This review of the literature on hearing children of deaf parents (HCDPs) notes increasing interest in this subject, including such aspects as language development, life experiences of HCDPs, parental self-concepts, and counseling techniques. Themes in the literature are identified, including the following: (1) the frustrations of HCDPs as interpreters; (2) the positive self-concept of the HCDP, especially as a family member; and (3) questionable relations of HCDPs with deaf parents. Contradictory findings are noted concerning the effect of American Sign Language (ASL) on acquisition of spoken English, with two main schools of thought: those who believe ASL has no impact on language development of the bilingual HCDP and those who believe ASL has a negative impact on spoken language development. Contains 21 references. (DB)
Understanding and Assisting Hearing Children of Deaf Parents: A Review of the Literature

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Abstract

In reviewing the literature of hearing children of deaf parents (HCDPs) it is obvious the limited the number of studies conducted in this area. The recent interest in this area yield subjects discussing: language development, aspects of life experiences of HCDPs, parental self-concept, and counseling techniques. Trends emerge through this review, including the frustrations of HCDPs as interpreters, positive self-concept of the HCDP, especially as a family member, as well as questionable relations with deaf parents. Contradictory findings are included about the effect of ASL on acquisition of spoken English with 2 main schools of thought: those who believe ASL has no impact on language development of the bilingual HCDP and those believing ASL has a negative impact on spoken language development. In conclusion, more research is suggested to answer these contradictions.
Introduction

Hearing children of deaf parents (HCDPs) represent a unique bilingual population because, unlike those fluent in two spoken languages, they are fluent in two fundamentally different languages, sign and spoken language, which are rooted in different sensory modalities. Their situation is not at all uncommon, considering 90% of deaf people choose deaf spouses and 90% of their children are hearing (Mallory, Zingle, and Schein; 1993). In reviewing the literature of hearing children of deaf parents (HCDP) four main topics repeatedly emerge, which will be discussed: 1. HCDP's language development, 2. HCDPs' experience in comparison to normal children, 3. the self concept of the deaf parents, and 4. counseling techniques for the deaf-parented families.

Language Development

The topic of language development in regard to HCDPs is the most widely researched area of the limited published literature based on this population. Schiff and Ventry (1976) examined the existence of communication problems among 52 HCDPs.
Their sample size of 52 is impressive yet their method in choosing the sample is biased. They call for deaf parents to bring their children for a free evaluation, perhaps attracting families suspecting communication difficulties. Assessment of oral linguistic abilities took place at a common testing location to the researchers of HCDPs, the Teachers College Speech and Hearing Center. The results of both formal and informal testing measures showed that 21% of the subjects had speech and language problems related to parental deafness, including such difficulties as stress and intonational speech patterns resembling deaf speech.

Schiff and Ventry were unable to prove a correlation among parental intelligibility and speech and language problems of their hearing children. In fact, the studies of Mayberry (1976), Jones & Quigley (1979), and Schiff-Myers (1982) all arrived at the same conclusion that HCDPs' oral language development is not affected if both manual and oral language is used in the home. All three studies were based on small sample case studies. Mayberry's sample of eight subjects was the largest of the three and she used a variety of testing measures, including one articulation test and four tests of oral-language development. The five subjects in Schiff-Myers' study were referred by the Teachers College's evaluation program and were evaluated for 1/2 hour intervals over a six month period, using Blooms' (1970)
method for eliciting communication. Jones and Quigley conducted a naturalistic longitudinal study of two HCDPs over a two year period. Both were pretested with a Speech Reception Threshold test. Unlike Mayberry and Schiff-Myers, an evaluation of the parents' communication methods was conducted by them. It is clear that the conclusions reached from the small samples and from these types of studies must be considered for further study before generalizing to larger groups.

A longitudinal case study was conducted by Prinz and Prinz (1979) of a young hearing child with a deaf mother, who used ASL when communicating with the subject, and a hearing father, over the course of 14 months. Their clearly stated hypotheses are based on the possible interference of simultaneous acquisition of sign language and spoken English. As in Schiff-Myers' study, the subject was video taped at home in the popular free play sessions. The observations began at the onset of the subject's first sign and up to the point when she was combining words and signs. The quantitative evidence reveals that although the child developed oral language normally, acquisition of signs occurred earlier than spoken words when communicating. The researchers theorize that the child learned the manual language first because it is an easier modality to learn. Their study is referred to quite often by colleagues.
Guttentag and Schaefer (1987) focused their study on information encoding for short term serial recall of HCDPs, predicting and proving that HCDPs, fluent in ASL, encode list items phonologically as typical hearing people do, even when recall was required in ASL. Although the five young subjects claimed greater proficiency in ASL then in spoken English, on average they did not know the signs for 10% of the items. Thus findings found would not generalize to subjects with truly equivalent or superior proficiency in ASL.

Johnson, Watkins, and Rice (1992) in the most recent article on language development, conducted a multifactorial longitudinal case study of a young HCDP over the course of three years. As in Jones and Quigley's study, a complete history of the subject's communication with parents and hearing individuals was incorporated. Conclusions reveal the subject's spoken English to be affected by the negative influence of ASL in the following areas: question formations (the strongest influence), in linguistic concepts undifferentiated in sign and differentiated in English (ie. omission of articles in sign), the mismatch between free or bound morphemes to mark verb tenses as well as with plurals, and in word order patterns.

As in the study of Johnson et al, Folven and Bonvillian (1991) conducted a complex multifactorial longitudinal study with all complex terms described in clear operational definitions.
Their focus was based on the onset of referential language (the use of vocabulary items to name new instances of objects or items). Their findings showed that HCDPs first produced recognizable signs several months earlier than children usually begin to speak. However, the subjects were on average with the use of signs to categorize or name new items. The children produced two-sign combinations somewhat earlier then children producing two-word combinations. One explanation for the earlier onset of signing is that the centers in the brain responsible for motor control develop more rapidly than do areas associated with speech control (Bonvillian, Orlansky, & Novack, 1983).

Overall, these studies leave unanswered questions of HCDPs' language development, regarding the prevalence of communication problems, affect on acquisition of spoken English in respect to parental mode of communication, and whether acquiring sign language is in fact advantageous.

The Hearing Child of the Deaf

In a completely original cross-sectional descriptive study based on intergenerational modes of communication among deaf-parented families, Mallory, Zingle, and Schein (1993) researched 15 families, selected after consultation with four leaders of a deaf community in a Canadian city. Conclusive evidence shows deaf parents communicating with each other using ASL and switching modes of communication to an English-based mode when
conversing with their hearing parents and hearing offspring. Different modes of communication were used with the eldest child, thus the younger children were less likely called upon to mediate since their signing skills were not as advanced as the eldest child's.

In a multifactorial study employed to investigate the power structure of the deaf-parented families (Rienzi, 1990), eight deaf parents and their eldest offspring and eight control family triads were videotaped in their homes planning a meal together. Evidence concluded that the HCDPs had more influence than the children of the control group as depicted in the number of ideas accepted, even though the two groups did not differ quantitatively in number of ideas proposed, questions asked or assertiveness in expressing disagreement.

The oldest HCDP of 16 caucasian families and a control group of 16 students from hearing-parented families were selected from midsize cities to partake in Buchino's (1993) study, regarding perceptions of their parents. The quantitative and qualitative data revealed similar responses in feelings toward parents, communication with parents, and role reversal. Yet HCDPs felt they were always involved in situations as interpreters, feeling negative about interpreting mainly because it impeded on their social lives. Charlson's (1990) study yielded the same results in respect to frustration of HCDPs as mediators. Thirty-seven
caucasian adolescent HCDPs, identified primarily through a religious organization from various areas across the US and 32 adolescence in the control group were given the Tennessee Self Concept Test and a Social Cognition Interview. No significant difference was found between the two groups in self-concept or in social cognition, although non-mediators scored lower with self-concept in relation to their feelings as family members. This study is limited due to the disproportionate number of HCDPs with highly educated deaf parents.

Chan and Lui (1990) conducted an original survey of Chinese HCDPs to investigate self-concept. With the assistance of three welfare organizations, 70 HCDPs, 84 deaf parents, and a proportionate control group were included. A trained interviewer administered the questionnaire in Hong Kong Chinese. No significant difference was found among the two groups, except the HCDPs viewed themselves to be more physically attractive and scored lower on relationship with parents.

A survey of adult children of deaf parents was conducted by Pecora, Despain, and Loveland (1986). A 3-sectioned questionnaire was distributed to 68 HCDPs, 36 were returned, all completed by caucasians. No severe difficulties seemed to manifest among this population in areas of self-esteem, life contentment, or relationships to parents. There did however, appear to be a strain with HCDPs and their deaf mothers. The
majority of respondents mentioned the role of interpreting as difficult due to insufficient signing skills for interpreting in many situations (with doctors, lawyers, and salespeople). This study is limited due to the predominance of subjects coming from the Mormon Church.

Although the HCDPs in Chan and Lui's study had high self-concept, their deaf parents did not. They scored significantly lower than the hearing parents. This is the next area of discussion.

Perceptions of the Deaf Parent

Goldenberg, Rabinowitz, and Kravetz (1979) tested the correlation between level of communication and self-concept by calculating the Pearson r coefficient between level of communication and the scores on the Tennessee Self-Concept Scale. The 24 participating families were selected from the Helen Keller Institute in Tel-Aviv. The results show a positive correlation between level of communication and the child's positive feelings toward the mother and a negative correlation between level of communication and negative feelings toward the father, signifying that the higher the level of communication with the father, the fewer the negative feelings. The study was limited due to exclusion of control for birth order, sex, and education of parents.
The Parental Strengths and Needs Inventory was evaluated for content validity, using 15 deaf-parented families selected in the same way Mallory, Schein, and Zingle (1992) selected subjects in their study published in 1993. The results conclude that these deaf parents have a positive view of their child-rearing performance. This study was based on Jones, Storm, and Daniels' (1989) study which yielded the same results but had design limitations similar to those mentioned above in the study of Goldenberg et al. In several of these studies, counseling for the deaf-parented family is suggested in order to deal with the commonplace constraints, such as poor communication.

Counseling the Deaf Parented Families

Buchino's (1990) second contribution to the literature based on HCDPs is an article which offers the advice to therapists to help HCDPs recognize the similarities they have with hearing-parented families and to help them feel comfortable with the differences. Harvey (1982) stresses the need for utilization of an interpreter in family therapy even when the counselor is fluent in manual communication. He suggests it is not prudent to interpret for all family members while simultaneously providing treatment. Sloman, Perry, and Frankenburg (1987) incorporate a case study in their article which illustrates the complexities of factors that lead to communication problems in deaf-membered families. They suggested poor signing skills to be attributable
to the interaction between biological, psychological, familial and social factors, stressing that therapists must be able to understand the pragmatics of communication in the family and the factors that impede open and successful communication. They also warn the therapist to maintain a professional standpoint, not to get drawn into the family system so they do not lose objectivity. Only Buchino's article discussed the particular challenges of the deaf-parented family, while the others were based on counseling for deaf-membered families.

**Conclusion**

It is a great feat what these 20 research teams have accomplished in the last 25 years since the onset of investigations regarding HCDPs. All articles were published in highly specialized publications with the exception of one article from ERIC. Some significant trends have been observed such as the frustration of HCDPs in their role as interpreters, the need for counseling with the use of interpreters, and self-concept of HCDPs. The question of ASL as hindering spoken English needs to be researched further as does the advantageous aspects of acquisition of ASL. Future research should be based on a more representational sample size.
References


