

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The successful handling of the infant/child with of hearing loss of middle ear pathology calls for a high level of interdisciplinary functioning and the cooperation of specialists (Wachtel & Compart, 1996). This assessment team, after making assessments and preliminary diagnosis independently and from their own perspectives, should make a joint diagnosis and decide on the best intervention method in order to increase the infants/child's quality of life. This study aimed to explore the knowledge and attitudes of pediatricians regarding the intervention of infants and children with a sensorineural hearing loss. In this chapter the study will be evaluated in terms of its strengths and limitations. In order to evaluate the value of the results, the results will be summarized together with the clinical and theoretical implications. To conclude the study, recommendations for future research will be given.

5.2 EVALUATION OF THE RESEARCH METHODOLOGY

The strengths and limitations of the study must be taken into account if a follow-up or comparative study should be performed. Therefore an evaluation of the research methodology is done in order to provide insight regarding the value of the study.

5.2.1 Strengths of the study

- Results of the study can be considered as valid and reliable on account of the guidelines discussed in Chapter 3.
- The data gathering procedures were effective considering that the questionnaire was limited to the amount of questions, yet relevant questions were asked. The results were therefore complete and this enhances the reliability of the study.

- Since there is limited literature regarding the knowledge and attitudes of pediatricians of the intervention of infants and children with a sensorineural hearing loss, the results of this study can be used as a starting point for similar studies.
- Another strength of this study is that it highlighted the areas of uncertainty of pediatricians regarding the intervention of an infant/child with sensorineural hearing loss. If these areas of uncertainty can be eliminated through continuous education, effective identification and referrals of infants and children with a hearing loss can be obtained.
- This study might lead to the awareness of the importance of continuous education and teamwork. The role of the audiologist is not only to assess hearing and to fit hearing aids, but also for supporting pediatricians as part of a team of professionals in the habilitation of the infant/child with a hearing loss.
- The respondents were also made aware of their own areas of uncertainty regarding their referrals of infants and children with sensorineural hearing loss to professionals. This might create a need to participate in hearing programmes in order to stay up to date with the latest developments in the audiology field.

5.2.2 Limitations of the study

- Firstly, the geographical area of this study was limited to the Gauteng Province. The respondents who participated were thus limited and generalization of the results could not be made.
- Another limitation was the type of questions used in the questionnaire. The majority of the questions were closed-set questions. This question type is time saving and is easily analysed, but the reason for this being a limitation is that the questions are limited, and may not always include all the alternative answers (Leedy & Ormrod, 2001). Consequently the respondents were able to guess the most logical answer.

- The length of the questionnaire has been limited to 18 questions, because of the respondent's busy schedules. A longer questionnaire might have had a lower return rate, but could have provided the researcher with a more comprehensive image regarding the respondent's attitudes and knowledge.
- The size of the pilot study was too small and did not take the whole test population into account.
- The goal of the study is to find the areas where pediatricians lack some knowledge or are in need for continuous in-service education. Therefore the researcher wanted to focus on all pediatricians representing Gauteng (rural and urban areas). Unfortunately no responses were obtained from pediatricians in the rural district. This is a problem since it may be that these pediatricians are not able to be involved with relevant programmes as often as those pediatricians practicing in the city.

5.3 SUMMARY AND CONCLUSIVE DISCUSSION OF FINDINGS OF THE STUDY

The following conclusive results are given according to the results of the study:

- Continuous education, regardless of experience, is to transfer and gain technical knowledge, related skills, values and attitudes in order to develop proficiency and abilities to improve capabilities as a medical member (Masterson et al., 1999). Therefore all pediatricians, those who just started practicing as well as for those who have been in practice for a longer period should be on an equal level regarding their skills and knowledge.
- All pediatricians, regardless of area of practice, need sufficient knowledge regarding infants and children with sensorineural hearing loss.

- The respondents appear to have sufficient knowledge regarding most of the risk factors that might lead to sensorineural hearing loss, despite limited or no formal education surrounding this topic.

Uncertainty of lesser-known risk factors that may cause a sensorineural hearing loss, such as blood type incompatibility between the mother and child, childhood diseases, diseases of the mother and otitis media, may interfere with the early diagnosis and intervention of an infants/child's life. Limited knowledge has negative implications for the effective identification and referrals of infants and children with sensorineural hearing loss. It is therefore important to emphasize the need for continuous educational programmes for all professionals involved the intervention of these infants and children.

- The majority of the respondents related to the importance of early identification. These results might have a positive outcome regarding early identification, appropriate referrals, amplification and intervention of infants.
- The respondents appear to have a broad knowledge of tests available for testing the hearing of the pediatric population, as well as to when to request for a specific test. If hearing tests can only become a routine part of an initial examination as well, earlier referrals can be made, problems can be diagnosed earlier, eliminated or treated.
- For adequate intervention to take place all disciplines must be aware of the devices available for intervention of hearing-impaired infants and children. It is also necessary for them to know of the outcomes of available devices, in order to educate and motivate families. The respondents view both the hearing aid and the cochlear implant as effective. As technology develops, so must education, in order to keep pace with changes as the specially designed adaptive technology will increase and change (Davila, 1994).
- Overall the respondents showed good interdisciplinary skills when it came to the referral of patients and their interaction during teamwork, although some

respondents never consult with hearing programmes or clinics. Co-operation and mutual confidence between these programmes and the involved team members is important in order to improve service delivery to patients and their families.

- The respondents indicated a strong need for more information regarding the early identification and intervention of infants and children with a sensorineural hearing loss. They stipulated that they would like the information to be summarized in the form of a pamphlet. The researcher can make the conclusion that even though the respondents appear to have sufficient knowledge surrounding most of the aspects covered in the questionnaire, there are a few aspects where they show limited knowledge. It is for these 'gray' areas that extra and new information will be provided to them through a pamphlet.

5.3.1 Theoretical and clinical implications of the results

In the following paragraphs the implications of the study's results will be discussed.

By means of the literature study it became evident that education surrounding the identification and intervention of infants and children with sensorineural hearing loss is insufficient. Throughout the study the complexity surrounding a sensorineural hearing loss is emphasized. Sufficient knowledge is therefore of critical importance for all pediatricians if they want to ensure the best intervention methods for these children that suffer from a hearing loss.

An expert on the identification, prevention and intervention of infants and children with sensorineural hearing loss the audiologist is the preferred person to provide information. It is therefore the role of the audiologist to enhance cooperation, knowledge of professionals as well as to provide them with the necessary information regarding the diagnosis and intervention of infants and children with sensorineural hearing loss. The respondents can therefore enhance their knowledge by becoming active members of hearing programmes and to work in coordination with audiologists.

In order to ensure pediatricians' involvement in the early diagnosis and intervention of the hearing-impaired population, Hearing Programmes are needed. These programmes must address the pediatrician's needs and questions surrounding all

aspects of sensorineural hearing loss. The keyword is thus empowerment of all pediatricians as a member of the early intervention team of the hearing-impaired. More research must be conducted in order to make the programmes more curriculum-based and to ensure the programme will be effective in the South African context. This can be done by establishing personal contact with Pediatric Departments of Universities and to involve them in the development of a more effective curriculum-based programme that will enhance the pediatrician's knowledge surrounding sensorineural hearing loss.

It is evident from the results that there is a great need for more information surrounding the diagnosis and intervention of a sensorineural hearing loss. This has positive implications for the elaboration of the pediatrician's knowledge on sensorineural hearing loss. Compiling a pamphlet that will include all the relevant information regarding the topic, sensorineural hearing loss will be sent to all the respondents. Another goal is to publish the results of the study in pediatric magazines. Through this a bigger population can be reached.

Effective hearing-impaired intervention relies on teamwork where all disciplines' roles are integrated. Therefore all clinical and theoretical implications as discussed above may lead to a more positive relationship between members of the team and will help with the expansion of knowledge on the field surrounding sensorineural hearing loss.

5.4 RECOMMENDATIONS FOR FUTURE RESEARCH

The researcher is of the opinion that the study proved to be beneficial and valuable since the respondents showed a strong need for further information and knowledge on the intervention of infants and children with sensorineural hearing loss. The study is relevant since there is a growing tendency for earlier identification of infants and children with hearing loss. National research regarding the knowledge and attitudes of pediatricians on infants and children with sensorineural hearing loss is necessary in order to draw conclusions and differences between first and third world countries.

In order for this goal to realize the ‘gate keepers’ of infants and children, the pediatricians, need to be alert for indications of a hearing loss. The goal of this study was therefore mainly to identify areas of uncertainty, whereas audiologists can provide information to pediatricians to be part of a team. The findings of this study will hopefully motivate more in-depth research studies in the future. Research and more literature surrounding this specific topic, namely pediatric sensorineural hearing loss, can help to minimize the ‘gray’ areas, can lead to the development of a new and complete curriculum at medical school and may help the fast developing field of pediatric audiology.

Effective diagnosis and intervention of infants and children with sensorineural hearing loss is dependent on the integration of all the relevant disciplines’ skills and coordination of services (Guralnick, 1997). This study emphasizes the importance of teamwork and the need for audiologists and pediatricians to exchange their skills and knowledge in order to provide the best possible intervention for this population.

5.5 CONCLUDING REMARKS

The aim of early identification and early intervention is clear: one needs to accommodate disabled infants and children as soon as possible within the mainstream of education (for example a school).

As stated throughout the study, pediatric audiology is a fast developing field and the technology surrounding this field will become more sophisticated and continuously improving. Therefore it is important to note that new research opportunities will arise as technology develops. Only if all team members have thorough knowledge and necessary skills surrounding their roles, will the children with a hearing loss reach their maximum potential. The aim thus is continuous education for all professionals in the team. The future of infants and children with a sensorineural hearing loss appears to be increasing in effectiveness with the help of all relevant team members of Hearing Programmes.

The pediatrician is an important team member of the hearing intervention team. Their involvement is crucial and their referral can be the important stepping-stone for early

identification and intervention. This research emphasized the importance of a pediatrician as part of a team of professionals who interact, to ensure the early diagnosis and intervention of a young child with a sensorineural hearing loss.

The study can be concluded as Charles Gore once said: “*it is not expected of us to do extraordinary things, but to do ordinary things extraordinary well.*”