skills

	Teacher reports						
	1	2	3	4	5	6	7
Teacher reports							
1. Self-oriented skills (T_T1)	1	.876**	.758**	.828**	.096*	.011	.343**
2. Leadership (T_T1)		1	.588**	.537**	-.009	-.096*	.284**
3. Setting limits (T_T1)			1	.507**	.077	.006	.136*
4. Social participation (T_T1)				1	.251**	.169**	.407**
5. Other-oriented skills (T_T1)					1	.956**	.923**
6. Cooperative (T_T1)						1	.694**
7. Prosocial (T_T1)							1
Parents reports							
8. Self-oriented skills (P_T2)	.282**	.291**	.116*	.256**	.052	-.050	.101*
9. Leadership (P_T2)	.260**	.267**	.104*	.239**	.059	-.026	.097*
10. Setting limits (P_T2)	.224**	.286**	.111	.157**	-.010	-.068	.019
11. Social participation (P_T2)	.233**	.232**	.096*	.218**	.080	-.038	.133**
12. Other-oriented skills (P_T2)	.072	.016	.073	.081	.218**	.228**	.164**
13. Cooperative (P_T2)	.067	.002	.080	.077	.185**	.229**	.118*
14. Prosocial (P_T2)	.043	.037	.013	.047	.230**	.181**	.210**

Note. Pearson correlations, 2-tailed
* p < .05; ** p <. 01.

3.3.1 Associations within teacher-rated social skills scales (T1)

Subscales within one dimension (self vs. other) showed high positive correlations with each other. At T1, the global scales of self- and other-oriented social skills showed a zero-correlation, however, prosocial behavior was significantly associated with all other subscales. Correlations between subscales within one dimension were higher than across dimensions.

3.3.2 Associations between teacher and parent report of social skills

Longitudinal associations between social skills showed a very clear pattern (see Table 2). Teacher-rated self-oriented social skills (T1) (global scale and subscales) were significantly associated with parent-rated self-oriented social skills (T2), but not with other-oriented social skills. Likewise, teacher-rated other-oriented social skills (global scale and subscale) were significantly associated with parent-rated other-oriented social skills, but only marginally with self-oriented social skills (only leadership and social participation showed significant but low correlations with prosocial behavior).

3.4 Multivariate associations between social skills and psychosocial adjustment

Table 3 shows bivariate associations between social skills and psychosocial adjustment. In a next step, linear regression analyses were computed to investigate the differential impact of parent-rated social skills on children's psychosocial adjustment. Parent-reported social skills were entered as independent variables. All analyses were controlled for gender and age (at T2). All variables were entered simultaneously.

Table 3: Bivariate associations between social skills (teacher and parent report) and psychosocial adjustment (child report)

	Child report T2				
	Depressive symptoms	Conduct problems	Peer victimisation	Bullying	Defending
1. Self-oriented skills (T_T1)	-.034	.019	-.062	.089	.053
2. Leadership (T_T1)	.011	-.008	-.032	.056	.045
3. Setting limits (T_T1)	-.009	.087	-.035	.110	.074
4. Social participation (T_T1)	-.095	.035	-.094	.083	.066
5. Other oriented skills (T_T1)	-.094	-.162**	-.201**	-.155**	.047
6. Cooperative (T_T1)	-.107*	-.168**	-.221**	-.164**	-.002
7. Prosocial (T_T1)	-.056	-.181**	-.139*	-.084	.100
8. Self-oriented skills (P_T2)	-.201**	-.060	-.202**	.040	.109*
9. Leadership (P_T2)	-.122*	.020	-.096	.075	.116*
10. Setting limits (P_T2)	-.127**	-.088	-.166**	.006	.057
11. Social participation (P_T2)	-.226**	-.086	-.227**	.015	.098*
12. Other oriented skills (P_T2)	-.008	-.215**	-.100*	-.267**	.297**
13. Cooperative (P_T2)	-.022	-.150**	-.082	-.196**	.128**
14. Prosocial (P_T2)	.001	-.201**	-.085	-.245**	.324**

Note. Pearson correlations, 2-tailed; * = $p < .05$; ** = $p < .01$.

3.4.1 Social skills and mental health

Parent-reported deficits in self-oriented social skills predicted higher levels of depressive symptoms at age 12. Depressive symptoms were also predicted by sex and age. Females and older children reported higher levels of depressive symptoms (see Table 4). Parent-reported deficits in other-oriented social skills predicted higher levels of child conduct problems. In addition, being male predicted higher levels of conduct problems (see Table 4).

Table 4: Regression analyses on social skills predicting child mental health and bullying roles at T2

Parent reports	Depressive symptoms	Conduct problems	Peer victimisation	Bullying	Defending
Sex (being male)	-.120*	.101*	.062	.029	-.177**
Age (T2)	.097*	.056	-.003	.038	-.140**
Self-oriented skills (P_T2)	-.217**	.004	-.189**	.125**	.025
Other-oriented skills (P_T2)	-.016	-.190**	-.027	-.297**	.246**

Note. Values are standardized B's; * = $p < .05$; ** = $p < .01$.

3.4.2 Social skills and bullying roles

Table 4 presents results of the hierarchical regression analyses for parent-reported social skills predicting children's bullying roles (victimization, bullying, and defender behavior). Parent-reported deficits of self-oriented social skills were predictive of higher levels of peer victimization (both at age 12). Gender and age were not significant. Bullying was predicted by parent-reported deficits of other-oriented social skills but also by higher levels of self-oriented social skills at age 12 (see Table 4). Lastly, high levels of parent-reported other-oriented social skills predicted higher levels of defender behavior. Defender behavior was also significantly predicted by sex and age, with girls and younger children showing higher levels of defender behavior (see Table 4).

4. Discussion

Our study partly confirmed the reliability and construct validity of the parent-report SOCOMP. Moreover, the study demonstrates the distinctiveness of the dimensions self- and other-oriented social skills in relation to their associations with children's psychosocial adjustment.

4.1 Reliability and validity of the parent report

Internal consistency of the parent-reported social skills scales was moderate to high. Longitudinal analyses showed that parent-rated self-oriented social skills (global scale and subscales) were significantly associated with (former) teacher-rated self-oriented social skills, but not with other-oriented social skills. Likewise, parent-reported other-oriented social skills were consistently associated with (former) teacher-reported other-oriented social skills, but not with self-oriented social

skills. Taken together, the analyses showed significant associations between teacher- and parent-reports within the same dimension but not across dimensions (self and other). As these associations were found across informants with a time lag of six years, the results indicate a rather high convergent validity of the parent report.

However, the confirmatory factor analyses did not fully confirm our hypothesized factorial structure of the SOCOMP. Parents reliably distinguish between cooperative behavior and setting limits in relation to other aspects of social skills. However, parents seem not to distinguish between children's social participation and leadership skills. Moreover, parent reports of prosocial behavior were strongly related with social participation and leadership. This association between those three subscales also explains the rather high associations between the dimensions of self- and other-oriented social skills in the parent report. Moreover, in the parent report SOCOMP, self- and other-oriented social skills do not emerge as two underlying latent factors as clearly as expected. As we did not assess teacher and parent reports at the same age, we cannot determine whether differences between teacher and parent reports are due to informant differences or developmental patterns.

Nevertheless, the pattern of longitudinal associations between teacher and parent reports of social skills and the differential effects regarding mental health and bullying roles (discussed below) support the conceptual difference between self- and other-oriented social skills.

4.2 Social skills and children's psychosocial adjustment

The study demonstrated a distinct pattern of associations regarding both dimensions of social skills and psychosocial adjustment. The statistical analyses showed that parent-reported deficits in other-oriented social skills were associated with higher levels of conduct problems and bullying. In line with other studies, children with higher levels of prosocial-cooperative behavior show lower levels of externalizing problems (Card & Little, 2006; Groeben et al., 2011; Hay & Pawlby, 2003). In addition, we also found that children's proneness to prosocial-cooperative behavior was also predictive for defender behavior (supporting and comforting victims of bullying), i.e. these children showed prosocial actions in a specific peer situation (Pozzoli & Gini, 2010).

In addition to these expected associations between other-oriented social skills and psychosocial adjustment, we found significant associations between children's adjustment and (former) teacher-reported other-oriented social skills. Bivariate correlations showed that deficits in other-oriented social skills in kindergarten were associated with depressive symptoms and peer victimization six years later. These results go in line with findings from our earlier studies which also found strong cross-sectional associations between these variables: In two different samples of kindergarten and early school age children, we found that peer victimization

mediated the negative impact of other-oriented social skills on depressive symptoms (Perren & Alsaker, 2009; Perren et al., 2008).

Regarding self-oriented social skills, we found that parent-reported submissive-withdrawn behavior was associated with depressive symptoms. This is in line with our hypothesis and other studies (Groeben et al., 2011; Ladd, 2006). The current study with early adolescents indicated that deficits in self-oriented skills (i.e. lack of social participation, setting limits and leadership) are predictive of peer victimization. This is partly in contrast to our studies in kindergarten and early school age (Perren & Alsaker, 2009; Perren et al., 2008), where we found that deficits in other-oriented social skills are stronger predictors for peer victimization than deficits in self-oriented social skills. Nevertheless, deficits in other-oriented social skills in kindergarten age are still significantly associated with peer victimization at age 12. This result might be explained by the generally high stability of aggressive behavior, that in turn has been found to be an important predictor of victimization (Perren & Alsaker, 2006).

Bullying is not only associated with deficits in other-oriented social skills (as reported above) but also with higher levels of self-oriented social skills. That is, our study confirms the perspective that bullies have deficits regarding prosocial-cooperative behavior, but are very sociable and assertive, i.e. they know very well how to reach their own goals and needs (at least in the short term) (Perren & Alsaker, 2006).

The differential associations between social skills and adjustment also indicate that there is considerable inter-individual variability in children's social skills. The current study used a variable-centered approach. Another study using a person-oriented approach yielded distinct behavioral profiles: Whereas most children show a profile of high competence in both dimensions, some merely have deficits in self-oriented social skills and another group of children have deficits in other-oriented social skills (Perren et al., 2008).

4.3 Gender differences and developmental processes

In line with most studies on social competence, we found a range of gender differences. Whereas at kindergarten age, girls were rated by teachers as having higher social skills than boys in both dimensions, gender differences in self-oriented social skills were less pronounced at age 12. Nevertheless, like in most studies, girls are consistently rated as showing more prosocial-cooperative behavior than boys (Eisenberg & Fabes, 1998).

Regarding bullying and victimization, no gender differences were shown when controlling for social skills. However, in line with other studies (Gini et al., 2008), girls reported higher levels of defender behavior. This result might be explained by girls' higher propensity to show prosocial behavior and empathy in general (Eisenberg & Fabes, 1998).

Regarding mental health at age 12, clear gender differences emerged: Boys showed higher levels of conduct problems and lower levels of depressive symptoms than girls. The gender difference in depressive symptoms corresponds well with earlier studies demonstrating that depression usually starts in early adolescence and is becoming more pronounced across adolescence (e.g., Garber, Keiley, & Martin, 2002).

The finding that deficits in self-oriented social skills are predictive of peer victimization at age 12, but not at kindergarten age (Perren & Alsaker, 2006, 2009) also suggests certain developmental processes. The result goes in line with other studies which identified developmental trends with regard to behavioral correlates of peer rejection and peer victimization. Results of these studies showed that in younger children, externalizing behavior patterns (e.g., aggressive, impulsive and rule-breaking behavior) are more strongly associated with peer victimization and rejection than social withdrawal (Coie, Dodge, & Kupersmith, 1990; Hanish & Guerra, 2004).

Further studies should also take developmental processes into consideration. A study investigating the impact of parental personality and child temperament on social skills showed that parental extraversion was associated with the dimension of self-oriented social skills whereas agreeableness was associated with other-oriented social skills. Moreover, behavioral inhibition at 14 months predicted lower assertiveness, but higher levels of cooperative behavior (Perren, Möhler, & Resch, 2011).

4.4 Strengths, limitations and further research directions

One aim of the current study was to investigate the psychometric properties of the parent report of the SOCOMP-measure. The study indicated that teacher and parent report of the SOCOMP can both be used in further studies (items found in the Appendix). As many studies in adolescent populations rely heavily on self-reports, a step for further research is to develop a valid and reliable youth self-report form of the SOCOMP, which enables the assessment of social competence from a further informant. From a conceptual standpoint, we assume that items of the parent and teacher report tap the same subscale and dimension. However, we did not explicitly test for measurement equivalence in a confirmatory factor analysis framework. We refrained from doing this analysis because teacher and parent report had been assessed with a six-year time lag. Therefore, any differences between the teacher and parent report could also be attributed to children's development.

The most important strengths of the current study are the use of data from a rather large longitudinal sample and the use of multi-informant measures. The sample was originally a representative sample of kindergarten children (Alsaker, 2007), the follow-up was conducted six years later. This large time lag and also the changing procedure in contacting participants (school versus home) resulted in a rather high attrition. Selective attrition resulted in a follow-up sample with a low-

er percentage of non-Swiss families and a high level of parental education, which might limit the generalizability of our study. To avoid inflated correlations due to shared method variance, predictors (social skills) and outcomes (adjustment) were assessed by different informants. In general – with the exception of conduct problems –, child reports were adequately reliable. A limitation of the study was that it was not assessed whether mother, father or both parents together completed the parents' questionnaire.

Our questionnaire-based assessment of social skills assesses a trait-like aspect of social competence (Nangle, Grover, & Fales, 2011). Further studies should investigate the impact of children's and adolescents' social skills on actual social interactions in specific situations and also their relations with underlying mental processes.

The current study emphasizes the importance of distinguishing between self- and other-oriented social skills. As both dimensions are differentially related to children's psychosocial adjustment, global social competence scores mixing aspects of both dimensions (e.g., being friendly and being a leader) may yield distorted findings regarding the significance of social competence for children's positive development. The distinction between self- and other-oriented social skills is very important from a conceptual point of view, however, further studies can use the five subscales or the two global scales to investigate associations between social skills and children's adjustment. Further studies should also investigate the interplay of self- and other-oriented social skills in more detail (Groeben et al., 2011).

In conclusion, the study demonstrates the importance of self- and other-oriented social skills for children's and adolescents' psychosocial adjustment. In line with the general definition of social competence (Malti & Perren, 2011), children's ability to find a balance between the interests of the self and the interests of others, as well as the ability to flexibly adapt one's own goals and needs to those of others, depending on the situational demands is conducive for positive development.

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Appendix

Table 5: Items of SOCOMP

Self-oriented social skills
Social participation
P6. Outgoing in peer group situations
P13. Withdraws from other children (reversed)
P18. Watches rather than joins peer activities (reversed)
P22. Converses with peers easily
Leadership
P3. Leader in peer group situations
P10. Organizes, suggests play activities to peers
P16. Initiates conversations with peers
Setting limits
P5. Refuses unreasonable requests from others
P12. Able to defend him-/herself
P17. Able to peers
Other-oriented social skills
Prosocial behavior
P4. Shares readily with other children (treats, toys, pencils etc.)
P8. Helpful if someone is hurt, upset or feeling ill
P11. Shows empathy toward peers
P20. Friendly toward other children
P24. Often volunteers to help others (parents, teachers, other children)
Cooperative behavior
P2. Listens what classmates say
P7. Accepts peers ideas for group activities*
P14. Willingly takes turns in peer activities
P19. Compromises in conflicts with peers
P23. Cooperative with peers*

Note. *excluded from final analyses due to the CFA solution.