



Evaluating Family-School Collaboration: A Preliminary Examination of the Family-School Collaboration Inventory

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Abstract

Family-school collaboration is a key component of practice within the field of School Psychology. Promoting an effective partnership between parents and educators can be difficult, as a variety of factors influence the quality of the relationship. Currently, no scale exists to measure constructs related to family-school collaboration in a practical manner. The current study sought to create a reliable measure to assess parents' perceptions about the practice of family-school collaboration by their child's school that could provide actionable steps to increase family-school collaboration. The Family-School Collaboration Inventory (FSCI) was created from a review of best practices in the field of school psychology. The survey was completed online by 304 participants (parents/caregivers of school-aged children) recruited through social media websites. A principal component analysis was completed and identified three factors comprising family-school collaboration: (1) Collaborative Communication of Standards and Services (CCSS), (2) Inclusive Partnership (IP), and (3) Disconnected Experience (DE). Limitations and future directions are discussed.

Keywords Educational/school · Family/parents · Collaborative

Family-school collaboration can be defined as a partnership between educators and families striving to enhance the student's development in four major areas: emotional, social, behavioral, and academic (Christenson 2003; Christenson and Sheridan 2001). A strong partnership between the family and school, focused on improving the student's learning opportunities and educational process, research is positively associated with improvements in academic performance (Jeynes 2005; McIntyre and Garbacz 2014; Reynolds 1994) and decreases behavior problems (Domina 2005; McIntyre and Garbacz 2014; Sheridan et al. 2012). Furthermore, there are benefits especially for students at-risk or those with disabilities (Lines et al. 2011; Sheridan et al. 2014). When implemented effectively, the collaboration process between the school and family can increase and improve both the quality and quantity of services provided to the student (Sheridan et al. 2014).

The idea of collaboration between family and school is not as simple as a set of guidelines for school personnel to

execute. Christenson (1995) described family-school collaboration as "primarily an attitude, not exclusively an activity" (p. 118–119). This means there is not a singular path by which to accomplish family-school collaboration, but a fluid set of ideas based on mutual respect, communication, and shared goals. The school and the home setting are two microsystems in which the child participates. Researchers continue to investigate the characteristics related to effective collaboration between these two settings in order to promote positive outcomes for students.

Family can include any significant adult in the child's life (e.g., grandparents, aunts/uncles, close family friends), while *school* refers to all educators (teachers, administrators, support staff) (Christenson 1995). Rather than a one-way flow of information from the teacher to the parents, family-school collaboration involves shared goals and responsibilities for the educational outcome of the student. Bi-directional communication between teachers and parents is an important factor within the parent teacher relationship, ultimately an essential piece of family-school collaboration. This communication creates a sense of support and the perception of availability, shared goals, and mutual respect (Vickers and Minke 1995). Research investigating the effectiveness of interventions using family-school collaboration shows that interventions prioritizing a two-way exchange of communication are most effective.

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When both parents and educators contribute to the education of the student and are considered of equal importance, families feel more empowered and are more willing to help their child participate in the intervention (Cox 2005).

Parental involvement is a component within an overall framework of family-school collaboration (Cox 2005). However, increasing parent involvement in schools through traditional means, such as encouraging them to volunteer at school or sending home correspondence when their child fails an assignment, is not sufficient or always possible to facilitate family-school collaboration (Christenson 1995; Christenson 2003; Miller and Kraft 2014). For single parents, school-based participation can be difficult, especially when the only times available for participation may be during the school/work day (Grolnick et al. 1997). Other factors affect levels of parental involvement, such as parental education level. Parents with postsecondary education are more likely to be involved in the school environment, as well as in communicating with educators about their children. This may be due to feeling more comfortable in the education setting due to their prior successes (Fantuzzo et al. 2000). A parent's history of access to information or services, or a child's level of functioning, may also affect parental involvement. For example, Garbacz et al. (2016) found that parents of children with autism reported better parent-teacher relationships and more involvement when they had a history of satisfactory access to information and services. Conversely, they reported lower parental involvement and a poorer relationship with their child's teacher as the developmental impairment of their child increased. When working to increase parental involvement, it is important to consider these and numerous other factors that may be affecting parents' ability or confidence in participating in their child's education. Schools must actively reach out to parents, welcoming and supporting them at their level of need, rather than passively waiting for their child to misbehave or perform poorly before contacting them (Christenson 2003).

Parental involvement is not only a suggestion for promoting family-school collaboration, it is a right for parents of students with disabilities, as delineated by the Individuals with Disabilities Education Improvement Act (IDEIA 2004). This statute outlines procedural safeguards for students and families that ensure the provision of a free and appropriate public education and promotes the practice of including families as a crucial partner in the decision-making process at both the local and state levels, calling for meaningful participation by families. Families and school personnel come together to determine the student's need for identification, evaluation, and educational placement in regards to Special Education.

Furthermore, The National Education Goals Panel (NEGP 2017) created objectives that schools should address at the local and state levels in order to further develop students academically, socially, and emotionally. One of the objectives emphasizes the importance of developing policies that will

establish programs to increase partnerships between families and schools. These policies state that schools should actively include families in educational decision-making in the school setting and academic learning at home, and that families should support the schools, while holding them accountable for their shared responsibilities, such as including families on curriculum committees. This legal framework is supported by a large body of research which supports that children with disabilities benefit from a collaborative model.

Information from parents is essential in understanding their children's strengths and needs in the school setting. Family participation in students' education has benefits both academically and behaviorally across settings (Li et al. 2017; O'Donnell and Kirkner 2014). Research supports that when families are involved in the education process, students are more likely to earn higher grades and test scores, enroll in higher level programs, be promoted, attend school regularly, have better social skills and adapt well to school, and graduate and go on to postsecondary education (Miller and Kraft 2014). Children with Attention Deficit-Hyperactivity Disorder have shown improvement in symptoms, social skills, behaviors, and organization after participation in an intervention program utilizing a collaborative approach (Pfiffner et al. 2011). Children with Autism Spectrum Disorder (ASD) have also been shown to benefit from a collaborative approach between multiple settings. For example, Garbacz and McIntyre (2016) used a conjoint behavioral consultation model to implement interventions for students with ASD, and showed improvement in the students' social behavior, the relationship between the parent and teacher, and both the parent and teacher's ability to problem solve. In sum, the effectiveness of family-school collaboration necessarily hinges on the nature of parental involvement and parent-educator relationships. However, there are additional key elements that must be considered when creating and sustaining effective family-school collaboration and to ensure best practices.

Christenson and Sheridan (2001) described four fundamental components of an efficient family-school collaboration model: *approach*, *attitude*, *atmosphere*, and *actions*. The approach component is the foundation on the tone, method, and manner the school and families will communicate (Sheridan et al. 2014). First, schools are advised to consider each individual student and their family's ethnic background, culture, beliefs, and values in order to approach and to communicate with families respectfully (Lines et al. 2011; McIntyre and Garbacz 2014). Francis et al. (2016) found that parents of students believe that effective communication from school personnel should be respectful, informal, and in person and should include meaningful explanation and opportunity to give input.

It is equally important for the school to consider the attitude conveyed to the family through the communication and actions of school personnel (McIntyre and Garbacz 2014).

Attitudes are the families' and schools' perceptions and thinking of one another (a reciprocal interaction), their partnership, and responsibilities (Christenson and Sheridan 2001; Sheridan et al. 2014). The attitude conveyed by the school personnel can directly affect the family's interactions with the school, and have the opportunity to promote a feeling of belonging (Francis et al. 2016; McIntyre and Garbacz 2014). Parents feel welcomed and a valued member of the education team when administrators are available/approachable and when educators convey a positive demeanor and willingness to collaborate (Francis et al. 2016). Thus, the school must impress upon the families that they are the school's partner in the decision-making and process of their child's academic career.

The third component, physical atmosphere, projects the school's attitude regarding equal partnership. The physical climate of the school involves various methods to engage the families, such as information and events made available with regard to cultural and linguistic diversity. A focus group of parents indicated that they feel a sense of belonging when school personnel attempts to reduce barriers to their involvement in school events through providing translation services, child care, food, and transportation (Francis et al. 2016). Similarly, the affective climate of the school focuses on creating trust, respect for, openness to, and acceptance of the family (Sheridan et al. 2014). The affective climate should give the sense to the families that they are encouraged to explain their beliefs and ideas concerning their child's education to school personnel. According to past research, parents typically report satisfaction with school team meetings (Vaughn et al. 1988) even though their participation may be limited. More recently, Esquivel et al. (2008) found that parents of children receiving special education services described positive and negative experiences in school-based team meetings within five categories: (1) meeting context and organization, (2) relationships, (3) communication, (4) problem-solving, and (5) parent emotions. Increasing elements of optimal family-school collaboration may lead to increased participation by families and is considered positive; however, not all problems can or will be solved in a collaborative manner between families and schools (i.e., complaints and due process hearings).

Lastly, the actions of the school need to be considered in order to establish an effective partnership with the parents. The school's actions in the collaboration process occur across settings and contexts (McIntyre and Garbacz 2014). For example, families in the school can monitor field trips, serve as classroom assistants, and participate with decision-making process at school meetings. Parents have indicated that the opportunity to participate on committees and be included in the decision-making processes helps promote family leadership and build trusting partnerships between families and schools (Francis et al. 2016). In the home, the family can provide guidance with homework and use rules that align with the child's classroom rules. Furthermore, family involvement

in school processes and activities may help prepare children to succeed in school. For example, Parker et al. (1997) showed that academic motivation, social competence, and school readiness exhibited by the student were significantly correlated with the number of volunteer hours and frequency of volunteer events completed by the parents at the school. Schools must consider their role in fostering a collaborative partnership with families, rather than focusing on what the families can do for the school (Sheridan et al. 2014).

The extensive research on family-school collaboration covers a variety of ideas and models due to the factors and benefits associated with implementing an effective partnership. Given the research indicating enhancement in children's academics, behavior, and social and emotional skills (Christenson 2003; Christenson and Sheridan 2001), it is important for both the family and school to focus on the student. While various ideas and practices to improve family-school collaboration have been proposed in the literature, there has been no instrument developed for schools to quantify these practices and measure improvements. With a lack of uniform data or procedural suggestions for collecting data, schools do not have a readily usable format to examine their current practices and consider strategic plans to foster and further develop collaboration. The current study sought to create a reliable measure to assess families' perceptions of family-school collaboration practices of their child's school.

Method

Participants and Procedure

Participants were recruited through social media (e.g., FaceBook, Online Parenting groups, etc.). All participants completed the study online. Overall, 304 parents or caregivers of a school-aged child participated in the study. Four individuals were excluded from data analysis due to a significant portion of missing data or indicating that their child was home-schooled. Demographics of all included participants can be found in Table 1. Participants represented 26 states within the USA, primarily Texas (207; 68.1%), Colorado (17; 5.6%), Kentucky (14; 4.6%), and Mississippi (14; 4.6%). Families also provided information regarding their yearly household income. Most families indicated their child attended a public school (242; 79.6%), with 46 attending a private school, 11 attending a charter school, and 5 reporting some other type of school placement.

Family-School Collaboration Inventory

The Family-School Collaboration Inventory (FSCI) was based on a review of best practices noted in the field of school psychology. The review team consisted of a School

Table 1 Demographics of participants as percentage of the sample ($N=304$)

Characteristic	Percent of sample
Relationship to child	
Mother	86.2
Father	7.9
Guardian	5.3
Other	0.7
Race	
American Indian/Alaska Native	1.3
Asian	0.7
Black/African American	30.6
Native Hawaiian or Other Pacific Islander	0.3
White/Caucasian	61.2
Bi- or multi-racial	2
Not reported	3.9
Ethnicity	
Hispanic or Latino	7.6
Not Hispanic or Latino	87.8
Not reported	4.6
Marital status	
Single	21.1
Married	66.4
Divorced	7.2
Separated	3
Widowed	2.3
Education level	
Did not complete high school	1.6
High school diploma or GED	15.5
Some college credit	19.1
Associate degree (e.g., 2-year degree/cert)	9.2
Bachelor's degree	23.3
Graduate degree	31.2
Household income	
< 20,000	4.6
20–39,999	13.2
40–59,999	19.8
60–79,999	11.5
80–99,999	11.2
100–124,999	14.8
125–149,999	7.9
> 150,000	16.4
Not reported	0.7

Percentages may not equal 100% due to rounding

Psychology faculty member, three specialist level students in school psychology (one a parent of children without disabilities), a parent of a child with a disability receiving special education services, and a social worker. The team consisted of three males and three females: five Caucasian and one African American. The team was assigned chapters from the

National Association of School Psychologists' *Best Practices in School Psychology* (Harrison and Thomas 2014). The research team reviewed various chapters related to family-school collaboration practices, which included the following: Promoting Family Engagement in Education (Sheridan et al. 2014); Systems-Level Organization and Support for Effective Family-School Partnerships (McIntyre and Garbacz 2014); Reducing Barriers to Parent Involvement (Manz and Manzo 2014); Partnering with Parents in School-Based Services (Miller and Kraft 2014); Family-School Collaboration for Multitiered Service Delivery (Miller et al. 2014); and Facilitating Family-School Meetings (Minke and Jensen 2014). Each of the review team members created a list of items or themes from the readings. All items were shared with the full team and were retained, deleted, or combined to create a set of 31 items.

Next, a small group of parents and school professionals (acquainted with the research team) were asked to review the items and provide feedback on the clarity of each item and if there were other factors that they perceived to impact their ability to collaborate with families/school professionals. This focus group included parents and teachers across the grade spectrum (PK–12) and included students of varying abilities (those with and without disabilities). Minor revisions were made to improve items clarity. The team discussed the measurement scale for the items and decided upon a seven-point Likert scale: (1) Strongly Agree, (2) Agree, (3) Somewhat Agree, (4) Neither Agree Nor Disagree, (5) Somewhat Disagree, (6) Disagree, and (7) Strongly Disagree.

In addition to the items developed to measure family-school collaboration practices, the participants were asked to provide the following demographic information when completing the measure: (1) age of parent, (2) relationship to child, (3) marital status, (4) highest level of education completed, (5) state of residence, (6) zip code of residence, (7) number of people in household (adults plus children), (8) number of children (birth to 21 years of age) in home, (9) estimated yearly family household income, (10) race, (11) ethnicity, (12) type of school child attends, (13) grade of child, (14) child's eligibility for special education services (and subsequently primary eligibility category, if applicable), and (15) student eligibility for Section 504 (and subsequently primary eligibility category if applicable).

Results

Data Analyzed

Following screening for outliers and missing data (see the "Method" section), the final sample size was 304 individuals. All analyses were conducted using the statistical software SPSS version 25.

Principal Component Analysis

Initially, the factorability of the 31 FSCI items was examined. Certain items (items 20, 8, 4, 27, and 29) were reverse scored due to the nature of content including negative aspects of family-school collaboration. Reviewing of the correlation matrix, 30 of the 31 items correlated at least 0.3 with at least one other item. Additionally, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.956, and Bartlett's test of sphericity was significant ($\chi^2(465) = 6715.576, p < 0.001$). Thus, it was determined to include all items in the principal components analysis. A principal components analysis was conducted to identify real factors based on the correlation matrix. This methodology, compared to a factor analysis, explains all variance in a matrix, and includes the error contained within the correlations (Klein 1994).

In examining the total variance explained, the initial eigenvalues indicated that the first four factors explained 47.90, 6.42, 4.43, and 3.52% (cumulative % = 62.26). Solutions for three and four factor were examined using a promax (oblique) rotation for the factor loading matrix due to the possibility of correlation among suspected factors. The three-factor solution was preferred due to the leveling off of eigenvalues on the scree plot after three factors and the identification of only one item comprising the fourth factor.

A total of five items were eliminated because they did not contribute to the simple factor structure and failed to have a minimum primary factor loading of 0.4 or above. The five items included the following: (1) item 16—"I feel that attending meetings or conferences with my child's school is valuable and worth my time," (2) item 25—"I am included in the problem-solving process when my child has a problem at school," (3) item 28—"After a school meeting, I feel optimistic," (4) My child's school provides high quality educational and support services (such as special education programs, after school programs, and RTI)," and item 30—"My own school experience was positive." The pattern matrix for the full scale is included in Table 1, noting those items that were eliminated due to not meeting inclusion criteria (i.e., a factor loading > 0.4 and/or cross-loadings of 0.3 or higher with several other items).

Through a consensus process, the study team reviewed the three factors and identified common themes among the various items. Ultimately, the team decided upon the following names for the factors: (1) Collaboration Communication of Standards and Services, 2) Inclusive Partnership, and 3) Disconnected Experience (with these items reverse scored). Composite scores were created for each of the three factors and an overall Family-School Collaboration Composite (FSCC) score was also generated (the sum of the three factor scores). Higher scores indicated more effective family-school collaboration. Descriptive statistics are reported in Table 2. The

skewness and kurtosis values were well within a tolerable range for assuming a normal distribution. Based on an examination of the histograms for the three factors and composite scores, the distributions also looked approximately normal. The three factors were found to have high correlations with each other: $r = 0.67$ for CCSS and IP, $r = 0.65$ for CCSS and DE, and $r = 0.69$ for IP and DE (Table 3).

Discussion

The purpose of the current study was to create and examine the psychometric properties of a scale measuring practices related to family-school collaboration. Based on the best practice items created by the current research team, the principal component analysis identified three factors comprising family-school collaboration: (1) Collaborative Communication of Standards and Services (CCSS), (2) Inclusive Partnership (IP), and (3) Disconnected Experience (DE). Each factor provides insight into key practices comprising family-school collaboration.

The CCSS subscale contains items related to the methods schools used to communicate with parents, the type of information communicated, and the clarity of the information communicated. It is imperative that schools have infrastructure in place for parents to receive information about their child. When schools utilize a variety of means to communicate, parents are given multiple opportunities to engage with their child's school (Clarke et al. 2010). When this information is communicated to parents on a consistent basis, trust in the school increases which increases parental involvement (Adams and Christenson 2000). Parents also need to be given relevant information about their child, so parents know how to collaborate with their school most effectively. For example, if a school is going to conduct an assessment or an intervention, personnel should exercise the due diligence to explain these in simple terms that parents can understand. Parents are more likely to incorporate the results of these measures taken by the school in their own home when the information is presented in simple terms and without jargon (Blue-Banning et al. 2004).

The IP subscale consists of items that pertain to the atmosphere of the school, and whether parents felt welcomed and valued. When parents feel welcomed and respected, parents are more likely to start and maintain their involvement with the school (Quiocho and Daoud 2006). Parents also need to feel comfortable expressing their opinion when they do decide to engage. Parents may be reserved during meetings, and may not volunteer their opinion unless encouraged or prompted. Asking parents open-ended questions encourages participation, creating the opportunity so that their input is well-

Table 2 Factors loadings and communalities based on a principal components analysis with promax rotation for the Family-School Collaboration Inventory ($N = 304$)

	CCSS	IP	DE
I receive regular progress notes about my child's academic grades and behavior. (12)	0.88		
I receive information on how I can help my child succeed in school through a variety of methods (such as a parent center, texts, emails, bulletin boards). (13)	0.87		
My child's school provides adequate resources for me as a parent to assist me in helping my child. (14)	0.84		
My child's school has clear standards for understanding how my child is assessed regarding learning (academic skills). (23)	0.84		
My child's school has asked me what information and resources I need or want to better help support my child. (21)	0.82		
My child's school has attempted to help me understand how to support my child's behavior (for example, social, emotional, and behavioral skills). (19)	0.82		
I have received an overview of what my child will be learning. (22)	0.82		
My child's school has attempted to help me understand how to support my child's learning (academic skills). (18)	0.81		
My child's school has clear standards for understanding how my child is assessed regarding discipline and behavior. (24)	0.80		
I feel that my child's school places my child's learning as their priority. (26)	0.66		
Communication from my child's school is written so that I can read and understand it. (10)	0.52		
My child's school makes it easy for me to be involved. (17)	0.51	0.37	
When my child's school contacts me, I am told good things about my child such as his/her strengths. (9)	0.41	0.28	
My child's school provides high quality educational and support services (such as special education programs, after school programs, RTI). (31) ^a	0.30 ^a		
All family members are invited and welcomed to field trips, special programs, and other school activities. (2)		0.85	
I feel comfortable picking up the phone to call my child's teacher or other school personnel. (3)		0.80	
In school meetings, I feel that I can openly voice my opinion with the school staff. (7)		0.78	0.21
I feel that my child's school is welcoming. (1)		0.76	
I feel that my child's school has a positive view of my family's culture, values, and practices. (5)	0.22	0.69	
I feel my child's school welcomes a variety of cultures. (6)	0.27	0.61	
Communication from my child's school is provided in my native language. (11)		0.55	
I feel that I am a partner with my child's school when discussing issues concerning my child. (15)	0.37	0.41	0.21
I feel that educational decisions about my child are made without my input. (20—reverse scored)			0.91
When my child's school contacts me, it is mainly to tell me about a problem. (8—reverse scored)			0.76
I feel that school personnel create more problems than they solve. (4—reverse scored)			0.65
After a school meeting, I feel more confused than before the meeting. (27—reverse scored)			0.65
I feel that my opinion is diminished or discouraged by the school when discussing my child's performance. (29—reverse scored)		0.21	0.61
I am included in the problem-solving process when my child has a problem at school. (25) ^a	0.31 ^a	0.27 ^a	0.32 ^a
My child's school provides high quality educational and support services (such as special education programs, after school programs, RTI). (31) ^a	0.30 ^a		
My own school experience was positive. (30) ^a	0.24 ^a		
I feel that attending meetings or conferences with my child's school is valuable and worth my time. (16) ^a		0.31 ^a	0.26 ^a
After a school meeting, I feel optimistic. (28) ^a			0.35 ^a

Factor loadings < 0.2 are suppressed

CCSS collaborative communication of standards and services, IP inclusive partnership, DE disconnected experience

^a An item was excluded for the final selection

Table 3 Descriptive statistics and intercorrelations for the three components and composite score of the Family-School Collaboration Inventory ($N = 304$)

	No. of items	M (SD)	Skewness	Kurtosis	Cronbach's α	CCSS	IP	DE	FSCC
Collaborative communication of standards and services (CCSS)	13	64.39 (17.45)	-0.47	-0.48	0.95	–			
Inclusive partnership (IP)	8	46.02 (7.75)	-0.59	0.17	0.88	0.74**	–		
Disconnected experience (DE)	5	24.59 (6.33)	-0.59	0.17	0.79	0.67**	0.70**	–	
Family-school collaboration composite (FSCC)	26	135.00 (28.66)	-0.58	0.08	0.96	0.96**	0.88**	0.82**	–

CCSS collaborative communication of standards and services, IP inclusive partnership, DE disconnected experience, FSCC family-school collaboration composite

** $p < 0.01$

represented as a mutual partner in decisions (Guo 2009). If parents do not feel valued, they are unlikely to offer input, and it will be mainly the recommendations of the school that are implemented.

The DE subscale consists of items that pertain to possible undesirable outcomes of collaborating with the school. As parents engage schools in collaborative efforts, it is important that they leave encounters with a sense that their efforts made a positive difference and were a valuable use of their time. When this is the case, parents are likely to continue to engage in collaboration with the school knowing that they will be able to have an impact on their child's learning. When parents experience the opposite, such is the case of schools implementing a policy they do not understand or approve of, they may feel that the collaborative process is irrelevant, and this will restrict further involvement as a result (Kazdin 2000) (Table 4).

As noted previously, the current study utilized a principal component analysis to identify the optimal components that incorporates the error associated with the correlations into the model. Within this analysis, some component variables receive more weight than others, leading to a certain structure. This is in contrast to a factor analytic approach which would estimate hypothetical factors, with the error removed from the factors (Klein 1994). A factor analytic approach could lead to a slightly different structure of this measure; it is recommended that additional research continue to refine the components/factors of family-school collaboration.

A possible limitation of the study is that the respondent sample varied from general demographic characteristics of the USA in a few ways. For example, in the current sample, only 7.5% of families identified as Hispanic or Latino, an underrepresentation compared to the 16.3% identified in the most recent 2010 United States Census. (U.S. Census Bureau 2011). The lack of Hispanic or Latino families within the current sample highlights the need for more research within this segment. Other

research on family-school collaboration with Hispanic/Latino families indicates these families sometimes feel confused by school structure and expectations (Carreón et al. 2005), report not understanding school politics with school administrators (Peña 2000), and feel abandoned (Ramirez 2003). Additionally, there was an overrepresentation of Black/African American participants in the current sample compared to the most current US census (30.6% compared to 12.6%). This sample also reported above-median household incomes. Approximately 55% of participants reported a household income of \$70,000 or more, compared to the US median household income of \$55,775 (U.S. Census Bureau 2016). Given that this study sample was national in scope but also regionally concentrated, it is necessary for future research to examine the factor structure of this measure in various regions and with a variety of racial/ethnic and socioeconomic backgrounds. The lack of diversity provides a significant limitation in examining the usefulness of the inventory currently; however, as this is a preliminary study, the FSCI provides a framework from which to conduct future work.

School personnel may wish to utilize the FSCI to obtain a measure of collaborative practices currently in place within their school. With further validation, this measure could serve as an evaluation tool to potentially conduct a needs assessment and measure improvements over time. Future research will need to quantify the utility of this measure in serving these functions at the level of individual family-school collaboration as well as at a global school performance level. In considering how school personnel can improve their practices, a key domain is the school's communication infrastructure. Schools should be providing parents with a variety of opportunities to engage with the school, whether through letters, email, or phone calls. Practitioners should provide effective communication to increase parents' knowledge of the opportunities to be involved in school activities, as parents may

Table 5 Mean, skewness, and kurtosis

Item	<i>M</i>	<i>S</i>	<i>K</i>
1	5.93	−1.58	3.39
2	5.39	−0.86	0.01
3	6.01	−1.67	2.93
4	5.15	−0.93	−0.06
5	5.59	−1.18	1.13
6	5.74	−1.14	0.98
7	5.68	−1.38	1.84
8	4.57	−0.41	−1.16
9	4.91	−0.65	−0.27
10	5.46	−01.09	0.46
11	6.27	−2.39	7.35
12	5.24	−0.71	−0.51
13	4.92	−0.54	−0.82
14	4.89	−0.55	−0.67
15	5.41	−1.13	0.64
16	5.83	−1.74	2.94
17	5.21	−0.85	−0.07
18	4.94	−0.56	−0.52
19	4.72	−0.43	−0.76
20	4.65	−0.44	−1.04
21	3.93	0.13	−1.08
22	4.72	−0.50	−0.90
23	5.06	−0.79	−0.23
24	5.16	−0.93	0.19
25	5.03	−0.66	−0.47
26	5.21	−0.88	0.13
27	5.11	−0.72	−0.07
28	5.11	−0.73	0.68
29	5.11	−0.75	−0.35
30	5.41	−0.85	−0.04
31	5.20	−0.92	0.18

be unaware of opportunities at times. Thus, it is further recommended that schools include frequent invitations to parents to collaborate in multiple forms of correspondence, which have been shown increase parental engagement (Hoover-Dempsey and Sandler 1997).

Schools should also seek to promote a positive atmosphere for parents. This can be done by adhering to positive communication strategies such as inviting dialog, monitoring tone/body language, and expressing respect and empathy to parents (Epstein 2001). Schools should also incorporate more positive feedback and information regarding strengths about children and their families as a means to maintain relationships with parents (Blue-Banning et al. 2004). When parents only hear about weaknesses in their family, it can develop a sense of hopelessness in parents, which might lead to disengagement. Schools should also be highly accountable in order to avoid a disconnected experience. Parents need to be able to trust that

what is agreed upon in meetings will be implemented quickly and effectively. This allows parents to see the positive results of their engagement with the school, which may motivate them to seek further engagement (Table 5).

In conclusion, there are numerous emotional, social, and academic benefits to children when their families collaborate with schools (Hattie 2009; Jaynes 2005). Students of involved parents earn better grades, take more difficult classes, have better attendance, better social skills, and a lower drop-out rate (Barnard 2004; Henderson and Mapp 2002). The family-school relationship has also shown to have positive academic effects for children identified as having a disability, and appears to expand the quantity and quality of service delivery by schools (Clarke et al. 2010; Lines et al. 2011;). Ultimately, this is why it is considered a best practice for schools to eliminate as many barriers to optimal family-school collaboration as possible. Previously, there has been no measure to provide a quantitative measure of family-school collaboration. The development of the FSCI and current data regarding its underlying factors and reliability provide a starting point for professionals to examine their success, and possible areas requiring remediation, in creating a collaborative school environment.

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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