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## **Social-emotional factors underlying internalizing problems and peer relations in deaf or hard of hearing youth**

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# Chapter 6



## A balanced and short Best Friend Index

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## Abstract

This study evaluated a short friendship questionnaire providing a balanced assessment of positive (e.g., support) and negative (e.g., jealousy) friendship features. In addition, associations with indices of adaptive functioning versus psychopathology were tested. The friendship questionnaire was presented to 548 typically developing children and young adolescents ( $M_{age} = 11;01$  years). Results confirmed validity and independence of the two friendship features, and showed that negative friendship features were uniquely associated with symptoms of psychopathology, whereas both positive and negative features were, in opposite directions, uniquely associated with aspects of socio-emotional functioning.

The importance and independence of positive and negative friendship qualities with regard to individuals' development has been proven in past research (cf. Bagwell, Bender, Andreassi, Kinoshita, Montarello, & Muller, 2005; Berndt, 2004; La Greca & Harrison, 2005). However, existing measurement tools of friendship quality are unbalanced, capturing many more positive than negative friendship features (e.g., Bukowski, Hoza, & Boivin, 1994; Furman & Buhrmester, 1985; Parker & Asher, 1993). Moreover, examination of the negative qualities is mostly concentrated around conflict and antagonism, whereas other negative qualities may also be present in a friendship. This constrains our ability to draw conclusions about the links between friendship quality and psychosocial functioning. In the present study a Best Friend Index (BFI) is evaluated in which the positive and negative friendship features are balanced. Furthermore, the semantics and syntactic structures of BFI items were relatively simple to address friendship quality in young samples, but also in clinical groups characterized by language problems and social difficulties, such as children with specific language impairments or those who are deaf or hard of hearing. Finally, the questionnaire was short, so it could be presented easily and quickly to children.

### **Purpose of study**

The BFI consists of an equal number of items on both the positive and negative features scales (i.e., positive: companionship, reliable alliance, disclosure, support, and affection/admiration; negative: jealousy, dominance, conflict, betrayal, and competition). Our aim was to establish internal structure and homogeneity of these two scales. Furthermore, we wanted to evaluate construct validity by examining associations between the two friendship scales and related constructs identified in past research (cf. Bagwell et al., 2005; La Greca & Harrison, 2005; Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). These variables include adaptive dimensions of children's socio-emotional functioning (i.e., emotion awareness, empathy and self-esteem) as well as psychopathological symptoms (i.e., depression, social anxiety and aggression). Finally, gender differences emerged in previous studies on children's friendships (see Rose & Rudolph, 2006, for a review) therefore gender will be taken into account.

## Method

### Participants and procedure

The study was conducted with 548 children (249 boys and 299 girls) from regular primary schools in the Netherlands. The mean age of the boys was 11;01 years ( $SD = .96$ ) and of the girls 11;01 years ( $SD = .90$ ). The participants were tested in their classrooms. They received written versions of the questionnaires and filled these out individually. Before actual data collection began, response formats were explained and sample questions were provided. Written parental consent was obtained for all participants, prior to data collection. The local ethics committee granted permission for the research to take place.

### Materials

The BFI is partly compiled and adapted from two sources: positive features from the Network Relationship Inventory (NRI; Furman & Buhrmester, 1985; Selfhout, Branje, & Meeus, 2008) and negative features from the Friendship Quality Questionnaire (FQQ; Parker & Asher, 1993). Because items of the NRI negative features scale have relatively complex syntactic structures (i.e., “How much do you and this person get upset with or mad at each other”), we included negative items from the FQQ. Additional negative items were developed by a team of developmental psychologists and a child psychiatrist. Items from the NRI and FQQ were translated into Dutch and modified in such a way that they all could be answered on a 5-point scale (from 1 = *never* to 5 = *very often*). Items were also adapted in order to simplify the syntactic structures (i.e., no compound or long sentences). An initial version of the BFI consisted of 28 items (11 from the NRI; seven from the FQQ; eight newly developed negative quality items; and two filler items to make the questionnaire less negative). The two filler items were removed and an additional eight items were deleted due to insufficient fit with the selection criteria (i.e., the phrasing of one item was too difficult; one item assessed qualities of the friend rather than the friendship; four items had insufficient loading on their intended factor; two items appeared to be covered by other items). This resulted in the current 18-item version (see Table 1), which gives the most unique information regarding friendship quality. Before rating the items, the participants were asked to write down the name of their best friend.

**Table 1** PFF, NFF, and PCA factor loadings

Item	PFF	NFF
1. I turn to my best friend for support with personal problems	.673	
2. My friend and I have fun together	.426	
3. I think we will stay friends forever	.541	
4. My friend and I do enjoyable things together	.578	
5. I share secrets with my best friend	.657	
6. My friend makes me feel I do nice things	.609	
7. My friend helps me with things I do not know or cannot do	.624	
8. I enjoy helping my best friend	.611	
9. My friend shows me I am good at many things	.613	
10. My friend and I argue together		.560
11. I get fed up when my friend receives a higher grade.		.589
12. My friend and I are angry at each other		.599
13. I am jealous towards my friend		.628
14. My friend tries to boss me around.		.681
15. I dislike it when my friend is better than me at things		.685
16. My friend and I bug each other		.546
17. My friend tries to decide what we should play		.515
18. My friend says mean things about me to others.		.590

### Questionnaires to assess social-emotional functioning and psychopathology

The self-report questionnaires had excellent internal consistencies ranging from  $\alpha = .80$  to  $\alpha = .94$ . For each questionnaire a mean score was calculated.

*Emotion awareness* was assessed with the Emotion Awareness Questionnaire (EAQ; Rieffe, Oosterveld, Miers, Meerum Terwogt, & Ly, 2008). Children were asked to rate the 30 items about how they feel and what they think about their feelings on a 3-point scale (from 1 = *not true* to 3 = *often true*).

*Aggressive behavior* was assessed with a self-report version of the Instrument for Reactive and Proactive Aggression (Polman, Orobio de Castro, Koops, Van Boxtel, & Merk, 2007). Children were asked to rate six possible functions (e.g., "Because I was angry") for six forms of aggressive behavior (e.g., "kicking") on a 5-point scale (from 1 = *never* to 5 = *always*).

*Depression* was measured using the Children's Depression Inventory (Kovacs, 1992). Each of the 26 items consists of three self-evaluation sentences with a score in the direction of symptom severity. The children were asked to select the response that best describes how they felt over the preceding two weeks.

The *Social Anxiety Scale for Adolescents* (La Greca & Lopez, 1998) consists of 22 items (of which four were filler items). The participants were asked to score



how often the items apply to them on a 3-point scale (from 1 = *never* to 3 = *always*). *Empathic behavior* was assessed with the Interpersonal Reactivity Index (Davis, 1980). Children were asked to rate the degree to which each of the 24 items correspond to their own opinion or experience on a 5-point scale (from 1 = totally not true to 5 = totally true).

*Children's Self-Confidence and Acceptance Scale* was used to measure children's self-esteem (Rieffe et al., 2007). In addition to the original 20 items assessing children's self-esteem in various domains, a Global Acceptance scale of five items (e.g., "I believe I do things well") was added. The participants were asked to score the items on a 3-point scale (from 1 = *not true* to 5 = *often true*).

## Results

### Factor structure, internal consistencies and mean scores of friendship scales

A principal component analysis on the 18 items of the BFI, with the factor count set to two factors (Table 1), showed that all items loaded  $> .40$  on their keyed factor (explaining 39.4% of the variance). Oblimin rotation with Kaiser normalization was used. The inter-factor correlation between the two scales was significant but moderate in magnitude ( $r = -.39$ ;  $p < .001$ ). The internal consistencies of the PFF and NFF were good, with  $\alpha = .78$  and  $\alpha = .79$ , respectively. Finally, girls scored significantly higher on PFF,  $F(2,545) = 20.25$ ,  $p < .001$ ,  $\eta_p^2 = .07$ , ( $M = 4.16$ ,  $SD = .59$  versus  $M = 3.84$ ,  $SD = .57$  for girls and boys, respectively), while no significant gender differences were found on the NFF ( $M = 1.58$ ,  $SD = .53$  for girls;  $M = 1.65$ ,  $SD = .54$  for boys).

### Correlation and multivariate regression analysis

As shown in Table 2, PFF were positively correlated to indices of social-emotional functioning, whereas PFF were negatively related to psychopathology. The relations of NFF with the variables were in the opposite direction as for the PFF, except that the relationship between NFF and empathic behavior was non-significant for girls. PFF and NFF were not related to Age (i.e.,  $r = -.01$ , *n.s.* and  $r = -.04$ , *n.s.*, respectively).

**Table 2** Correlations between PFF, NFF, psychosocial variables, and Age

	Psychopathology			Social-Emotional functioning		
	Aggression	Depressive symptoms	Social anxiety	Emotion awareness	Empathy	Self-esteem
PFF	-.24***	-.16***	-.09*	.29***	.33***	.33***
NFF	.36***	.36***	.26***	-.28***	-.23*** /.08	-.30***

Note. Correlations are provided separately for boys and girls when these were found to be significant different (using Fisher Transformation) for the two groups (boys/girls)

\*  $p < .05$ , \*\*\*  $p < .001$

Finally, a multivariate regression analysis was conducted, in which PFF and NFF were the independent variables. Indices of social-emotional functioning and psychopathology were the dependent variables. As shown in Table 3, the NFF were negatively associated with the socio-emotional functioning variables (except empathy), and positively with psychopathology, over and above the PFF. The PFF, on the other hand, were uniquely associated with more social-emotional functioning, but not with psychopathology.

**Table 3** Multivariate regression analysis

	Psychopathology			Social-Emotional functioning		
	Aggression	Depressive symptoms	Social anxiety	Emotion awareness	Empathy	Self-esteem
	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
Age	.00	-.02	-.02	.04*	-.02	.01
Gender	-.18***	.04	.27***	-.08**	.25***	-.02
PFF	-.06	-.01	-.06	.11**	.24***	.11***
NFF	.31***	.16***	.31***	-.09***	.03	-.09***
$R^2$	17.4%	13.9%	10.9%	15.5%	17.0%	14.9%

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

## Discussion

In this study the validity of the Best Friend Index as a short and balanced measurement strategy for capturing individual differences in positive and negative friendship qualities is confirmed. The language (structure) of the questionnaire is relatively simple, which makes it also appropriate for children with language difficulties, such as various clinical groups experience. The

principal component analysis showed two clearly distinguishable factors; one representing positive friendship features and one representing negative features. The two scales that were constructed showed good internal consistencies and a relatively modest and negative intercorrelation, as should be the case for a multifaceted construct. It should be noted that age was not related to either type of friendship feature, indicating that at the age range of approximately 9 to 13 years, children exhibit similar levels of the assessed friendship features. Moreover, our results indicated that negative friendship features are not domain specific. Although negative features were reported more sporadically, they appeared to have a stronger connection with well-being, i.e., they appear to affect both positive and negative domains of functioning (cf. Rook, 2001). Positive features, on the other hand, seem to be more domain specific and are related particularly to more adaptive socio-emotional functioning. Children and adolescents experiencing psychopathological problems may benefit from intervention efforts that target negative friendship features.

### **Future research**

The self-report methodology enabled us to examine children's friendship experiences in various settings beyond classroom friends; however, future research might benefit from a consideration of both parties in the friendship dyad, such as assessing mutuality in friendships. We further believe that future research in this area might benefit from longitudinal work, in which directionality of the associations between friendship quality and psychosocial functioning can be established. Additionally, the various dimensions of psychosocial functioning examined in this study may also influence each other, so future (longitudinal) work can raise the intriguing possibility of situating friendship quality (both positive and negative features) within a complex cycle of mediated psychosocial pathways.

