

Full Length Research Paper

Supervision on early intervention practices for teachers of the deaf

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The objective of the present study was to examine the early intervention practices of two teachers working with infants with hearing loss and the supervision provided to these teachers to improve their practices. It was designed as a qualitative case study. Data were collected with intervention session video recordings, evaluation meeting audio recordings, session plans, the reflective journals, teacher evaluation forms and interviews conducted with teachers. The data were analysed with the inductive analysis method. Study findings were presented under four themes; the early intervention process, supervision of this process, teacher views and the views of the supervisor on the supervision process and improvements observed in teacher skills. It was found that teachers shared similar intervention goals, however their implementation and management of the process were different. The supervisor provided corrective and confirmatory feedback to the teachers. It was determined that the positive relationship formed between the teachers and the supervisor was considered important by both parties.

Key words: Teachers of the deaf, early intervention, teacher supervision, qualitative research.

INTRODUCTION

Children with hearing loss experience difficulties in developing language skills when compared with their peers with typical development (Barker et al., 2009; Niparko et al., 2010). Delays in language development could lead to a variety of challenges in other developmental domains (Antia et al., 2009; Dammeyer, 2010). Therefore, early intervention is highly recommended for children with hearing loss to prevent significant problems in language and academic skills during their school years and adulthood (Joint Committee on Infant Hearing (JCIH), 2007).

It was stressed that early intervention for infants and toddlers with hearing loss should include parents as the

most important agents for supporting their young children's language development and professionals who work with parents should focus on promoting their abilities to provide a language-rich environment within everyday routines and activities for their children (JCIH, 2007; Moeller et al., 2013; Yoshinaga-Itano, 2014).

Teachers of the deaf play an important and specialized role in providing early education services to families of the infants and toddlers with hearing loss (Martin-Prudent et al., 2016). Nevertheless, several professionals, who were initially trained to work with deaf and hard of hearing children, do not receive professional training that would prepare them to meet the needs of the parents in

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supporting their young children's language development (Munoz et al., 2011; Robbins and Caraway, 2010). Teaching parents is different than teaching in classroom. When working with a parent, the teacher should provide information on how to use the methods needed to support the development of their child and enable them to practice the skills that they acquire. (Brown and Nott, 2005; Martin-Prudent et al., 2016; Nelson and Meehan, 2016).

Opportunities to practice under the supervision of an experienced teacher would make an important contribution to professional development of teachers and help to improve the quality of the provided services (Bergmark and Westman, 2016; De Rijdt et al., 2016; McIntyre and Hobson, 2016). During supervision, the supervisor is expected to support the development of pre-service teachers for a predefined period of time, particularly about the content knowledge and instructional methods (McIntyre and Hobson, 2016). In other words, throughout this process, the supervisor supports the teachers in their efforts to acquire in-depth knowledge about the topics that they would teach and to learn how to teach (De Rijdt et al., 2016). In the field of teacher training, different authors emphasize the importance of teaching practice, sharing experiences and receiving feedback from more experienced educators (Hooton-Kurtoglu, 2016; Menaa et al., 2016).

Considering the need to train teachers of the deaf who intend to work in early intervention, examining the supervision process may improve the knowledge in this specific field. It may also provide information about the content of education sessions which was reported to be complex and with vague definitions (Martin-Prudent et al., 2016). Thus, the present study aimed to examine the early intervention practices of two teachers working with parents of infants with hearing loss and the supervision provided to these teachers to improve their practices.

METHODS

The present study was conducted with a qualitative case study design. Case studies enable researchers to explore individuals, organizations, simple or complex interventions, relationships, communities or programs in depth (Creswell, 2005; Yin, 2009).

Participants

Two teachers of the deaf working towards their masters' degrees in early intervention and a supervisor of these teachers were the participants of the study. Their initials were used instead of full names for the anonymity of the participants.

Teacher A

Teacher A was a teacher of the deaf with 12 years of experience and was employed as a preschool classroom teacher for children with hearing loss. For the last six years, she has been working with the parents of 3-5 years old children in addition to her work as a classroom teacher.

Teacher E

After graduating from a program for teachers of the deaf five years ago, teacher E worked with families at a private rehabilitation centre for two years, and then enrolled in a master's program. Both teachers took courses on the theoretical foundations of early intervention during their undergraduate and graduate education, including basics in audiology.

The supervisor

The supervisor was the academic advisor for both teachers. She has been working with parents as an audiologist for a long period of time at a university research centre, and runs the early intervention program and teaches undergraduate and graduate courses on education of the children with hearing loss.

The research setting

The study was conducted at a school and research centre for children with hearing loss located at a university. The centre adopted a natural auditory-oral approach. It has an early intervention program as well as providing pre-school and primary school education to children with hearing loss.

Data collection and analysis of the data

The data were collected with early intervention session video recordings conducted by the teachers, audio recordings of sessions conducted to evaluate the video recordings, researcher reflective journals, session plans for early intervention, audio recordings of the interviews conducted with teachers and transcriptions of these records. The collected data were analysed with the inductive method. Inductive analysis is the most useful method when the objective is to discover relationships between the raw data collected for a study (Creswell, 2005; Thomas, 2006). The research findings emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies. Therefore, the transcriptions of the data of this research were coded and themes were established considering the scope of the research, while a breakdown of the data collected for the study are presented Table 1. Teacher evaluation forms were used to evaluate teachers' practices. It was developed by the author for the present study based on the main goals of the early intervention

Validity and reliability

To establish the validity and reliability of the data, a second academician, who was working in the field of hearing loss and had expertise in qualitative research methods, critically examined the video recordings and transcripts on a regular basis during and after data collection, and confirmed its validity and reliability. Teacher evaluation forms for the first and last teacher sessions were used to record teachers' improvement. The content validity of the evaluation form was controlled and confirmed by two other teachers of the deaf. It is presented in Appendix A,

RESULTS

70 codes and 4 main themes and 6f subthemes were emerged by analysis of the data. The themes and

Table 1. Data collected for the study.

Data	Teacher A	Teacher E
Early intervention plans	10 sessions	8 sessions
Video recordings	10 h	8 h
Session evaluation meetings (by the supervisor and the teacher)	11 h	9 h
Reflective teacher journals	15 pages	20 pages
Reflective supervisor journals	10 pages	10 pages
Recordings of the interviews with teachers A and E.	10 min	15 min

Table 2. Main themes and subthemes.

Main theme	Subtheme
Early intervention practice	Development of intervention plans and material
	Sharing the information with the mother
	Session evaluation
Supervision of the intervention	Recommendations on the content and the structure of sessions
Recommendations on interactions with the mother and the child	-
Teacher and the supervisor views	Views on the content and form of the recommendations.
	Views on the relationship established between the supervisor and the teachers.

subthemes are presented in Table 2.

Early intervention practice

Development of intervention plans and material

Prior to each session, teachers planned three games suitable for the age group of the child and set session goals. The games selected included activities that helped to observe the interaction between the child and the mother and the development of the child. Session goals were established in the context of these games for the mother and the child. The goals aimed to develop the linguistic, listening, cognitive and communication skills of the child, improve the interaction between the mother and child through these interactions, teach parents how to use strategies to provide rich linguistic input for the child. However, certain differences were observed between the teachers' session plans based on the skills of the child and the mother.

For the mother, Teacher A set session goals that would improve her skills in management of child behaviour, using age appropriate materials for interaction, playing by monitoring the child's interests, making games more fun, providing age appropriate language input, engaging the child in conversation, expecting the child to use the words and sound imitations that are included in her vocabulary. For the child, she set session goals that would improve her age appropriate behaviour, increase her attention span, allow her to follow simple rules in games,

understand simple phrases only through audition, use adequate words and sound imitations. On the other hand, Teacher E set session goals that would improve mother's interactive behaviour with her child. She worked with mother in providing interactive opportunities for the child, to wait for the child to respond, to monitor the child's interests, to take turns during the games, not to intervene physically in the child's play, to use more elaborate language input, to use less commands, and to draw child's attention to the sounds. For the child, she set session goals that would improve his listening skills and production of sound imitations, to improve his age appropriate behaviour and play.

Information sharing between the mother and teacher

In the beginning of each session, the mothers informed the teachers about the activities they conducted at home with the child, experiences and interests of the child at home, and the development of the child's linguistic and listening skills.

In each session, the teachers also shared their observations on the child's progress. They made recommendations to improve the play and interaction skills of the mother. To provide information to the mothers, teachers employed a number of strategies:

- i. Observing the interaction between the mother and the child and making recommendations based on their observations

- ii. Interacting with the child themselves and acting as a role model for the mother
- iii. Making explanations and providing direct information.

Both teachers observed the way mothers interacted with their children as they played with the child. When the mother experienced difficulties, they played with the child themselves, acted as a role model for the mother using different strategies to improve listening and linguistic skills, and explained these strategies.

Session evaluation

Following the intervention sessions, the teachers wrote evaluation reports and developed the plan for the next session. Evaluation reports included information on the reaction of the child to sounds (based on information received from the mother and observations made during the session), linguistic development of the child (based on information received from the mother and observations made during the session), participation of the child in the games, new ideas introduced and contributions made by the child about the play, responsiveness of the mother to the child, the mother's ability to improve the language and playing skills of the child and to develop and maintain shared interests, behavioural management of the child, and the needs of the mother.

The supervision process

A review of the audio recordings of the evaluation meetings, intervention plans and the teachers' reflective journals demonstrated that the supervisor's recommendations to the teachers could be grouped under two themes: Recommendations on the content and structure of intervention, and recommendations on the interactions between the mother and the child.

Recommendations on the content and structure of sessions

Recommendations under this theme were as follows: using age-appropriate material for the child and the material that could be easily obtained by the parents, establishing session goals, and organizing the structure of intervention.

The teachers did not experience much difficulty in preparing age-appropriate materials for the children; on the other hand, they did experience occasional problems with setting goals that were adequate for the children's level of development and organizing the flow of sessions.

For example, Teacher A experienced the most difficulty in organizing the part of the session where the mother and the child played. Although recommendations were made during the first four sessions on this issue, video recordings demonstrated that the teacher did not provide sufficient opportunities for the mother. Therefore, the

supervisor and the teacher watched the same section of the intervention session using teacher E's videos, and the supervisor made further explanations. Following this, A experienced no further problem in observing the play between the mother and the child during intervention sessions and providing feedback to the mother. Teacher E, on the other hand, experienced the most difficulty with play-related issues such as which materials to use, playing games adequate for the child's level, creating game variations, and making the games more fun. The supervisor explained the types of games and how to play them at the child's level and provided examples for how to play these games.

Recommendations on the interactions with the mother and the child

Recommendations on the interaction between the teachers and the mother and the child throughout the intervention process focused on the atmosphere the teachers created and the communications during the sessions. The supervisor answered teachers' questions on the subject and pointed out the positive aspects of their interactions.

Records of the evaluation meetings demonstrated that in these meetings, teachers evaluated their own performances, discussed their shortcomings with the supervisor and asked for clarification to better understand the issues. The supervisor listened to teachers' self-evaluations and indicated their strengths as well as weaknesses. Suggestions provided for the teachers varied based on their needs. E mostly received recommendations on interaction during the games, whereas A received support on the need to provide the mother and the child more interaction opportunities and ensure the active participation of the mother in the sessions.

Participants views on the supervision process

Based on the collected data, the teacher and the supervisor views on the supervision process were grouped under two themes: The content and form of the recommendations and the relationship established between the supervisor and the teachers.

The content and form of the recommendations provided throughout the supervision process

Both teachers described the process as difficult but fun. They stated that the method that benefited them the most was the use of tangible examples from their actual work to clarify and explain the issues. Teacher E explained this as follows: "you said no such technique existed, and then explained what I could do instead. You gave examples".

As Teacher A stated, “watching and discussing what I did was really very helpful”. Teacher A also said that watching a section in Teacher E’s video was very effective in helping her to change the behaviour that she previously struggled to change: “I used to intervene too much with the mother. You explained what I should do instead several times, but I could not help myself; then we watched a part of E’s session and it really helped. I realized how it was done.”

Furthermore, the teachers stated that holding the evaluation meetings immediately after the intervention sessions was beneficial since it made it easier for them to develop the next session and, because their memories were still fresh, it was easier to internalize the recommendations. Both teachers stated that they grasped the importance of the active involvement of the mothers in the educational process over the course of these sessions. Teacher A emphasized that this was the greatest benefit of working with a supervisor: “I mean, we read articles and such on family centred education, but it is something else to be guided by a real person and this is mentoring, and I guess it was just what I needed.” The supervisor’s journal entries and records on the evaluation meetings demonstrated that the supervisor evaluated the teachers’ performance based on the natural auditory-oral approach with a family-centred philosophy and recommendations were made accordingly. The supervisor made sure to point out shortcomings and areas of improvement for the teachers and based her recommendations on the characteristics of the child and the mother. For example, the supervisor said the following to A: “The child has moderate hearing loss, she can hear many sounds. Therefore, the mother speaks in an easy and natural way, and provides the child several opportunities, but her play skills are problematic. She does not play, she always tries to teach, and naturally, the child is bored” (Evaluation meeting with A on the 4th intervention session).

The supervisor also noted that the teachers had different professional developmental needs and emphasized this point during evaluations: “A is more experienced with children; therefore, she is more comfortable when starting a game with the child. However, her expectations are too high for an 18-month old. She needs to go easier on the mother.” (Journal entry) “E seems to get along very well with the mother, but she is having difficulties in dealing with the child. It is not easy to control a child at this age, though. We should talk about characteristics of 2-year old children in the next meeting” (journal entry).

The relationship between the supervisor and the teachers

Another area of emphasis for the teachers was the relationship they had with the supervisor. Both teachers

stated that developing a positive relationship with the supervisor made it easier for them to accept criticism and improve their practices. Teacher E stated the following: “Another thing is that I have confidence in you; for example, when preparing the transcripts, I also noticed stuff. I said this was wrong, I should have done something else, and so on, but I did not get nervous before the evaluation meetings and I did not feel bad”. Teacher A stated the following: “I never said this was it, I cannot do this. Otherwise, I would have given up long ago, but after the evaluations, I left with a feeling that I am doing good, but I can do better. Your kindness was also very important as you were not harsh on me.”

The supervisor was pleased with the improvement that both teachers showed over the course of the sessions: “Both E and A are making rapid progress and they do everything I say. It is a pleasure to work with them” (Journal entry). Furthermore, the supervisor thought the teachers were eager to learn, and good teachers: “Both are great teachers, they prepare very well and are very organized. They know when they make mistakes and are not offended by criticism. This makes my job easy, there were no hard feelings” (Journal entry).

Improvement observed in teachers’ practices

The author and another teacher of the deaf, experienced in early intervention, evaluated the first and last sessions of the teachers separately. Teacher A scored 49 and teacher E scored 50 points out of 88. They both received the top score (88) for the last session. Interrater score was .89 for the first sessions and .100 for the last sessions. The detailed examination of the form demonstrated that teacher E had the lowest scores on the areas of preparation of appropriate play materials and interaction with the child, on the other hand, teacher A had the lowest scores on providing interaction opportunities to mother and supporting her skills, consistent with the video evaluations.

DISCUSSION

The present study findings provided evidence that teachers of the deaf may benefit from the training that focuses on working with infants and toddlers with hearing loss. The results also demonstrated that parental involvement in the intervention to children with hearing loss was versatile in nature and incorporated a broad range of behaviour and practices (Thomas and Marvin, 2016). Both parents and children’s needs should be considered while developing session plans (Dunst, 2002; Nelson-Lartz and Meehan, 2016).

The intervention session content was examined in the present study based on the theoretical foundations of the educational approach adopted by the institution where the study was conducted. This approach aimed to

normalize the communication behaviour that might deteriorate in a family after the diagnosis of hearing loss and to provide natural language input for the child to support his/her language acquisition (Clark, 2007). In this perspective, the content knowledge provided for the teachers aimed to enforce and improve teachers' theoretical knowledge base on the language development, the effects of parent-child interaction on development and to ensure proper implementation of this knowledge in practice (Kaiser and Hancock, 2003).

Educational recommendations provided by teachers for the parents were based on the needs of the mother and the child that they were working with. Intervention plans demonstrated that both teachers aimed to support the mothers' interaction with their children, and helped improve the children's linguistic, listening and cognitive skills; however, the methods utilized by the teachers in this process were different. Like mothers, teachers needed to develop different skills as educators, and the supervision process focused on these needs. Teacher A experienced difficulties in changing her interaction style with the child and the mother, while Teacher E needed further support in providing feedback to the mother and playing with the child. The supervisor and the teachers identified needs together and shared their thoughts on issues. In addition to the feedback provided by the supervisor, the teachers were also provided self-criticism on their work and engaged in reflective thinking, which arguably contributed to their endeavour to affect the desired change in their behaviour. Reflecting upon and discussing one's own work helps better understand one's own practices (De Rijdt et al., 2016; Mena et al., 2016; and makes transformative learning possible (Mezirow, 2000).

Instructions provided during the supervision process were problem oriented, focused on applied knowledge and based on the experiences of the teachers specified. Both teachers, who participated in the study, had varying levels of teaching experience, and undergraduate degrees from programs that adopted the same theoretical approach used in the intervention practice. Thus, the recommendations they received on the intervention content helped them transfer their existing knowledge to the field of early intervention. In this perspective, it can be argued that the teachers created new meanings by re-interpreting their previous experiences (Mezirow, 2000). In the conducted interviews, both teachers emphasized that focusing on their own practices, receiving recommendations on their practices, and reflecting on their practices, contributed to their professional development. This finding was consistent with the argument that adult learning takes place not through fictional activities, but when associated with real life situations (Lave and Wenger, 1991; Marsick and Watkins, 1990) and with Knowles' (1984) principle that during learning, adults draw upon their life experiences.

The supervisor provided two types of feedback;

confirmatory and corrective. Confirmatory feedback is positive feedback that confirms and supports a teacher's quality, instruction skills, behaviour, or a decision made by the teacher during the session. Corrective feedback, on the other hand, calls attention to and discusses areas of improvement, and provides explanations (Hooton-Kurtoglu, 2016). Both corrective and confirmatory feedback contribute to the development of teachers in two different manners. Confirmatory feedback improves teachers' feelings of confidence and competence, whereas corrective feedback improves their knowledge in the subject area; however, for an effective corrective feedback, the feedback needs to be specific, detailed and informative (Hooton-Kurtoglu, 2016; Lindahl and Beecher, 2016). At each meeting, the present study's supervisor pointed out techniques where the teachers needed to improve further; however, also provided confirmatory feedback on issues such as mastered techniques, relationships formed with the parents, intervention plans, and play skills. Corrective feedback was accompanied by several examples. This attitude does not only result in better learning but also in a more positive relationship between the supervisor and the teacher (Ginkela et al., 2016).

On the other hand, the findings of the current study underlined the importance of the relationship with the supervisor in professional development of the teachers. Besides representing a privileged setting for monitoring the teachers' development, for reflection on their practices, or the devise of a more consolidated and integrated knowledge of the hows and whys of the teaching, the supervising relationship emerged as an important source of support. Previous studies drew attention to the relationship dimension of the learning-teaching process (Cranton, 2011; Mezirow, 2000). The social interaction that accompanies learning is very important for the nature of learning. Bordin (1983) argued that individual change is related to two factors. The first factor is the bond between the person who aims to change and the person that mediates this change, and the second factor is whether this bond includes an agreement on goals and duties. Emotional bonds between the advisor and the advisee, such as liking, protection and trust, are considered as important mediators of change and development. Advisees, who described their relationship with their advisors as positive and supportive, reported experiencing higher levels of positive change. These results were consistent with the findings of more recent studies (Hardy, 2016; Geller and Foley, 2009; McIntyre and Hobson, 2016).

Conclusions and recommendations

The overall findings of the present study indicated that teachers of the deaf need support in different areas when working with parents and their young children, and this difference is due to the characteristics of both teachers

and parents. It is important to take these needs into consideration when providing supervision. Reflective thinking of the teachers and focusing on the real-life situations were found as important sources of learning as well as positive relationship established between the supervisor and the teachers.

More studies using qualitative methodologies might be recommended for better understanding the content of early intervention programs. Qualitative research designs aim to answer the why and how questions, and the knowledge they generate is different in nature and more in-depth when compared to the knowledge generated by quantitative studies (Creswell, 2005; Yin, 2009). These studies can also help update and transform our knowledge on teacher training by providing insights into the requirements for training practitioners.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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Table A1. Teacher evaluation form.

Teacher's behavior	Always (4)	Frequently (3)	Sometimes (2)	Never (1)
Prepares session plans appropriate to the child and family				
Asks questions to the parents considering the child's language development				
Asks questions to the parents considering the child's listening skills and hearing aid use				
Asks questions to the parents considering the daily routines				
Uses age appropriate games and toys				
Uses educational material appropriate to the family (easy to obtain, not expensive, can be used at home etc.)				
Establishes play routines				
Draws attention to the sound during play				
Recognizes and uses spontaneous language learning opportunities (names the objects and actions the child involves)				
Follow child's attention to enhance language learning				
Regulates the pace of the session according to the child				
Models language supportive interaction for the parent				
Provides time and space for the parent during play				
Observes parent-child interaction				
Provides suggestions considering parent-child interaction				
Provides appropriate answers to the parent's questions				
Provides support for appropriate solutions to the problems which parent faced				
Provides information on the child's progress				
Encourages the parent's skills using positive remarks				
Provides guidance to support the parent's skills				
Summarizes the session at the end				
Establishes a positive relationship with the parent				
Total score				