



Speech-Language Service Delivery Model in Low Socio-Economic Status Preschools: An Exploratory Evaluation



Modèle de prestation de services d'orthophonie dans des centres préscolaires se trouvant en milieux socio-économiques faibles : Une évaluation exploratoire

KEY WORDS

COLLABORATION

ECE PERCEPTIONS

EVALUATION

S-L INTEGRATED SERVICES

PRESCHOOL

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Abstract

Speech and language support in the classroom may be especially relevant for children in low-income families as these children are at risk for difficulties in health, development, and academic success. To this end, many preschools and schools have embraced community-based interventions, often resulting in speech-language pathologists (S-LPs) collaborating with educators to provide service in the classroom, which has been demonstrated to facilitate language development (Farber & Klein, 1999; McEwen, 2007, Shaughnessy & Sanger, 2005). In 1983, an association of preschools serving low-income families in an urban Canadian city procured speech and language services from a local children's hospital to be delivered in the eleven preschools. The results of this survey based research reveal the perceptions of 34 early childhood educators (ECEs) about the speech and language (S-L) service delivery model.

Respondents generally described the service model similarly to how the S-LPs intended it. Survey results revealed a strong collaborative relationship between S-LPs and ECEs. Aspects of this adaptive, integrated and collaborative model were judged effective but ECEs perceived that not all children received service. S-LPs interacted appropriately with families but some ECEs highlighted the need for more communication with families. Feedback provided new directions for improving the S-L service and initiatives have been implemented to increase effectiveness and strengthen collaborative relationships with ECEs and families, to the benefit of the children.

Abrégé

Le soutien d'orthophonistes en salles de classe peut être particulièrement pertinent pour les enfants de familles à faible revenu puisque ces enfants sont à risque de difficultés de santé et de développement ainsi que de problèmes au plan académique. Dans ce but, plusieurs centres préscolaires et écoles ont choisi des interventions communautaires, où des orthophonistes collaborent souvent avec des éducateurs pour offrir des services dans les classes, ce qui s'est avéré faciliter le développement du langage (Farber & Klein, 1999; McEwen, 2007, Shaughnessy & Sanger, 2005). En 1983, une association de centres préscolaires desservant des familles à faible revenu en milieu urbain dans une ville canadienne ont sollicité les services en orthophonie d'un hôpital pour enfants local pour onze centres préscolaires. La présente étude rapporte les résultats d'un sondage mené auprès de 34 éducateurs et éducatrices de la petite enfance en lien avec ce modèle de prestation de services en orthophonie.

En général, les répondants ont décrit un modèle semblable à celui que souhaitaient les orthophonistes. Les résultats de l'étude ont révélé une grande collaboration entre les éducateurs et les orthophonistes. Certains aspects de ce modèle adaptable, intégré et collaboratif ont été jugés efficaces, mais certains éducateurs ont perçu que les enfants n'ont pas tous reçu des services. Les orthophonistes interagissaient de façon appropriée avec les familles, mais certains d'entre eux ont souligné le besoin de plus de communication avec les familles. Les commentaires ont offert de nouvelles directions pour l'amélioration des services en orthophonie. On a mis en œuvre des initiatives visant à améliorer l'efficacité et renforcer les relations de collaboration entre les orthophonistes et les familles au profit des enfants.

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Many preschools and schools have embraced services in which speech-language pathologists (S-LPs) collaborate with educators to provide service onsite in the classroom rather than in the clinical setting (Beck & Dennis, 1997; Valdez & Montgomery, 1997). Suleman et al. (2014) indicated the importance of being knowledgeable about different speech-language (S-L) service delivery models in order to implement the most appropriate services for children.

In a systematic review of different service delivery models, Cirrin et al. (2010) stated that there was a lack of adequate research-based evidence regarding effectiveness of service delivery models, even though S-LPs are increasingly required to apply evidence-based methods when making decisions regarding service for clients. In addition, they found there was limited research on consultative service delivery models. A number of studies have investigated service delivery models in schools (Brandel & Loeb, 2011; Cirrin et al., 2010), however there appear to be fewer that focus on S-L services provided to preschools. Of the studies that have been done within early childhood education, some studies have shown this type of intervention facilitated language development (Hodge & Downie, 2004). In contrast, Gallagher and Chiat (2009) found, in their study of severely language impaired preschool children, that direct intensive speech and language intervention was a more effective model of intervention compared to the nursery-based intervention. This highlights the importance of evaluating S-L service models to ensure they are effective.

The current study examined a preschool based speech and language service delivery model in use by an association of preschools. This association of preschools supports eleven municipally funded urban preschools in a large Canadian community. The population served

by these preschools includes children primarily in low-income families between the ages of 1 ½ to 5 years. Many of these families are new to Canada and may face additional challenges including adjustment to a new culture and learning a new language. These preschools provide enriched learning experiences as well as offer nutritious meals, book bag programs, numeracy programs, and transportation. Speech and language support in the classroom may be especially relevant for children in low-income families as these children are at increased risk for experiencing difficulties in health, development, and academic success (Dickinson & Caswell, 2007; Hodge & Downie, 2004; Hoff & Tian, 2005). As a part of their mandate to help these children achieve their full potential, the association of preschools contracts speech and language services from the local children's hospital. Initially, the contract allowed for a part-time position fulfilled by one S-LP. A number of S-LPs have held this sole-charge position over the years until extra funding allowed for increased hours to provide service in French. As a result, a second S-LP was hired in 2005 to provide bilingual service. At the time of this study, the contract allowed for S-LPs to provide a total of 200 days of service over the course of one year. In order to maximize the effectiveness of service over the year, more days were allocated from September to June and fewer days over the months of July and August when demand for service was less urgent.

Table 1 presents the components of the S-L service. It describes the tasks completed by the S-LPs to identify children with speech and language difficulties and to promote work with early childhood educators (ECEs) and families to support positive change in children's communication abilities. The service delivery model under examination was developed to encompass aspects of prevention, assessment, and mediated intervention.

Table 1. Components of the Speech and Language Service and Descriptions

Component	Description
Screenings and Assessments	Evaluating children's communication skills in the preschool.
Collaborative Consultation	Developing strategies with ECEs to enhance children's communication skills in preschool routines.
Training for educators	Examples: <i>Learning Language and Loving It®</i> and <i>Teacher Talk®</i> Hanen programs, and provision of in-services on topics related to children's communication.
Parent Education	Examples: Individual parent training targeting goals for their child, parent workshops on communication.
Therapy	Children may receive direct therapy at the preschool if the family is unable to access service elsewhere.
Referral	Initiating and supporting referrals to health and community agencies.

Over time, an S-L service delivery model used in these preschools evolved into an adaptive, integrated and collaborative model. Several features of the model are supported by research on implementing optimal speech and language services. They include: adapting to the needs of the preschool families and staff (Kagan & Kauerz, 2006; Phoenix & Smith-Chant, 2014), integrating into existing classrooms (Christensen & Lockett, 1990; Shaughnessy & Sanger, 2005), and allowing collaboration with educators (Beck & Dennis, 1997; Farber & Klein, 1999; Krysiak & Strader, 1996).

evaluating the working relationship between S-LPs and ECEs, researchers identified key positive and negative features of service delivery models. The services were viewed in a positive light when the S-LPs actively listened and communicated with educators, provided information about children with communication disorders, and implemented suggestions into the educational program. Negative evaluations were obtained when the S-LPs were perceived as unhelpful and unable to provide suggestions for classroom management of students with communication disorders (Sanger, Hux, & Griess, 1995; Tomes & Sanger, 1986).

Table 2. Aspects of an Adaptive, Integrated, and Collaborative Model

<p>Adaptive</p> <ul style="list-style-type: none"> • scheduling meetings with parents according to family availability • offering service to families in English, French, or their first language with an interpreter • adapting strategies and hand-outs according to literacy and education levels • planning interactions with ECEs around the routines of full day childcare and half-day nursery school programs • providing strategies to ECEs relevant to the children's communication levels and the preschool setting
<p>Integrated</p> <ul style="list-style-type: none"> • regular visits to each of the 11 preschools (one to four times a month) • observing, interacting, and stimulating speech and language skills of all children during preschool activities (e.g. playtime, snack time, dressing, hand washing) • S-LPs participate in annual general meetings, yearly workshops with the ECEs, and preschool special events
<p>Collaborative</p> <ul style="list-style-type: none"> • S-LPs work with ECEs to identify and assess children's communication skills • Regular discussions with ECEs and families of strategies and activities to stimulate children's speech and language skills • S-LPs and ECEs are often part of team service meetings organized by other professionals

To conduct this S-L service effectively, a positive working relationship between S-LPs and ECEs is recognized as essential. Other studies have highlighted the importance of professional collaboration in school settings. Suleman et al. (2014) studied the responses of student S-LPs after an interprofessional education experience that included instruction on models of specialized service delivery in schools. The authors stated that the inclusion movement has led to some governments developing policies regarding collaboration between professionals (e.g. Alberta provincial government). In a study by Shaughnessy & Sanger (2005), kindergarten teachers indicated agreement with the statement that classroom teachers and S-LPs should share responsibility for serving children with oral language problems. Beck & Dennis (1997) investigated teachers' and S-LPs' perceptions of classroom interventions. By

Purpose

In response to the call for ongoing evaluation of service delivery models, the purpose of the current study was to begin the process of evaluating the adaptive, integrated, and collaborative service delivery model in use with an association of preschools serving low-income families. In contrast to many studies that focus on intervention (Beck & Dennis, 1997; Valdez & Montgomery, 1997; Gallagher & Chiat, 2009), this study hoped to gather additional information regarding service delivery tasks that occur before intervention. Employing a similar methodology to previous studies surveying teachers' and/or S-LPs' perceptions of classroom service delivery models (Beck & Dennis, 1997; Elksnin & Capilouto, 1994), the current study sought ECEs' perceptions of the relationship between ECEs and S-LPs, and the effectiveness of this S-L service delivery model.

Table 3. Participant Preschools: Description of the Preschools' Program Length and Classroom Composition at the Time of the Study.

Preschool	AM/PM or full day	Maximum number of children	Ages of Children	ECE to child Ratio
A	AM and PM	32	2 ½ to 5 years	1:8
B	Full day	50 (10 toddlers and 40 preschoolers)	18 to 30 mos 2 ½ to 5 years	1:5 Toddlers 1:8 Preschoolers
C	AM and PM	44	18 months to 5 years	1:6
D	AM and PM	32	2 ½ to 5 years	1:8
E	Full day	48	2 ½ to 5 years	1:8
F	Full day	32	2 ½ to 5 years	1:8
G	AM and PM	32	2 ½ to 5 years	1:8
H	AM and PM	48	2 ½ to 5 years	1:8
I	AM and PM	24	2 ½ to 5 years	1:5
J	AM	24	2 ½ to 5 years	1:8
K	AM and PM	21	18 mos to 5 years	1:7

Eliciting ECEs' opinions could provide concrete ways to tailor the service according to the needs of the children, their families, and the ECEs.

Method

Participant Preschools

All eleven preschools of the association participated in the study. They all ran either full day or half day (morning and/or afternoon) programs in English and one of these preschools offered an additional half day program in French. Table 3 shows the program length and the composition in terms of ages, number of children, and the ratio of ECEs to children.

Participants

All 52 ECEs from eleven urban preschools affiliated with the association were invited to participate. In total, 34 (65%) of invited ECEs completed and returned the questionnaire. Some ECEs may not have participated in the study due to the challenge of finding time to complete the survey.

Demographic information about participants was obtained through multiple-choice questions on the survey.

The characteristics of the 34 respondents are shown in Table 4.

Survey Development (See Appendix for survey)

The survey was designed to capitalize on information gathered through quantitative and qualitative means. The combination of Likert scale items, multiple choice questions, and open-ended questions provided ECEs with an opportunity to respond in a variety of ways.

Using literature which described tools for investigating educators' perceptions of S-LPs (Beck & Dennis, 1997; Sanger et al., 1995; Tomes & Sanger, 1986), items for the questionnaire were developed to capture the breadth of services offered in this model. Inspired by the tools used by Sanger et al. (1995) and Tomes & Sanger (1986), survey items were presented under the headings: S-LP as a professional, S-LP as a team player, and effectiveness of S-LP's services. They are defined below:

1. S-LP as a professional: examined the S-LP's awareness of and sensitivity to the challenges of working with the low-income population. Requirements included possession of relevant

Table 4. Demographic Characteristics of Participants Reported in % of Participants

Characteristic	n (%)
Languages ECE uses when interacting with children	
English	17 (50.0)
English and French	13 (38.2)
English and Other	2 (5.9)
English, French, and Other	2 (5.9)
Employment status at the preschool	
Full time	28 (82.4)
Part time	6 (17.6)
Length of employment in a preschool setting	
0-5 years	7 (20.8)
6-10 years	8 (23.5)
11-15 years	6 (17.6)
More than 15 years	13 (5.9)
Length of employment at preschool	
0-5 years	13 (38.2)
6-10 years	7 (20.6)
11-15 years	5 (14.7)
More than 15 years	9 (26.5)
Highest level of education	
Some College	2 (5.9)
Completed College	20 (58.8)
Completed University	11 (32.4)
No response selected	1 (2.9)
Role in preschool	
ECE	26 (76.5)
Director	8 (23.5)

knowledge and skills, and a willingness to be open to suggestions for ongoing improvements to the service (Sanger et al., 1995).

2. S-LP as a team player: looked at the efforts to create and maintain a healthy working partnership with ECEs with the aim of promoting children's communication development (Sanger et al., 1995).
3. Effectiveness of the S-LP's services: reflected the way the service meets family needs, whether the amount of time spent with each child is sufficient, and the ECE's perception of progress in all the preschool children.

ECEs' levels of agreement/disagreement with each statement in the three dimensions were rated on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree", with the midpoint of the scale corresponding with an "unsure" response.

Open-ended survey questions were developed after a review of related literature (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Sanger et al., 1995; Shaughnessy & Sanger, 2005). They were included to elicit comments from respondents concerning their personal experience with the service delivery model. They pertained to time to access S-L service, types of S-L services provided at the preschool, appropriateness of S-LP expectations of ECE's role, strengths and limitations of S-L service, and how services can be improved. ECEs were also invited to provide additional comments.

Additionally, as per questionnaire design suggestions made by Litwin (2003), an S-LP with a background in research and a teacher reviewed a draft of the survey for face validity in order to support that the survey items were relevant to the topic area. Their comments were used to further develop the survey.

Pilot Study

A pilot study was conducted by giving a draft of the survey to 10 ECEs. These ECEs worked in the same building as a participating preschool, but were not part of the association of preschools in the current study. The ECEs completed the draft survey and provided feedback. This permitted researchers to further verify the relevance of survey content, format presentation, and time required to complete the questionnaire. Verbal recommendations pertained to format changes rather than content of the survey. This feedback was used to achieve the final version of the survey.

Procedure

The survey was administered using a modified version of the Dillman Total Design Method (Dillman, 2000). A personalized letter was mailed to each ECE with information about the study. The ECEs were informed of the purpose of the research project and that their responses would be anonymous. Included in the mailing was a questionnaire survey and a pre-addressed, stamped return envelope. After two weeks, a postcard was sent to all ECEs reminding them to complete and return the questionnaire. Four weeks after the initial mailing, another package containing the information letter and replacement questionnaire was mailed to non-respondents. This study was approved by the local hospital's Research Ethics Board and tacit consent was assumed by the return of the completed questionnaire by the professionals in early childhood education.

Data Analysis

SPSS (SPSS Corp.version.18.0.2009) was used to calculate descriptive statistics for the Likert scaled items in the questionnaire. Percentage of responses was generated for each rating on the Likert scaled items. Descriptive statistics were also tabulated for the yes/no and multiple choice questions in the form of percentages.

The open-ended responses were grouped inductively so that similar responses were identified and coded together. This was accomplished by having two researchers independently group the open-ended responses into categories (e.g. knowledge and expertise of S-LP, referrals and accessing resources, and connecting and communicating with families). The groupings were compared between the researchers, and 80% agreement was achieved. Discrepant responses were discussed and mutually acceptable categories were determined.

Results

Speech-Language Pathology Services

The majority of respondents (73.5%) reported an S-LP visited their preschool one to two times per month and 15% reported a visit frequency of three to four times per month. In the survey, the ECEs were asked to choose words from the list that best described their experience with this service delivery model. The results in Table 5 are presented according to each descriptor. ECEs described the service delivery model most often as "collaborative" (94.1%), "consultative" (73.5%), "integrated" (67.6%), and "adaptive" (47.1%). When looking at those descriptors most often paired together, 25 (73.5%) of ECEs chose both "collaborative" and "consultative" as their experience with

Table 5. ECEs' Experience with the S-L Service Reported in Number and % of Participants

Note: ECEs selected which descriptors they felt applied to the S-L service.

Descriptor	N (%)
Collaborative	32 (94.1)
Consultative	25 (73.5)
Integrated	23 (67.6)
Adaptive	16 (47.1)
Individualistic	14 (41.2)
Isolated	1 (2.9)
Pull Out	1 (2.9)
Mediated	0
Most Frequent Combinations of 2 Descriptors	
Collaborative and Consultative	25 (73.5)
Collaborative and Integrated	23 (67.6)
Consultative and Integrated	19 (55.9)
Most Frequent Combinations of 3 Descriptors	
Collaborative, Consultative, and Integrated	19 (55.9)
Adaptive, Collaborative, and Integrated	16 (47.1)
Collaborative, Adaptive, and Consultative	15 (44.1)

the model. Twenty-three (67.6%) chose "collaborative" and "integrated", while "consultative" and "integrated" were selected together by 19 (55.9) participants. When examining the combination of three descriptors, 19 (55.9%) chose "collaborative", "consultative" and "integrated". Sixteen (47.1%) respondents chose the descriptors "adaptive", "integrated" and "collaborative", while 15 (44.1) chose "collaborative", "adaptive", and "consultative".

Results were obtained from the Likert items and are presented on Table 6, 7, and 8, reflecting three sections in the survey: "S-LP as a Professional", "S-LP as a Team Player", and the "Effectiveness of the S-LP's Services".

When ECEs were asked to list all team members with whom they work, only nine (28.1%) of the 32 ECEs who responded to this question identified the S-LP as a member of their team. Eight (23.5%) respondents commented that having time in the day to access the S-L service was problematic.

Thirty three ECEs (97.1%) indicated the level of S-LP expectations of the ECE's role in supporting children with communication delays was appropriate. Respondent comments included:

- "I feel she listens to my suggestions/ideas with regard to a particular child"
- "She understands the staff and that certain things cannot be done so other means are to take place. She has confidence in our abilities and respects our decisions"
- "Yes, they have a clear view about where and how we can support these children the best"
- "They take into consideration my time, schedules and other children in the program. Language is most important at this age and success helps with all development"

Comments regarding strengths of the S-L service were identified:

Table 6. ECEs' Perceptions of S-LP as a Professional (n = 34) Reported in Number and % of Participants

*Not all participants reported on all items.

** The preschool association name has been omitted to preserve confidentiality

Item	Responses n (%)					
	N	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
The speech-language pathologist serves all children in my preschool who are in need of speech-language services	33	2 (5.9)	2 (5.9)	0	14 (41.2)	15 (44.1)
The speech-language pathologists is generally passionate about her work	33	0	0	0	7 (20.6)	26 (76.5)
The speech-language pathologist is a good advocate for children with communication difficulties/disorders	32	0	0	0	9 (26.5)	23 (67.6)
The speech-language pathologist follows the policies and procedures of my preschool	34	0	0	0	12 (35.3)	22 (64.7)
The speech-language pathologist is aware and sensitive to the challenges involved in working with the ** population	34	0	1 (2.9)	1 (2.9)	10 (29.4)	22 (64.7)
The speech-language pathologist displays appropriate skills and knowledge to perform her job	34	0	0	0	8 (23.5)	26 (76.5)
The speech-language pathologist's notes, reports and referrals are done in a timely manner	34	0	1 (2.9)	0	10 (29.4)	23 (67.6)
The speech-language pathologist respects and maintains confidentiality of information	34	0	0	0	11 (32.4)	23 (67.6)
The speech-language pathologist is open to suggestions for improving service	33	0	0	2 (5.9)	11 (32.4)	20 (58.8)

- Eight (23.5%) respondents highlighted assessment and/or early identification of children with language delays as a strength.
- Six (17.6%) ECEs commented on the support the S-LP provides for helping families with referrals and accessing resources.
- Eight (23.5%) comments were related to connecting and communicating with families.
- Six (17.6%) comments stated the S-LP's knowledge and expertise was a positive part of the service.

When asked to comment on limitations of the service and suggestions for improvements, the following results were noted:

- Twenty-six (76.5%) respondents indicated the need for more hours and/or visits to the preschool program by the S-LP. Respondents' comments included: "Not enough time - the visits allotted are not enough to substantially help or improve the child's speech".
- Ten (29.4%) respondents commented on the need for on-site therapy: "on site therapy not available usually. (The

Table 7. ECEs' Perceptions of S-LP as a Team Player (n = 34) Reported in % of Participants

*Not all participants reported on all items.

** The preschool association name has been omitted to preserve confidentiality

Item	Responses n (%)					
	N	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
The speech-language pathologist interacts appropriately with the preschool children's families	34	0	1(2.9)	1(2.9)	12 (35.3)	20 (58.8)
The speech-language pathologist collaborates and consults with me when planning and implementing treatment programs	34	0	2 (5.9)	0	13 (38.2)	19 (55.9)
The speech-language pathologist offers services to the preschool children's families	33	0	1(2.9)	3 (8.8)	11 (32.4)	18 (52.9)
The speech-language pathologist provides in-service training which helps me relate to children with communication delays	33	1(2.9)	0	5 (14.7)	18 (52.9)	9 (26.5)
The speech-language pathologist contributes important information to professionals who collaborate with the ** preschool program (e.g., Social Worker, CISS Integration Advisors, Physiotherapists, Occupational Therapists)	33	0	2 (5.9)	3 (8.8)	13 (38.2)	15 (44.1)
The speech-language pathologist has an understanding and is respectful of my professional area of expertise	34	0	0	0	19 (55.9)	15 (44.1)
There is communication between the speech-language pathologist and myself regarding the status of specific children in my preschool	34	0	0	0	11 (32.4)	23 (67.6)
The speech-language pathologist is approachable	33	0	0	0	5 (14.7)	28 (82.4)
I am an equal partner with the speech-language pathologist when discussing a specific child's communication needs	34	0	1(2.9)	1(2.9)	13 (38.2)	19 (55.9)
There is a strong collaborative relationship between the speech-language pathologist and my preschool	34	0	1(2.9)	3 (8.8)	10 (29.4)	20 (58.8)
My concerns regarding the children in my preschool are heard and addressed by the speech-language pathologist	34	0	1(2.9)	0	9 (26.5)	24 (70.6)
The speech-language pathologist is a part of my preschool's team	28	0	2 (5.9)	1(2.9)	12 (35.3)	19 (55.9)

Table 8. ECEs' Perceptions of the Effectiveness of the S-LP's Services (n = 34) Reported in % of Participants
 *Not all participants reported on all items.

Item	Responses n (%)					
	N	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Overall, the services that the speech-language pathologist provides are beneficial for the children in my preschool	34	0	1 (2.9)	0	10 (29.4)	23 (67.6)
The amount of time the speech-language pathologist spends with each child is sufficient to improve the child's communication skills	34	2 (5.9)	5 (14.7)	9 (26.5)	14 (41.2)	4 (11.8)
Evaluations performed by the speech-language pathologist provide me with useful information	33	0	0	1 (2.9)	12 (35.3)	20 (58.8)
I have observed progress in the children who received speech-language services at my preschool	34	0	0	4 (11.8)	16 (47.1)	14 (41.2)
The speech-language pathologist enhances the communication skills of non-targeted children in my preschool	34	0	2 (5.9)	9 (26.5)	12 (35.3)	11 (32.4)
The speech-language pathologist offers appropriate suggestions for managing communication problems in my preschool	34	0	1 (2.9)	2 (5.9)	15 (44.1)	16 (47.1)
The speech-language pathologist is able to meet the scheduling expectations of my preschool and its families/children	34	0	0	1 (2.9)	19 (55.9)	14 (41.2)
The speech-language pathologist attempts to assess children in their first language and involves a cultural interpreter when needed	33	1 (2.9)	3 (8.8)	6 (17.6)	11 (32.4)	12 (35.3)
The speech-language pathologist offers valuable services to the preschool children's families	34	0	1 (2.9)	2 (5.9)	9 (26.5)	22 (64.7)
The speech-language pathologist makes an effort to improve the services that my preschool receives	33	0	3 (8.8)	4 (11.8)	9 (26.5)	17 (50.0)
I am able to receive speech-language services in French when needed (e.g., assessment, communication with parent, etc.)	33	0	1 (2.9)	3 (8.8)	8 (23.5)	21 (61.8)

local hospital) is not very close, difficult for some parents”, “more therapy/treatment provided within the program. More time to spend in classroom so all the children and teachers benefit from improved skills”.

- Four (11.8%) educators stated that the S-LP should have “more communication directly with parents”.
- ECEs also noted the S-LP faced challenges related to parent involvement. For example, “meeting and arrangements are made by the S-LP with the parent... but the parent doesn’t show up...” and “sometimes families are not showing any interest for their children (’s) language delay”.

Discussion

In examining the results, the S-L model will be discussed with respect to ECEs’ perceptions of (1) the description of the model, (2) the collaborative relationship between S-LPs and ECEs, (3) the effectiveness of the service, and (4) the interactions with families.

Description of the Model

It is important to verify how the service model is perceived by its users because it reflects the impressions of the work done by S-LPs. Participants generally perceived the S-L service model as collaborative, consultative, adaptive, and integrated, similar to the type of model the S-LPs strive to offer. Among these four most frequently chosen descriptors, ECEs often selected the “consultative” descriptor (73.5%). Even though this descriptor is not included in the title of the current model, it also reflects an integral aspect of the service since the S-LPs routinely engage in collaborative consultation with the ECEs. The descriptor “adaptive” was selected less frequently than the “collaborative” and “integrated” descriptors used by the S-LPs to name the model. This may suggest work is needed in this area to ensure the model is perceived as adaptive. Participants’ selection of “collaborative and consultative” and “consultative and integrated” as frequently chosen combined descriptors further attests to the model being perceived as it was intended. Results show that ECEs and S-LPs generally view the model as having the same attributes, thereby giving some indication that they both understand the model to be serving the same functions.

Relationship between S-LP and ECEs

A strong working relationship between S-LPs and ECEs is a cornerstone in providing effective service to children. As suggested by Farber and Klein (1999), collaboration between S-LPs and teachers is necessary to meet the language needs of students in the classroom. The current

survey revealed that more than half the participants had a minimum of six years of experience working in these preschools with an S-LP as part of their team. This significant amount of time facilitates rapport building and collaboration with the S-LP.

Sanger et al. (1995) list important aspects of effective collaboration. These include: “establishing good communication and rapport, gaining acceptance, sharing responsibilities, listening to others, and allotting sufficient time for collaborative efforts” (p. 81). Findings from the current study suggest these collaboration factors are present within the adaptive, integrated and collaborative service delivery model. Respondents unanimously agreed that the S-LP was approachable, understanding, and respectful of ECE expertise. They agreed the S-LP showed awareness of challenges working with the low-income population and was open to suggestions for improving the service. This is an important aspect of collaborative relationships as suggested by Tomes and Sanger (1986) who encouraged S-LPs to seek input often from teachers. The same was found with the model under study. With respect to sharing responsibilities, the survey responses on an open-ended question confirmed that the S-LP had appropriate expectations of the ECE role in supporting children with communication delays. Examples of responses included: “She talks with us and asks us if the ideas and goals are realistic in our practice” and “We share a common goal – helping the children.”

ECEs also agreed there was communication about specific children and the children’s individual needs, yet they felt they had limited time for these discussions which often took place during their break time or while supervising children and therefore were usually rushed or interrupted. Allotting sufficient time for collaboration is an ongoing struggle; however, efforts to address this concern are warranted. Strategies to facilitate communication between ECEs and S-LPs were offered in the open-ended survey responses. For example, respondents commented: “time to discuss before children arrive to meet with S-LP, read documents, info or assessments and recommendations”, which highlights the importance of written communication. Another suggestion from a respondent was to “Speak to S-LP at end of the day – They leave info behind as well for us to read.” This would involve having ECEs and preschool directors identify the most appropriate meeting times. The above suggests that integrating S-LP service into the classroom requires more time devoted to coordinated planning (Beck & Dennis, 1997).

Although effective collaboration factors were in place with the current S-L model, there was discrepancy in how ECEs perceived the constituent members of their preschool team. ECEs agreed to a statement that S-LPs were team members; however, they did not often list the S-LP as a team member. This may have been influenced by the difference in a yes/no versus an open-ended question type. “The team” may also have been perceived as referring only to ECEs working in the preschool on a daily basis, which may influence the tenor of the collaborative relationship. An effort to include the S-LP as part of the preschool team may support dedicated time to discussions.

Effectiveness of the Service

As a starting point to evaluating the effectiveness of the service, the study also elicited ECEs perceptions of different aspects of the adaptive, integrated, collaborative model.

Many ECEs reported the S-LP provided service for all children in their preschool who need speech-language services; however, a few ECEs did not share this perception. In reality, some children are not seen by the S-LP due to time constraints and pressure on available resources as a result of the high number of children requiring services. In order to address the ongoing challenge of bridging the gap between need and service provision, the S-LPs provide ECEs with formal and informal education to target children’s communication needs, and make referrals to other community based speech and language services as needed.

As a component of the service delivery model, many respondents agreed that the S-LPs provided in-service training, helping ECEs relate to children with communication delays. Courses such as the Hanen *Learning Language and Loving It*® (LLL) (Weitzman & Greenberg, 2002) and Teacher Talk® (Greenberg & Weitzman, 2005a; Greenberg & Weitzman, 2005b; Greenberg & Weitzman, 2005c) were offered to the ECEs to refine skills in eliciting and stimulating all children’s language in the course of preschool routines. Other studies have shown these courses to have beneficial effects. O’Toole and Kirkpatrick (2007) support in-service training in their study on ECEs participating in the LLL program, showing improved confidence after the program. In addition, a study of an ECE training program that targeted general concepts and milestones of communication, social, cognitive, play and peer interaction development (Warr-Leeper, 2002), confirmed that implementing the ECE training program yielded positive outcomes in overall language skills and social communication.

All respondents perceived the S-L service to be beneficial for children who received assessment and many

indicated they observed progress in children who received S-L services. Although this reflects perceived progress in children, and is not direct evidence of the children’s actual outcomes, it does provide initial support for the effectiveness of the S-L model in supporting communication skills of the children who received the service.

In contrast, many respondents did not perceive the amount of time spent with each child as sufficient to improve communication skills. This is of ongoing concern as the needs of individual children can be significant and require many resources. In addition, a lower than expected percentage of ECEs felt that the S-LP was able to improve communication skills in non-targeted children. This perception is in direct contrast to the findings of Elksnin and Capilouto (1994) who observe that the presence of an S-LP in the classroom was associated with an advantage for non-caseload students since they had more opportunities for language activities. This difference of perception by the ECEs in the current study may reflect that the service is not fully integrated into the classroom since the S-LP is neither team teaching nor providing curriculum. ECE responses may also have been affected by a general perception that direct contact with an S-LP is needed to enhance communication skills. Education aimed at increasing ECE awareness of their role in incorporating language stimulation strategies to effect change in all the preschool children may therefore be useful.

More time in the classroom would permit the S-LP to implement strategies that improve speech and language skills; however, the reality of fiscal constraints on hours of service provision requires ongoing creative solutions. Christensen and Luckett (1990) suggest that S-LPs provide language activities for the teachers to present to students on days the S-LP will not be in the preschool program. Other implemented solutions appear in Table 9 in the conclusion.

All respondents agreed that S-LPs met scheduling expectations of preschools and families. However, when asked on the survey to identify some of the limitations of the S-L services in their preschool, a vast proportion of respondents indicated frequency of visits and hours of service. Some respondents also highlighted lack of regular onsite therapy as a serious limitation of the program.

The present model supports prevention and early identification of delays as the primary focus. As such, assessments have been given priority over therapy in the S-L model. Families are referred to treatment programs offered by the local preschool speech and language initiative. Offering therapy at the preschool for families that

are unable to access other sites is something that warrants continued investigation.

Interactions with families

Feedback from the study also reflected ECEs' perceptions of interactions the S-LPs had with families. The majority of ECEs indicated that the S-LP interacted appropriately with families. Some ECEs indicated they were unsure of or disagreed with the statement that "S-LP offers service to preschool children's families". Furthermore, in response to open-ended questions, some ECEs mentioned the need for more communication directly with parents. Although ECEs are aware that S-LPs and families exchange information during S-L assessment and follow up sessions, they might not be privy to information conveyed in the course of informal meetings with parents regarding their child's progress. Some parents have fewer occasions to learn who the S-LP is and how she can help their child, especially in the case of those children who are bussed into the centre. Therefore, creating opportunities to engage parents more frequently may change ECE perception of this service omission. Collaboration with parents can help engage them in their child's language development.

ECEs noted that a limitation of the S-L service was the challenge for some families to attend appointments with the S-LP at the preschool. Contributing factors may include transportation barriers or lesser degree of concern about their child's language development which may result from a lack of knowledge about typically developing language skills. Based on literature (Phoenix & Smith-Chant, 2014) and experience working with low-income families, trust needs to be established between the parents and the S-LP in order to reach families and to support their access to the S-L

service. Spending more time interacting with parents can encourage their participation and understanding of their child's language development. Involving the whole team in supporting the families to attend appointments (e.g. ECEs giving written and verbal reminders, offering transportation, reinforcing the importance of showing up) is another way to improve effectiveness of service.

Limitations of the Study

Since the survey was designed to elicit perceptions of ECEs in one organization within a city, the capacity to generalize these findings to other locations is limited. Additionally, the sample size is small, therefore interpretation is restricted to this study. Rigorous testing of the survey itself would help establish validity and support that the positive rating ECEs reported on the items did indeed reflect their perceptions of the model.

Conclusion and Next Steps

Overall, the survey revealed positive ratings on the items, suggesting that ECEs were satisfied with the S-L service based on the adaptive, integrated and collaborative model. They identified strengths of the service and indicated areas to improve.

This model was designed to be mindful of the philosophy of providing service in a naturalistic setting and adapting to the needs of low-income families. The current study provides preliminary evidence that the S-L service delivery is an appropriate model through which to serve the needs of ECEs and children. In response to survey results, the participating S-LPs have modified the way that S-L service is delivered, which is presented in Table 9.

Table 9. Identified Service Areas to Improve with Corresponding Modifications

Areas in need of improvement identified by ECEs	Modification to Service
Support ECEs in stimulating language development in all children	Created Language Kits with toys accompanied by suggested ways to interact with children according to language ability. Kits were loaned to each preschool on a rotating basis.
Provide more service to families	In partnership with ECEs, offered planned preschool events for parents: "Meet and Greet" in the Fall and parent workshops on the topics of "Supporting Language and Play Development" and "School Readiness".
Increase communication between the ECE and S-LP	Installed Communication Boards in staff areas, allowing exchange of important information when the ECE or S-LP is not available.

Ongoing evaluation of this service model is needed. Potentially, additional information is available for this purpose through key informant interviews with ECEs. Dialogue could probe their views on the S-L service in their preschool and reveal different feedback than that elicited from the survey format.

So far, perceptions of the S-L model were obtained from ECEs and represent only one constituency using this service. Further investigation of the S-L service model can be realized by conducting a survey among families who have accessed the S-L service in the preschools, allowing for the triangulation of perceptions and to obtain a more complete representation of service user experiences. Furthermore, involving the family in the feedback process will be consistent with the philosophy of the family-centered approach and potentially serve as the next phase of the evaluation endeavour. Ideally, future research studies would also involve outcome measure procedures that revealed what type of change occurred in the children who received the adaptive, integrated, collaborative service delivery model.

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Appendix: Survey

Note: *** indicates the preschool association name has been deleted to preserve confidentiality

An Evaluation of the Speech-language Pathology Services in * Preschools**

You are invited to complete the below survey which will take approximately 25 minutes to complete. Thank you for taking the time to complete this survey.

Background Information**1) What is your role in the preschool? (Check all that apply)**

- Early Childhood Educator
- Director
- Program Assistant
- Supply Early Childhood Educator
- Other _____

2) What is your employment status at the preschool?

- Full time
- Part time
- Casual (Supply)
- Float
- Other _____

3) What is the highest level of education you have achieved?

- Completed high school
- Some College
- Completed College _____ diploma obtained
- Some University
- Completed University _____ diploma obtained
- Other _____

4) What languages do you use when interacting with the children and families that are a part of your preschool?

- English
- French
- Other _____

5) Who is a part of your *** preschool team? Please list the various ROLES (e.g., ECE instructor) of the individuals who are a part of your *** preschool team (DO NOT provide the names of any individuals).

6) How many years have you been employed in a preschool setting?

- 0-5 years
- 6-10 years
- 11-15 years
- More than 15 years

7) How many years have you worked in a preschool that is part of the *** Association for Preschools ?

- 0-5 years
- 6-10 years
- 11-15 years
- More than 15 years

8) On average, how many times per month does a *** speech-language pathologist visit your preschool?

- Less than 1 time
- 1-2 times
- 3-4 times
- 5 times
- Unsure
- Other _____

9) On average, how many times per month do you communicate with your preschool's *** speech-language pathologist?

- Less than 1 time
- 1-5 times
- 6-10 times
- 11-15 times
- More than 16 times

10) Are you aware that the number of days available for speech and language services changes throughout the year?

- Yes
- No
- Unsure

11) Please indicate your level of agreement or disagreement with the following statements. Mark your answer by checking the appropriate box. Please feel free to make additional comments at the end of the survey.

Speech-Language Pathologist as a Professional

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
The speech-language pathologist serves all children in my preschool who are in need of speech-language services					
The speech-language pathologists is generally passionate about her work					
The speech-language pathologist is a good advocate for children with communication difficulties/disorders					
The speech-language pathologist follows the policies and procedures of my preschool					
The speech-language pathologist is aware and sensitive to the challenges involved in working with the *** population					
The speech-language pathologist displays appropriate skills and knowledge to perform her job					
The speech-language pathologist's notes, reports and referrals are done in a timely manner					
The speech-language pathologist respects and maintains confidentiality of information					

The speech-language pathologist is open to suggestions for improving service

12) Please indicate your level of agreement or disagreement with the following statements.

Mark your answer by checking the appropriate box. Please feel free to make additional comments at the end of the survey.

Speech-Language Pathologist as a Team Player

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
The speech-language pathologist interacts appropriately with the preschool children's families					
The speech-language pathologist collaborates and consults with me when planning and implementing treatment programs					
The speech-language pathologist offers services to the preschool children's families					
The speech-language pathologist provides in-service training which helps me relate to children with communication delays					
The speech-language pathologist contributes important information to professionals who collaborate with the *** preschool program (e.g., Social workers, CISS Integration Advisors, Physiotherapists, Occupational Therapists)					
The speech-language pathologist has an understanding and is respectful of my professional area of expertise					
There is communication between the speech-language pathologist and myself regarding the status of specific children in my preschool					
The speech-language pathologist is approachable					

I am an equal partner with the speech-language pathologist when discussing a specific child's communication needs					
There is a strong collaborative relationship between the speech-language pathologist and my preschool					
My concerns regarding the children in my preschool are heard and addressed by the speech-language pathologist					
The speech-language pathologist is a part of my preschool's team					

13) Please indicate your level of agreement or disagreement with the following statements. Mark your answer by checking the appropriate box. Please feel free to make additional comments at the end of the survey.

<i>The Effectiveness of the Speech-Language Pathologist's Services</i>					
	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
Overall, the services that the speech-language pathologist provides are beneficial for the children in my preschool					
The amount of time the speech-language pathologist spends with each child is sufficient to improve the child's communication skills					
Evaluations performed by the speech-language pathologist provide me with useful information					
I have observed progress in the children who received speech-language services at my preschool					
The speech-language pathologist enhances the communication skills of non-targeted children in my preschool					
The speech-language pathologist offers appropriate suggestions for managing communication problems in my preschool					

The speech-language pathologist is able to meet the scheduling expectations of my preschool and its families/children					
The speech-language pathologist attempts to assess children in their first language and involves a cultural interpreter when needed					
The speech-language pathologist offers valuable services to the preschool children’s families					
The speech-language pathologist makes an effort to improve the services that my preschool receives					
I am able to receive speech-language service in French, when needed (e.g., assessment, communication with parent, etc.)					

14) Overall, how would you rate the speech-language services that are a part of the *** preschool program?
 Mark your answer by checking the appropriate box.

Excellent	Good	Adequate	Poor	Unacceptable

15) Do you have enough time in your day to access the speech-language pathology services that are a part of your preschool?

- Yes
- No

Please Explain:

16) Please describe the types of services that the speech-language pathologist provides at your preschool.

17) Are the speech-language pathologist's expectations of my role in supporting children with communication delays (i.e. to define "expectation") appropriate?

- Yes
- No

Please Explain:

18) Do you know how to contact the speech-language pathologist assigned to your preschool?

- Yes
- No

19) What are some of the strengths of the speech-language pathology services that are a part of your preschool?

20) What are some of the limitations of the speech-language pathology services that are a part of your preschool?

21) How can the speech-language pathology services at your preschool be improved?

22) What word(s) best describes the speech-language service model that is a part of your preschool
(Check all that apply)?

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Collaborative | <input type="checkbox"/> Mediated | <input type="checkbox"/> Adaptive |
| <input type="checkbox"/> Consultative | <input type="checkbox"/> Integrated | <input type="checkbox"/> Isolated |
| <input type="checkbox"/> Pull out | <input type="checkbox"/> Individualistic | |

23) Additional Comments:

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