

Parent, Teacher and Student Cross Informant Agreement of Behavioral and Emotional Strengths: Students With and Without Special Education Support

Erkko T. Sointu · Hannu Savolainen ·
Kristiina Lappalainen · Michael H. Epstein

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Abstract Information from multiple sources is recommended when assessing students' emotions and behaviors. Relatively few studies about cross informant agreement of behavioral and emotional strengths exist, especially for students with special education needs. The purpose of this study was to extend the cross informant agreement research of the Behavioral and Emotional Rating Scale (BERS-2) with a sample of Finnish parents, teachers and students. First, we studied the cross informant agreement of students' behavioral and emotional strengths between informants. Second, we explored the agreement separately for students with and without special education needs. Finally, we studied the convergent and divergent (discriminant) correlations of the Finnish BERS-2. The results show that the cross informant agreement of students' behavioral and emotional strengths were small to large with correlation coefficients ranging from .11 to .58 between different informants. The cross informant correlations, however, were higher in magnitude for students who receive special education support ($r = .29$ to $.78$) than for those students who do not receive support ($r = -.02$ to $.45$). Mean convergent correlations were higher than mean divergent correlations. The results suggest that the Finnish BERS-2 is a reliable measure in assessing student strengths across informants. The limitations, future research directions, and implications are discussed.

Keywords Multiple informants · Cross informant agreement · Informant agreement · Strength-based assessment · BERS-2

Introduction

Assessment of student behavior is conducted to make important educational decisions. For this task assessment procedures should be comprehensive, include data from multiple sources, and the instruments need to be psychometrically sound. In order to obtain a comprehensive picture of student behavior, professionals have advocated obtaining data from multiple informants such as parent, teacher and student across multiple settings such as home, school, and community (Merrell 2000; Richardson and Day 2000). Two reasons have been offered for the use of multiple informant assessment. First, the child's behavior is often situation specific; therefore, the behavioral and emotional functioning exhibited by children in one setting may be similar or dissimilar in another setting. Second, different informants may observe a variety of behaviors or emotions in these different settings where substantial variations of behaviors or emotions are exhibited by children (Achenbach et al. 1987; Achenbach and Rescorla 2007; Merrell 2000; Richardson and Day 2000). Assessment from multiple perspectives is valued because it provides a more specific and comprehensive view of child behavior (Collishaw et al. 2009); therefore, gaining information across settings from a range of respondents enhances the assessment process and may be informative in the assessment of student behaviors and emotions.

Rating scales are a commonly used method for gathering information from multiple informants (Merrell 2000; Wilson and Reschly 1996). Teachers, service providers,

E. T. Sointu (✉) · H. Savolainen · K. Lappalainen
Philosophical Faculty, Special Education, University of Eastern
Finland, PO Box 111, 80101 Joensuu, Finland
e-mail: erkko.sointu@uef.fi

M. H. Epstein
Center for Child and Family Well-Being,
University of Nebraska-Lincoln, Lincoln, NE, USA

parents and students are often asked to judge the referred student's emotional and behavioral functioning. The agreement of several informants is commonly referred to as 'cross informant agreement'. Traditionally the issue of cross informant agreement has been based on measures that are oriented toward identifying problems, deficits and pathologies in children or youth. One of the most comprehensive studies of behavioral/emotional problems of cross informant agreement is a meta-analysis conducted by Achenbach et al. (1987) where researchers analyzed 269 samples from 119 studies. In the study, agreement was found to be modest at best: the mean cross informant correlation between parent and teacher was .27, between parent and child .25 and between teacher and child .20.

The cross informant agreement of behavioral and emotional strengths is considerably less studied than the cross informant agreement of deficit-based emotional or behavioral assessments. Strength-based measurement has been defined as evaluation of those behavioral and emotional skills, characteristics, and competencies that enhances a person's capacity to deal with stress and adversity; creates a sense of personal accomplishment; and promotes comfortable relationships with peers, family members and other adults (e.g., teachers) (Epstein 2004; Epstein and Sharma 1998). Additionally, a strength-based perspective recognizes that (a) even students with difficult behaviors possess strengths, (b) a child's motivation can be increased by how parents, teachers and other adults responds to their strengths, and (c) if a child is not demonstrating a strength, it does not mean a deficit on the part of him or her (Epstein 2004).

In order to assess student strengths several assessment tools have been developed. One of these assessments, the Behavioral and Emotional Rating Scale (BERS-2; Epstein 2004), is widely used in the United States (US) schools and mental health services. The BERS-2 includes teacher, parent, and youth (11–18 years of age) rating scales, has 52-items and takes about 10 min to complete. The BERS-2 has a factor structure that assesses the dimensions of Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and Affective Strength. The factor structure has been replicated across several samples and has been found to be a valid and reliable measure (Benner et al. 2008; Buckley et al. 2006; Uhing et al. 2005). Of particular importance to the current study, the cross informant agreement of the BERS-2 has been found to be acceptable. Specifically, in a study of parents and youth respondents, researchers found significant moderate to large correlations ranging between .50 and .63 on the BERS-2 (Synhorst et al. 2005). In another study of parents and teacher informants of students with emotional disturbance, the authors reported significant moderate to large correlations ranging between .54 and .67 of the BERS-2 (Friedman et al. 1999).

Internationally, for example, in Scandinavian and in most European countries the orientation in schools to assess students' strengths has received increasing interest (see e.g., Lappalainen et al. 2009; Obel et al. 2004; Rothenberger and Woerner 2004). In Finland, the movement to a strength-based assessment model can be seen in legislation, government reports and core curricula all emphasizing that students strengths should be taken into account and supported especially in special education support systems (Finnish Law 642/2010; Finnish Ministry of Education 2007; Finnish National Board of Education 2010). The movement in special and general education has directed professionals to consider more positive educational and interactional approaches where the strengths of students are taken into account. These assessments can be used in planning strategies for teaching and learning and it thus increases possibilities for including children and youth with disabilities into general education settings (Watkins 2007). In addition, the assessment of students' behavioral and emotional status may be considered incomplete, if their strengths or competencies are not included in student support planning (Rothenberger and Woerner 2004).

In order to use a test instrument in another culture or country, its psychometric properties must be re-established (American Educational Research Association, American Psychological Association and National Council on Measurement in Education 1999). Further studies are especially required if the test is used in another population as it was originally normed, and if the test is significantly modified, for example, translated to another language (Geisinger 1994). With the obvious need of strength-based assessment in Finland, the BERS-2 was translated into Finnish. Preliminary research by Lappalainen et al. (2009) with a sample of 608 Finnish high school students replicated the original BERS-2 factor structure in the Finnish sample and reported acceptable internal consistency with Cronbach alphas ranging from .71 to .93. In another study of 275 Finnish fifth grade students, moderate to large cross informant agreement ranging from .35 to .51 were found between student and teacher BERS-2 assessments (Sointu et al. forthcoming). The mean convergent correlation ($r = .40$) of BERS-2 were found to be higher than mean divergent correlation ($r = .31$) indicating that students and teachers agreed more on their ratings of the same strength constructs than different ones (Sointu et al. forthcoming).

While these initial Finnish studies have demonstrated acceptable psychometrics further research questions need to be explored. For example, what is the cross informant agreement of parent, teacher and student assessments, and is there a difference between the cross informant agreement of parents, teachers and students for students with and without special education support? The purpose of the present study was to extend the international research of

the BERS-2 to examine (a) the cross informant agreement between parent–student–teacher informants, (b) the cross informant agreement between parent–student–teacher informants separately for those with and without special education support, and (c) the validity by examining the convergent and divergent (discriminant) correlations of the Finnish BERS-2.

Methods

Participants

The participants were fifth grade students, their parents and teachers drawn from a larger study of school inclusion in Eastern Finland. Students (age 11–12 years old) came from the areas 30 schools and 57 classes. For this study, three different informant groups were used to gather data: parents, teachers and students. The informants were selected as follows. First, all students ($N = 588$) belonging to the larger study who had completed the youth version of the BERS-2 were included. Second, the parent data were received from ($N = 328$) parents whose students participated in the larger study. Third, for the teacher data, teachers were given a list of six students whom the researchers had randomly selected from all students in class having parent consent and student assent to participate. If the number of students was less than 6, all eligible students were included in the sample. This resulted in 54 teachers rating 282 students, with an average of 5.2 students per teacher. The sample sizes for informant dyads were for parent–teacher comparison ($N = 147$), for the parent–student comparison ($N = 321$) and for teacher–student comparison ($N = 275$). The students reflected the ethnic composition of the region that was overwhelmingly Finnish origin with less than 5% other ethnicities.

Information of students' special education status was received on 502 students with 18.7% of them received special education support. Of the 502 students 32 (6.4%) were identified as having special education needs and had an individual education plan (IEP) in one or more school subjects. In addition to these special education students, 62 students (12.3%) received part time special education support. In Finland, part time special education support is a flexible support service that may be provided without an administrative decision and it normally includes individual or small group teaching 1–3 h a week for a period of time (see e.g., Halinen and Järvinen 2008; Itkonen and Jahnu-kainen 2010; Savolainen 2009). For this study, the students in part time special education support and those with the administrative special education student status were combined as one sample of students receiving special education (SE) support.

For the comparison of student strengths between informant dyads, the data of whether or not a student received SE support was obtained on 128 students (111 NSE, 17 SE) for parent–teacher comparison, on 272 students (230 NSE, 42 SE) for parent–student comparison, and on 245 students (195 NSE, 50 SE) for teacher–student comparison. Thus, the sample included 13.3% of students with SE support for parent–teacher comparison, 15.4% for parent–student comparison and 20.4% for teacher–student comparison.

Measures

Behavioral and emotional strengths of students were assessed by the Behavioral and Emotional Rating Scale-2 (BERS-2). The BERS-2 includes separate rating scale forms for parents (Parent Rating Scale—PRS), teachers (Teacher Rating Scale—TRS) and students (Youth Rating Scale—YRS). The BERS-2 has 52 items which forms five subscales (Interpersonal Strength IS, Family Involvement FI, Intrapersonal Strength IaS, School Functioning SF, Affective Strength AS) as well the overall Strength Index score. The three rating scales (i.e., PRS, TRS, and YRS) measure student strengths in the same way: however, minor wording alternations are expressed to reflect either the perspective of the student, parent, or teacher. For example, the item “Accepts responsibility for own actions” of the PRS and TRS is written as “I accept responsibility for my actions” in the YRS. Student strengths are rated on a 4 point Likert-type scale (4: if the statement is very much like the child/you; 1: if the statement is not at all like the child/you) by different informants.

The translation procedures to create a Finnish version of the BERS-2 were (a) the research team independently translated the BERS-2 into Finnish, (b) an authorized English translator, who had received the information of the purpose and the content of BERS-2 and was familiar with Finnish school culture translated the BERS-2 back to English, and (c) after this, the research team and the authorized translator discussed the translations and agreed on the final, culturally and linguistically correct wording for each item. Cronbach alphas in this study were for PRS (IS $\alpha = .90$; FI $\alpha = .80$; IaS $\alpha = .81$; SF $\alpha = .83$; AS $\alpha = .76$), for TRS (IS $\alpha = .96$; FI $\alpha = .87$; IaS $\alpha = .89$; SF $\alpha = .89$; AS $\alpha = .88$), and for YRS (IS $\alpha = .88$; FI $\alpha = .81$; IaS $\alpha = .81$; SF $\alpha = .78$; AS $\alpha = .78$).

Procedures

Data were collected in April–May 2010 as a part of Eastern Finland Education Development (ISKE) project funded by the Finnish National Board of Education. In each participating municipality around Eastern Finland, a coordination team contacted the schools asking which of the teachers

would volunteer to participate. After a school administrator agreed to participate parent/caregiver participation was sought. Specifically, parents/caregivers were sent letters describing the project, the research scope, what participation required from the students, and what the project had to offer to schools and students. All parents/caregivers were asked to sign a written consent form.

For data collection, the research group delivered to the participating schools the questionnaires including the PRS, TRS, and YRS and other scales (not reported in this study). The scales, details of the study and instructions were personally delivered and explained to the school administrators and teachers by the researchers. The teachers were asked to collect the questionnaires during regular school hours within five school days. Six (or less) pre-named teacher questionnaires that had the names of the selected six students from their class were also given to the teachers. The teachers were given written instructions on how to complete the questionnaires and they were informed to contact their municipality's project coordinator or the research personnel, if they had any questions. For parents/caregivers the questionnaires were delivered with students including response letter, return envelope to the researchers and detailed instructions for filling the questionnaires with contact information for further questions.

Data Analysis

Pearson product moment correlations were calculated to analyze the intercorrelations for each informant (parent, teacher and student) and cross informant correlation between informant dyads (parent–teacher, parent–student, and teacher–student). Intercorrelations measure the correlation of different subscales for each informant indicating how well different subscales measure the different aspects of strengths. For the comparison of cross informant validity, we used the convergent and divergent (discriminant) correlations. The convergent correlations measure the ratings of the same subscales (e.g., Interpersonal Strength, IS) between informants (parent, teacher and students), and the divergent correlations measure the ratings of different subscales (e.g., IS and School Functioning, SF) between informants (i.e., parent, teacher and students). Convergent correlations are expected to be higher in magnitude than divergent correlations (Campbell and Fiske 1959). To evaluate the magnitude of mean convergent and divergent correlations, the Fisher's Z_r transformation formula was used. After the calculation of the mean of convergent and divergent correlations, the Fisher inverse formula was used to transform the mean Z_r correlations to r . Correlations coefficients were calculated also separately for students with and without special education support by different informant dyads.

Hopkins (2006) has provided an approach for determining the magnitude of correlations where between .10 and .29 are considered small, between .30 and .50 are moderate, between .50 and .70 are large, and between .71 and .90 are very large (Hopkins 2006). As multiple comparisons were done, the P value was set at .01 to avoid the Type I error. For assessing the construct validity of Finnish BERS-2, correlations were calculated for every informant dyad to examine the convergent and divergent (discriminant) relationships. Analyses were conducted with PASW statistics 18.

Results

Table 1 includes data on all students and presents the Finnish BERS-2 intercorrelations for every informant (parent, teacher and student), and cross informant correlations (bold) for every informant dyad (parent–teacher, parent–student, and teacher–student). The intercorrelations were all significant ($P < .01$) ranging from .28 to .72 for parents, from .42 to .79 for teachers and from .40 to .70 for students. These findings indicate that the subscales of Finnish BERS-2 measure different aspects of the behavioral and emotional strengths. The cross informant correlations (see Table 1) were all significant ($P < .01$) but one (parent-teacher FI) ranging from .11 to .58 for parent-teacher dyad, from .25 to .43 for parent-student dyad, and from .35 to .51 for teacher-student dyad. According to Hopkin's (2006) criteria, the 15 cross informant correlations were 3 small, 9 moderate, 2 large and 1 non significant.

Table 2 presents intercorrelations and cross informant correlations for the two student groups: lower diagonal is for students without special education support (NSE) and upper diagonal is for students with special education support (SE). The intercorrelations were all significant ($P < .01$) for SE parents (.40 to .83), for NSE parents (.25 to .73), for SE teacher (.50 to .78), for NSE teacher (.41 to .83), for SE students (.39 to .74), and for NSE students (.38 to .69).

Cross informant correlations for SE and NSE students are presented in Table 2. Cross informant correlations were significant at the $P < .01$ for students with SE support in 11 of 15 subscales ranging from .42 to .78, significant at the $P < .05$ in 3/15 subscales ranging from .33 to .58, and non-significant in 1 subscale ($r = .29$ parent-student AS). According to Hopkins (2006) criteria, the significant cross informant correlations were moderate to very large in magnitude. For students with NSE support, the cross informant correlations were significant at the $P < .01$ in 12 of 15 subscales ranging from .18 to .45, significant at the $P < .05$ in 2 of 15 subscales ranging from .21 to .23 and

Table 1 Intercorrelations and cross informant correlation coefficients of Finnish BERS-2

	Parent					Teacher					Student				
	IS	FI	IaS	SF	AS	IS	FI	IaS	SF	AS	IS	FI	IaS	SF	AS
Parent	IS														
	FI	<i>.72**</i>													
	IaS	<i>.70**</i>	<i>.64**</i>												
	SF	<i>.46**</i>	<i>.41**</i>	<i>.44**</i>											
	AS	<i>.65**</i>	<i>.61**</i>	<i>.66**</i>	<i>.28**</i>										
Teacher	IS	.31**	<i>.18*</i>	<i>.16</i>	<i>.16*</i>	<i>.12</i>									
	FI	<i>.17*</i>	.11	<i>.12</i>	<i>.13</i>	<i>.15</i>	<i>.70**</i>								
	IaS	<i>.27**</i>	<i>.19*</i>	.32**	<i>.28**</i>	<i>.21*</i>	<i>.66**</i>	<i>.71**</i>							
	SF	<i>.29**</i>	<i>.19*</i>	<i>.22**</i>	.58**	<i>.16*</i>	<i>.61**</i>	<i>.52**</i>	<i>.54**</i>						
	AS	<i>.36**</i>	<i>.19*</i>	<i>.32**</i>	<i>.18*</i>	.31**	<i>.69**</i>	<i>.68**</i>	<i>.79**</i>	<i>.42**</i>					
Student	IS	.28**	<i>.16**</i>	<i>.21**</i>	<i>.09</i>	<i>.23**</i>	.37**	<i>.40**</i>	<i>.27**</i>	<i>.26**</i>	<i>.31**</i>				
	FI	<i>.22**</i>	.25**	<i>.22**</i>	<i>.06</i>	<i>.24**</i>	<i>.33**</i>	.37**	<i>.26**</i>	<i>.25**</i>	<i>.29**</i>	<i>.65**</i>			
	IaS	<i>.20**</i>	<i>.12*</i>	.33**	<i>.10</i>	<i>.24**</i>	<i>.29**</i>	<i>.36**</i>	.35**	<i>.21**</i>	<i>.36**</i>	<i>.70**</i>	<i>.65**</i>		
	SF	<i>.30**</i>	<i>.25**</i>	<i>.29**</i>	.43**	<i>.20**</i>	<i>.40**</i>	<i>.44**</i>	<i>.32**</i>	.51**	<i>.27**</i>	<i>.61**</i>	<i>.50**</i>	<i>.53**</i>	
	AS	<i>.19**</i>	<i>.10</i>	<i>.24**</i>	<i>.08</i>	.25**	<i>.27**</i>	<i>.35**</i>	<i>.28**</i>	<i>.20**</i>	.38**	<i>.61**</i>	<i>.55**</i>	<i>.68**</i>	<i>.40**</i>

IS Interpersonal Strength BERS-2 subscale, FI Family Involvement, IaS Intrapersonal Strength, SF School Function, AS Affective Strength. $N = 328$ parents; $N = 282$ teachers and $N = 588$ students. $N = 147$ for the parent-teacher comparison, $N = 321$ for the parent-student comparison and $N = 275$ for the teacher-student comparison. Values on cells are Pearson's correlation coefficient. Intercorrelations are presented in italics. Cross-informant (convergent) correlations of the same traits are presented in bold

** Correlation significant $P < .01$; * Correlation significant $P < .05$

non-significant in 1 subscales ($r = -.02$ parent-teacher FI). According to Hopkins (2006) criteria, the significant correlations were small to moderate in magnitude. Overall, these results indicate that the agreement of behavioral and emotional strengths across informants were in general higher for students with SE support than students with NSE support.

Mean convergent and divergent correlations for each informant dyad were calculated from the correlation matrix (see Table 3). Comparison of the mean convergent correlations between informant dyads (parent-teacher $r = .33$; parent-student $r = .31$; teacher-student $r = .40$) to the average divergent correlation (parent-teacher $r = .20$; parent-student $r = .19$; teacher-student $r = .31$) indicates that the convergent correlations were generally stronger in magnitude than the divergent correlations. As studied by student group separately, the mean convergent correlations of with NSE support informant dyads (parent-teacher, $r = .23$; parent-student, $r = .27$; teacher-student, $r = .32$) were higher in magnitude than NSE divergent correlations (parent-teacher, $r = .12$; parent-student, $r = .15$; teacher-student, $r = .25$). The mean convergent correlations for students with SE support informant dyads (parent-teacher, $r = .68$; parent-student, $r = .44$; teacher-student, $r = .51$) were higher than SE divergent correlations (parent-teacher, $r = .56$; parent-student, $r = .36$; teacher-student, $r = .43$). Higher convergent correlations than divergent

correlations in the range reported provides moderate support for the convergent validity of the rating scale (Gresham et al. 2010).

Discussion

The purpose of this study was to explore the Finnish Behavioral and Emotional Rating Scale-2 (BERS-2) cross informant agreement between parent-student-teacher informants for all students and then separately for those students with and without special education support. Overall, the results indicate that the cross informant agreement is moderate across informants. Studied separately between students with (SE) and without special education (NSE) support, the cross informant agreement was higher for students with SE support than NSE students, except in one subscale (parent-student IaS). The mean convergent correlations were higher than the mean divergent correlations between all informant dyads giving moderate support to the convergent validity of the Finnish BERS-2.

The results of cross informant mean correlations were higher than typically reported in studies of cross informant agreement with deficit-based behavioral and emotional measures. As stated earlier, the mean cross informant correlations reported in Achenbach et al. (1987) study were

Table 2 Intercorrelations and cross informant correlations coefficients of Finnish BERS-2

	Parent					Teacher					Student					
	IS	FI	IaS	SF	AS	IS	FI	IaS	SF	AS	IS	FI	IaS	SF	AS	
Parent	IS		<i>.66**</i>	<i>.79**</i>	<i>.40**</i>	<i>.83**</i>	.55*	<i>.70**</i>	<i>.73**</i>	<i>.52*</i>	<i>.79**</i>	.65**	<i>.38*</i>	<i>.37*</i>	<i>.45**</i>	<i>.32*</i>
	FI	<i>.73**</i>		<i>.77**</i>	<i>.60**</i>	<i>.60**</i>	<i>.65**</i>	.76**	<i>.75**</i>	<i>.49*</i>	<i>.61**</i>	.42**	<i>.30</i>	<i>.39*</i>	<i>.26</i>	
	IaS	<i>.67**</i>	<i>.62**</i>		<i>.59**</i>	<i>.73**</i>	<i>.60*</i>	<i>.66**</i>	.78**	<i>.49*</i>	<i>.62**</i>	<i>.44**</i>	<i>.29</i>	.33*	<i>.36*</i>	<i>.21</i>
	SF	<i>.48**</i>	<i>.40**</i>	<i>.39**</i>		<i>.44**</i>	<i>.18</i>	<i>.28</i>	<i>.46</i>	.70**	<i>.25</i>	<i>.25</i>	<i>.21</i>	<i>.22</i>	.44**	<i>.25</i>
	AS	<i>.62**</i>	<i>.60**</i>	<i>.64**</i>	<i>.25**</i>		<i>.44</i>	<i>.48*</i>	<i>.52*</i>	<i>.55*</i>	.58*	<i>.63**</i>	<i>.39*</i>	<i>.35*</i>	<i>.52**</i>	.29
Teacher	IS	.21*	<i>.05</i>	<i>.03</i>	<i>.11</i>	<i>.01</i>		<i>.72**</i>	<i>.74**</i>	<i>.60**</i>	<i>.70**</i>	.50**	<i>.42**</i>	<i>.40**</i>	<i>.53**</i>	<i>.36*</i>
	FI	<i>.04</i>	-.02	<i>-.01</i>	<i>.04</i>	<i>.07</i>	<i>.67**</i>		<i>.78**</i>	<i>.52**</i>	<i>.71**</i>	<i>.56**</i>	.46**	<i>.44**</i>	<i>.61**</i>	<i>.50**</i>
	IaS	<i>.21*</i>	<i>.08</i>	.23*	<i>.20*</i>	<i>.15</i>	<i>.61**</i>	<i>.65**</i>		<i>.52**</i>	<i>.72**</i>	<i>.54**</i>	<i>.40**</i>	.47**	<i>.53**</i>	<i>.40**</i>
	SF	<i>.27**</i>	<i>.17</i>	<i>.15</i>	.45**	<i>.11</i>	<i>.61**</i>	<i>.53**</i>	<i>.52**</i>		<i>.50**</i>	<i>.29*</i>	<i>.29*</i>	<i>.21</i>	.58**	<i>.25</i>
	AS	<i>.26**</i>	<i>.10</i>	<i>.23*</i>	<i>.16</i>	.25**	<i>.67**</i>	<i>.65**</i>	<i>.83**</i>	<i>.41**</i>		<i>.53**</i>	<i>.40**</i>	<i>.46**</i>	<i>.41**</i>	.57**
Student	IS	.18**	<i>.09</i>	<i>.15*</i>	<i>.09</i>	<i>.11</i>	.29**	<i>.34**</i>	<i>.17*</i>	<i>.25**</i>	<i>.21**</i>		<i>.68**</i>	<i>.74**</i>	<i>.63**</i>	<i>.68**</i>
	FI	<i>.19**</i>	.22**	<i>.22**</i>	<i>.08</i>	<i>.18**</i>	<i>.27**</i>	.33**	<i>.21**</i>	<i>.20**</i>	<i>.27**</i>	<i>.64**</i>		<i>.65**</i>	<i>.54**</i>	<i>.50**</i>
	IaS	<i>.15*</i>	<i>.10</i>	.35**	<i>.10</i>	<i>.21**</i>	<i>.22**</i>	<i>.26**</i>	.28**	<i>.18*</i>	<i>.30**</i>	<i>.69**</i>	<i>.66**</i>		<i>.55**</i>	<i>.67**</i>
	SF	<i>.24**</i>	<i>.22**</i>	<i>.23**</i>	.37**	<i>.08</i>	<i>.33**</i>	<i>.38**</i>	<i>.24**</i>	.43**	<i>.22**</i>	<i>.61**</i>	<i>.49**</i>	<i>.51**</i>		<i>.39**</i>
	AS	<i>.17**</i>	<i>.08</i>	<i>.25**</i>	<i>.08</i>	.24**	<i>.22**</i>	<i>.26**</i>	<i>.24**</i>	<i>.18*</i>	.30**	<i>.57**</i>	<i>.54**</i>	<i>.66**</i>	<i>.38**</i>	

Students without special education (NSE; lower diagonal) support and with special education (SE; higher diagonal) support

IS Interpersonal Strength BERS-2 subscale, FI Family Involvement, IaS Intrapersonal Strength, SF School Function, AS Affective Strength. Correlations in lower diagonal are for students without special education (NSE) support and in higher diagonal are students who have received special education support (SE). $N_{(NSE)} = 233$ parents; $N_{(NSE)} = 199$ teachers; and $N_{(NSE)} = 408$ students. $N_{(SE)} = 43$ parents; $N_{(SE)} = 51$ teachers; and $N_{(SE)} = 94$ students. $N_{(NSE)} = 111$ for the parent-teacher comparison, $N_{(NSE)} = 230$ for the parent-student comparison, and $N_{(NSE)} = 195$ for the teacher-student comparison. $N_{(SE)} = 17$ for the parent-teacher comparison, $N_{(SE)} = 42$ for the parent-student comparison, and $N_{(SE)} = 50$ for the teacher-student comparison. Values on cells are Pearson’s correlation coefficient. Intercorrelations are presented in italics. Cross-informant (convergent) correlations of the same traits are presented in bold

** Correlation significant $P < .01$; * Correlation significant $P < .05$

Table 3 Mean convergent and divergent correlations

Informant dyads	All Students		NSE Students		SE Students	
	Convergent correlation	Divergent correlation	Convergent correlation	Divergent correlation	Convergent correlation	Divergent correlation
Parent-teacher	.33	.20	.23	.12	.68	.56
Parent-student	.31	.19	.27	.15	.44	.36
Teacher-student	.40	.31	.32	.25	.51	.43

Mean convergent and divergent correlations for all students together and separately for students without special education (NSE) support and with special education (SE) support

quite low: between parent-teacher the mean correlation was $r = .27$, between parent-children $r = .25$, and between teacher-children $r = .20$. The higher agreement of BERS-2 between parent, teacher and students ratings in this study may occur because of the nature of the rating scale items. The BERS-2 requires informants to assess the positive behaviors, emotions or skills of the students compared to the deficit-based scales that ask informants to assess problems, pathologies or deficits. Thus, it may be more appropriate for informants to acknowledge and agree on the presence of positive behaviors or emotions rather than negative ones.

The results of the present study are somewhat compatible with previous research on the BERS-2 in the US. The parent-student dyad cross informant correlations ($r = .25$ to $.43$) in the present study were smaller than in the study of Synhorst et al. (2005) where the agreement ($r = .50$ to $.63$) was large between US parent-student dyad. Then, in a study of cross informant agreement between US teachers and parents of students with emotional disturbance, Friedman et al. (1999) reported large correlations ($r = .54$ to $.67$) which is similar to the findings of agreement between teachers and parents of students with SE support ($r = .55$ to $.78$) reported in the present study. The

differences between these three studies may occur because of the cultural differences between the US and Finland, the difference in student age (Finland 11–12, US 11–18), the way students are identified for education services in these countries, or the difference in the sample sizes. At the very least the differences in these studies warrant further investigation.

Perhaps the most interesting finding of the present study is that in almost all cases the cross informant agreement was higher in magnitude in the students with SE support group than in the NSE student group. This may occur for several reasons. First, the process for supporting students in Finnish schools results in the teacher spending significantly more time with the SE students than with NSE students. In addition, if the student is identified for part time special education, it often means that the student gets some direct support from a special education teacher. It is possible that the special education teacher's contribution may heighten the general education teachers' awareness of the student's functioning, and thus increases the awareness of the general education teacher to the student's strengths. Second, part time special education is a unique feature in the Finnish school system. This service is usually started immediately upon a student experiencing some difficulties and needs additional support more than the general education teacher can provide. Therefore, early support may increase the teacher's awareness of both the strengths and difficulties of the student. Third, the Finnish education law and the core curricula require schools to consider students strengths, among other things, when additional support is needed. In practice this requires the development of a learning plan, in part time special education, or an Individual Education Program (IEP), in full-time special education. Thus, the awareness of student's different needs as well as their strengths may be increased between teachers and students. Fourth, if a student requires additional support, the learning plan or the IEP must be done in collaboration between school (i.e., teacher) and home (i.e., parent/caregiver). This results in the parents/caregiver, the student and teacher(s) meeting together to discuss the learning plan or IEP, and thus, this collaboration may foster better agreement across informants. However, these results should not be over interpreted, as the sample size of students with SE support was small.

A final purpose of the present study was to assess the validity of the Finnish BERS-2 that was accomplished by studying the convergent and divergent correlations of the rating scale. Convergent correlations, which measure cross informant ratings of the same constructs, are expected to be larger in magnitude than divergent correlations, which measure the cross informant ratings of different constructs, which are expected to be smaller in magnitude. Studied separately for students with and without special education

and all students together, the convergent correlations were stronger in magnitude than the divergent correlations. However, these results should be carefully interpreted, as the differences in convergent and divergent correlations were relatively small.

This article contributes additional information on the psychometric status of the Finnish Behavioral and Emotional Rating Scale-2. In the first study, Lappalainen et al. (2009), found that the Finnish BERS-2 factor structure was similar to the original structure reported in the US and had acceptable internal consistency. In another study investigating reliability of the Finnish BERS-2 moderate to large correlations were reported between teachers and students and that higher agreement was achieved on externalizing than internalizing behaviors (Sointu et al. forthcoming). The research in the present article extended this line of research on cross informant reliability across three informant groups and students with and without special education support. Altogether, these findings further establish that the Finnish BERS-2 has acceptable psychometric properties to assess students' strengths.

As with most research, several limitations exist in the present study. First, only one school age cohort (i.e., fifth grade students) was included. Future research should increase the range of age cohorts with younger and older students. Second, although the sample was large, it was not geographically representative of all Finnish students from different regions. However, as noted in the international PISA studies (OECD 2009) the between school variance of students academic performance is the smallest in the world in Finland (about 5% of total variance) and we have confidence that the one region sample was representative of Finnish students nationwide. Third, two different groups of students (i.e., SE and NSE) were included; however, other groups based on special education need (i.e., learning disability) or clinical diagnosis (e.g., ADHD or conduct disorder) as well as students in other special education placements where support is provided (e.g., inclusive settings, partly integrated settings or special education classroom) should be studied. Fourth, the factor structure, internal consistency, intercorrelations, and cross informant correlations of the Finnish BERS-2 have been studied; however, this line of research needs to be extended to other psychometric characteristics such as short- and long-term test-retest reliability and content and predictive validity.

In spite of these limitations, several obvious implications are apparent. First, the results of present study along with earlier studies indicate that Finnish BERS-2 has acceptable psychometric properties. The BERS-2 appears to be a reliable instrument for Finnish professionals to use to assess students' strengths, and to use the assessment results for reporting and monitoring their strengths. Second, the overall findings indicate that in the assessment of

student strengths, the parents, teachers and students are in relative agreement. Thus, ratings of these informants are useful when a student is referred for services and information on the behavioral and emotional functioning is requested. However, in addition to rating-scale information, other types of data such as interviews with key informants, standardized assessments and direct observations should be included. Third, the BERS-2 can be useful in developing Individual Education Plans (IEP) for students with special education needs. Specifically, information on a student's strengths can be helpful in writing the goals and objectives central to all IEPs as well as identify the outcomes to be monitored as part of the evaluation process. Fourth, the BERS-2 can be a useful tool to understand the shared view of child's strengths and weaknesses by teachers and parents. Using strength-based assessment as a basis for parent-teacher discussions may offer important assistance in reaching and engaging some of the parents that might otherwise be unwilling to cooperate. Fifth although the present study demonstrated that the agreement for students with no special education support is lower than for students with SE support, the value of strength based perspective may extend beyond assessing and supporting students with special needs, and therefore, may be relevant to the prevention of later accumulative problems. Finally, the BERS-2 provides a meaningful and effective means to gather and track information of students' strengths from multiple informants and across different settings. Assessment of students' strengths may contribute positively to their academic achievement and well being, especially for those students' with special education needs.

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References

- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213–232.
- Achenbach, T. M., & Rescorla, L. A. (2007). *Multicultural understanding of child and adolescent psychopathology*. New York, NY: Guilford Press.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.
- Benner, G., Beaudoin, K., Mooney, P., Uhing, B., & Pierce, C. (2008). Convergent validity with the BERS-2 teacher rating scale and the Achenbach teacher's report form: A replication and extension. *Journal of Child and Family Studies*, *17*(3), 427–436.
- Buckley, J. A., Ryser, G., Reid, R., & Epstein, M. H. (2006). Confirmatory factor analysis of the behavioral and emotional rating scale-2 (BERS-2) parent and youth rating scales. *Journal of Child and Family Studies*, *15*(1), 27–37.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105.
- Collishaw, S., Goodman, R., Ford, T., Rabe-Hesketh, S., & Pickles, A. (2009). How far are associations between child, family and community factors and child psychopathology informant-specific and informant-general? *Journal of Child Psychology and Psychiatry*, *50*(5), 571–580.
- Epstein, M. H. (2004). *Behavioral and emotional rating scale: A strength-based approach to assessment* (2nd ed.). Austin, TX: PRO-Ed.
- Epstein, M. H., & Sharma, J. (1998). *Behavioral and emotional rating scale: A strength-based approach to assessment*. Austin, TX: PRO-Ed.
- Finnish Law 642/ (2010). Retrieved from <http://www.finlex.fi/fi/laki/alkup/2010/20100642>.
- Finnish Ministry of Education. (2007). *Special education strategy (report no. 47)*. Helsinki, Finland: Erityisopetuksen kehittämisen ohjausryhmä.
- Finnish National Board of Education. (2010). *Perusopetuksen ope- tussuunnitelman perusteiden muutokset ja täydennykset (amendments and additions to the national core curriculum for basic education; DNRO 50/011/2010)*. Helsinki, Finland: Finnish National Board of Education.
- Friedman, K. A., Leone, P. E., & Friedman, P. (1999). Strengths-based assessment of children with SED: Consistency of reporting by teachers and parents. *Journal of Child and Family Studies*, *8*(2), 169–180.
- Geisinger, K. F. (1994). Cross-cultural normative assessment: Translation and adaptation issues influencing the normative interpretation of assessment instruments. *Psychological Assessment*, *6*, 304–312.
- Gresham, F. M., Elliott, S. N., Cook, C. R., Vance, M. J., & Kettler, R. (2010). Cross-informant agreement for ratings for social skill and problem behavior ratings: An investigation of the social skills improvement system-rating scales. *Psychological Assessment*, *22*(1), 157–166.
- Halinen, I., & Järvinen, R. (2008). Towards inclusive education: The case of Finland. *Prospects*, *38*(1), 77–97.
- Hopkins, W. G. (2006). *A scale of magnitudes for effect statistics*. Retrieved from <http://www.sportsci.org/resource/stats/effectmag.html>.
- Itkonen, T., & Jahnukainen, M. (2010). Disability or learning difficulty? Politicians or educators? Constructing special education in Finland and the United States. *Comparative Sociology*, *9*(2), 182–201.
- Lappalainen, K., Savolainen, H., Kuorelahti, M., & Epstein, M. H. (2009). An international assessment of the emotional and behavioral strengths of youth. *Journal of Child and Family Studies*, *18*(6), 746–753.
- Merrell, K. W. (2000). Informant reports: Theory and research in using child behavior rating scales in school settings. In E. S. Shapiro & T. R. Kratochwill (Eds.), *Behavioral assessment in schools* (2nd ed., pp. 233–256). New York, NY: The Guilford Press.
- Obel, C., Heiervang, E., Rodriguez, A., Heyerdahl, S., Smedje, H., Sourander, A., et al. (2004). The strengths and difficulties questionnaire in the Nordic countries. *European Child and Adolescent Psychiatry*, *13*, ii32–ii39.
- OECD. (2009). PISA 2009 results: What students know and can do. Student performance in reading, mathematics and science. Retrieved from www.oecd.org/edu/pisa/2009.
- Richardson, G. A., & Day, N. L. (2000). Epidemiologic considerations. In M. Hersen & R. T. Ammerman (Eds.), *Advanced abnormal child psychology* (2nd ed., pp. 33–45). Mahwah, NJ: Lawrence Erlbaum.

- Rothenberger, A., & Woerner, W. (2004). Editorial: Strengths and difficulties questionnaire (SDQ)—Evaluations and applications. *European Child and Adolescent Psychiatry, 13*, ii1–ii2.
- Savolainen, H. (2009). Responding to diversity and striving for excellence: The case of Finland. *Prospects, 39*(3), 281–292.
- Sointu, E. T., Savolainen, H., Lappalainen, K., & Epstein, M. H. (forthcoming). Cross informant agreement of behavioral and emotional strengths between Finnish students and teachers. *Scandinavian Journal of Educational Research*.
- Synhorst, L. L., Buckley, J. A., Reid, R., Epstein, M. H., & Ryser, G. (2005). Cross informant agreement of the behavioral and emotional rating scale-2nd edition (BERS-2) parent and youth rating scales. *Child & Family Behavior Therapy, 27*(3), 1–11.
- Uhing, B. M., Mooney, P., & Ryser, G. R. (2005). Differences in strength scores for youth with ED across the youth rating scales of the assessment and without and parent BERS-2. *Journal of Emotional & Behavioral Disorders, 13*(3), 181–187.
- Watkins, A. (Ed.). (2007). *Assessment in inclusive settings: Key issues for policy and practice*. Odense, Denmark: European Agency for Development in Special Needs Education.
- Wilson, M. S., & Reschly, D. J. (1996). Assessment in school psychology training and practice. *School Psychology Review, 25*(1), 9.