The present study aims to determine whether rearing a deaf or hard-of-hearing (d/hh) child would differentiate the parenting and disciplinary preference of parents between the d/hh and the hearing child. The parenting styles of 30 hearing mothers from Cyprus were assessed using the Greek version of the Parenting Styles & Dimensions Questionnaire. Additionally, mothers rated sibling interactions using the sibling inventory of behavior. The results indicated that the dominant parenting style for both the hearing and the d/hh children among the participating mothers was the authoritative type and the least prevalent parental types were the permissive and the strict. Moreover, mothers’ perceptions of sibling relationship were found to be a significant factor in predicting mothers’ reported parenting styles in this sample. The contribution of the present findings to our knowledge of the parenting characteristics and practices of families who have a d/hh child along with their possible implications for child and family services are discussed.

Parenting styles encompass two important elements of parenting: parental responsiveness and parental “demandingness” (Baumrind, 1991; Maccoby & Martin, 1983). Parental responsiveness refers to “the extent to which parents intentionally foster individuality, self-regulation and self-assertion by being supportive, and acquiescent to children’s needs and demands” (Baumrind, 1991, p. 62). Parental “demandingness” refers to “the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts, and willingness to confront the child who disobeys” (Baumrind, 1991, pp. 61–62).

A typology of parenting styles is created on the basis of whether parents are high or low on parental demandingness and responsiveness. Baumrind (1971, 1989) identified three distinctive parenting styles: “authoritative, authoritarian, and permissive.” The authoritative parent is demanding and highly responsive. This type of parent is warm and supportive, providing their children with affection and support in their exploration and pursuit of interests. This parent has high maturity demands (e.g., expectations for achievement) of their children but fosters these maturity demands through bidirectional communication, explanations of their behavior, and encouragement of independence (Maccoby & Martin, 1983; Spera, 2005). The authoritarian parent is highly demanding, not responsive and intolerant of inappropriate behavior. He/she expects obedience and
asserts power when their children misbehave. The authoritarian parent expresses their maturity demands through clearly stated rules and orders and does not communicate to their children the rationale behind these rules (Baumrind, 1971, 1989, 1991). Permissive parents can be responsive but not demanding. Thus, the permissive parent is moderate in his/her responsiveness toward their children’s needs but excessively lax in his/her expectations for their children’s level of maturity and their tolerance of misbehavior. The permissive parent does not require mature behavior, allows considerable self-regulation, and avoids confrontation. Permissive parents are usually dismissive and unconcerned (Baumrind, 1971, 1991; Spera, 2005).

In Greece, parenting styles were studied by Maridaki-Kassotaki (2009) and Antonopoulou and Tsitsas (in press). Respondents were 1,572 fathers and an equal number of mothers from 13 different regions of Greece. Based on their characteristics, Greek parents were categorized into four types: the “authoritative,” the “authoritarian,” the “permissive,” and the “strict” parent. This latter parental type brings together features from the authoritarian and the authoritative parents, although not identical to any of the two. A strict parent is the parent who sets boundaries to cope with problems in child behavior and helps the child to improve using punishment. This type of parent is demanding, moderately responsive, does not negotiate his/her discipline measures and emphasizes the importance and the nonflexible nature of family rules (Maridaki-Kassotaki, 2009).

Psychological control is a third dimension that characterizes parenting styles. According to Barber (1996), psychological control is “a rather insidious type of control that potentially inhibits or intrudes upon psychological development through manipulation and exploitation of the parent-child bond (e.g., love-withdrawal and guilt induction), negative, affect-laden expressions and criticisms (e.g., disappointment and shame), and excessive personal control (e.g., possessiveness, protectiveness)” (p. 3297). Authoritative parents tend to manage children’s behavior using low psychological control with minimal use of threats, unreasonable criticism, or negative verbal and nonverbal expressions whereas authoritarian parents are high in psychological control (Darling, 1999) through excessive use of negative disciplinary techniques as described by Barber (1996).

Darling and Steinberg (1993) suggested the distinction between parenting styles and parenting practices. They proposed that “parenting style is best conceptualized as a context that moderates the influence of specific parenting practices on the child” (p. 487). Parenting style differs from parenting practices in that it describes parent–child interactions across a variety of situations, whereas practices are by definition domain specific. In contrast to parenting practices, a parenting style is independent of the content of the parenting behavior. Darling and Steinberg (1993) have argued that common parenting practices may have different effects in children as a result of different parenting styles. Controlling, for example, sibling relationships in a family with a deaf or hard-of-hearing (d/hh) child may be successful for parents with a general authoritative style and unsuccessful for parents with a different parenting style. Parenting styles, therefore, are defined as the emotional climate in which parents raise their children and include the broad dimensions of warmth, coerciveness, and communicativeness (Maccoby & Martin, 1983). Parenting practices refer to behaviors rather than beliefs or attitudes, in which parents engage in with the purpose of attaining particular socialization goals. Examples of parenting practices are parental monitoring of school and after school activities, parental involvement in daily routines, parental disciplinary strategies (physical punishment, love withdrawal), parent–child discussions, affectionate interactions, use of threats, criticism, or provision of rewards. The relationship between styles and practices is complex, in part because parenting practices are one way in which parents express their parenting styles, goals, and values (Fletcher, Walls, Cook, Madison, & Bridges, 2008).

There is empirical evidence on specific parenting behaviors that promote positive adjustment in children and have a positive effect on child cognitive ability, academic achievement, emotional stability, and psychosocial health (Epstein & Sanders, 2002; Fletcher et al., 2008). Authoritative parenting style is often related to positive scholastic, social, emotional, and cognitive developmental outcomes in children and adolescents. In contrast, authoritarian and permissive parenting styles are usually linked with poor child outcomes. Children
and adolescents from authoritarian families not only tend to perform moderately well in school and to be uninvolved in problem behavior but also have poorer social skills, lower self-esteem, and higher levels of depression. Moreover, children and adolescents from permissive homes are more likely to be involved in problem behavior and perform less well in school, but they have lower levels of depression (Baumrind, 1989; Chao, 2001; Park & Bauer, 2002; Querido, Warner, & Eyberg, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

In the current literature, there is a consistency of evidence suggesting that authoritative upbringing is associated with positive outcomes in children at different ages. Similarly to authoritative parents who appear to be able to balance their conformity demands, with their respect to their children’s individuality, children from authoritative homes also balance the claims of external conformity with their need for autonomy (Darling, 1999). In terms of parenting styles, the research indicates that authoritative parenting style is associated with higher levels of student achievement. Several studies, however, have concluded that these findings are not consistent across ethnicity, culture, and socioeconomic status (Spera, 2005). The contextual model of parenting proposed by Darling and Steinberg (1993) suggests that parenting style is the context (i.e., emotional climate) in which parental socialization goals and parental practices are emphasized and exhibited respectively.

**Deaf Children, Parenting, and Family Life**

The presence of a d/hh child in a family may affect all areas of family life (Luterman, 1987). The stresses and challenges of raising a child with hearing loss is mostly associated with the diagnosis of the hearing loss, learning new communication methods, making appropriate educational decisions, as well as increasing visits to various professionals. Parents may find themselves being overprotective, unsure of appropriate upbringing methods, and constantly explaining their child’s unique needs to other family members and friends (Calderon & Greenberg, 1999).

The presence of a d/hh child may affect family life in terms of family interaction, family resources, parenting style, and access to support for the child (Koester & Meadow-Orlans, 1990; Lampropoulou & Konstantareas, 1998; Wood-Jackson & Turnbull, 2004). Parents very often say that they find it difficult, frustrating, and demanding to communicate effectively and interact with their d/hh child in the family (Freeman, Dieterich, & Rak, 2002). According to Meadow-Orlans, Mertens, and Sass-Lehrer (2003) factors that determine the impact of deafness on family communication include ethnicity, severity of hearing loss, social support, parents’ hearing profile (deaf parents tend to be more successful in their interaction with d/hh children), parent exposure to the deaf community, or parental knowledge and familiarity in using sign language and visual communication (Calderon, Bargones, & Sidman, 1998; Hadjikakou & Nikolaraizi, 2008).

The domain of family resources includes aspects such as the family’s access to information, social networks, and health care. Calderon and Greenberg (1999) reported the results of a study with 36 hearing mothers of d/hh children on a variety of life stress and adjustment tests. Findings suggested that social support was an important predictor of maternal adjustment irrespective of the degree of maternal stress. Morton (2000) underlined the role of the members of the extended family for the successful development of the d/hh child. She has described relationships between grandparents and hearing parents of d/hh children and concluded that the majority of parents had received continuous support from their grandparents at the time of diagnosis and later on. Relationships with extended family members may be influenced by issues related to deafness, learning different modes of communication, limited knowledge of deaf issues, and increased time demands (Wood-Jackson & Turnbull, 2004).

Parenting a d/hh child is a complex activity; when parents raise a hearing child, they may rely on learned parenting skills from their own experience or their peers’ experience, but when they raise a deaf child, they often do not have a model to follow. Faced with their new roles as mother of father of a d/hh child, they may feel uncertain about their parenting skills, about their knowledge of how d/hh children learn best and how to cope with problems encountered in everyday life. They may also have difficulty in finding information needed for decision making, as well as how
to find sufficient time to fulfill household tasks and to meet the needs of the rest of the family members (Bodner-Johnson, 2001; Calderon et al., 1998; Park & Bauer, 2002; Zaidman-Zait, 2007).

Calderon and colleagues (1998) point out that families with d/hh children often experience difficulties in developing effective parental child-rearing approaches due to various reasons, such as restricted knowledge in the ways d/hh children communicate, minimal support, anxiety, and increased time demands as regards support and intervention. Additionally, parental child-rearing practice in families with d/hh children and hearing siblings is affected by the parental expectations and aspirations regarding their children’s abilities and future life (Goring, 2001).

It has been suggested that communication difficulties play a significant role in the upbringing approaches used for children with disabilities in the family (Hadjikakou & Nikolaraizi, 2008; Knutson, Johnson, & Sullivan, 2004; Verdugo, Bermejo, & Fuerters, 1995). The communicative difficulties between the d/hh child and the hearing parents may drive parents to adopt strict or punitive measures of child discipline (Sullivan, Brookhouser, Scanlan, Knutson & Schulte, 1991). Research has found that hearing parents of d/hh children are more likely to report the use of punitive measures and physical discipline methods with the d/hh child than with the hearing sibling (Knutson et al., 2004; Sullivan & Knutson, 2000). Moreover, hearing parents of d/hh children tend to provide insufficient explanations for their decisions in the family and do not express their feelings about their relationships with their d/hh children, due to communication barriers (Gregory, 1995; Hadjikakou & Nikolaraizi, 2008).

In reviewing the literature with respect to family quality of life, it becomes apparent that the impact of deafness on the family and the individual can vary greatly. There are practical and emotional issues that families will need to resolve before they can function as effectively, or even better, than before the birth of the d/hh child. However, family members may develop greater resiliency and enhanced communication skills, becoming more empathic, flexible, and accommodating. Parents and siblings may become strong advocates or adopt humanitarian beliefs (Atkins, 1987; Wood-Jackson & Turnbull, 2004).

### Sibling Relationships of Hearing and Deaf Children

A growing body of research has provided empirical evidence on the association between parenting discipline behaviors and siblings’ relationship in the family. Parents who appear to be unable to set equitable rules in the family toward the d/hh and hearing child may also provoke complaints, negative feelings, and disruptive behavior in the family (Atkins, 1987; Bat-Chava & Martin, 2002; Fillery, 2000).

Parents’ behavior and emotions toward the d/hh child may have an considerable impact on the hearing siblings’ attitudes and behavior toward their d/hh child. Previous empirical evidence has shown a significant correlation between parental lack of anxiety related to deafness and positive relationship between d/hh and their hearing siblings (Bat-Chava & Martin, 2002; Fillery, 2000; Hadjikakou, Nicolaou, Antonopoulou, & Stampilztzis, 2010). Additionally, other studies have shown that when d/hh children are characterized by their parents as more competent than the hearing sibling, the relationships between the siblings tends to be more negative, than in families where parents do not make such comparisons (Atkins, 1987; Bat-Chava & Martin, 2002; Fillery, 2000). Finally, parents’ failure to apply equitable rules in the family toward the d/hh and hearing child may give rise to grievances on the part of hearing siblings about unfairness in the family (Atkins, 1987). Goring (2001) suggests that a child’s temperament may influence both parenting styles and sibling perceptions of the presence of a child who is d/hh in the family. Similarly, Fillery (2000) points out that the attitude and personality of each sibling is a decisive factor in their relationship.

Existing studies suggest a number of key factors affecting sibling relationship. These are birth order, family size, parents’ anxiety about deafness, and negative comparisons by parents of hearing and d/hh siblings. However, the findings of studies are equivocal. Although it is unclear what accounts for the different findings, the context of family functioning and family variables seem to be moderating factors (Mandleco, Olsen, Dyches, & Marshall, 2003).

Studies examining the parenting styles of mothers who have a d/hh child and at least one hearing child
are scarce. Most studies looking at parenting in families with d/hh children compare hearing mothers of d/hh children with hearing mothers of hearing children. A number of studies involving hearing mothers of d/hh children have yielded that mothers tend to initiate more verbal and nonverbal interaction with their d/hh children and to control attention in communication as compared with hearing mothers with hearing children (Gregory, 1976; Henggeler, Watson, & Cooper, 1984; Power, Wood, Wood, & MacDougall, 1990).

The present study aims to explore the parenting style typology within families that have one d/hh child and at least one hearing sibling. In view of the lack of any such research in Cyprus, the study seeks to answer the following research questions: (a) What is the dominant parenting style employed by mothers of d/hh and hearing children in Cyprus? (b) How much similarity is there between the maternal parenting styles used in the interaction with the d/hh child and the hearing sibling in the family? (c) Is there a link between maternal parenting style and maternal perceptions of the quality of sibling interaction in the family? and (d) Which components of mother parenting style differ in the upbringing of the d/hh child and the hearing sibling?

Methods

Participants

Thirty hearing mothers of d/hh and hearing children from Cyprus participated in this study. An a priori determination of the sample structure was chosen for the purposes of this study (Oppenheim, 1997; Stewart & Shamdasani, 1990). Thus, a sample of mothers satisfying a certain set of criteria (mothers who had one d/hh child, no other children with disabilities, and a hearing child aged between 11 and 18 years attending a primary or secondary school) was selected by the researchers. These criteria have been developed by the researchers “independently of the concrete material analyzed, and before its collection and analysis was defined for this study” (Flick, 1998, p. 63). In order to trace and select the sample, we contacted the Pancyprian Association of Children with Hearing Loss, and we asked them to inform their members who met our set of criteria about this study, as well as to assure them about the confidentiality of the study. Thirty mothers accepted to participate voluntarily in this study. The demographic characteristics of the participants are presented in Table 1.

Twenty (66.7%) of the participating mothers had 2–3 children, whereas 10 of them (33.3%) had more than 4 children. Regarding their ages, 18 participating mothers (60%) were over 40 years old, 1 (3.3%) was under 30 years old, 3 mothers (10%) were aged between 31 and 35 years old, and the remaining 8 mothers (26.7%) were between 36 and 40 years old. Seven (23.3%) of the mothers were primary education graduates, 19 (63.3%) of them graduated from a secondary school, and 4 (13.3%) were university graduates. Twenty-nine (96.7%) of them were married, and one (3.3%) was divorced.

Nineteen of the hearing children were girls, and 11 were boys; their ages ranged from 11 to 18 years ($M = 14.63, SD = 2.20$). Regarding their birth

| Table 1 Demographic characteristics of the participants |
|-----------------------------------------------|---|---|
| Demographic variables                      | $n$ | % |
| Number of children in the family           |     |   |
| 2                                            | 9  | 30|
| 3                                            | 11 | 36.7|
| 4                                            | 7  | 23.3|
| 5                                            | 3  | 10 |
| Mother’s age                                |     |   |
| <30 years old                               | 1  | 3.3|
| 31–35 years old                             | 3  | 10 |
| 36–40 years old                             | 8  | 26.7|
| >40 years old                               | 18 | 60 |
| Mother’s education                          |     |   |
| Primary school                              | 7  | 23.3|
| Secondary school                            | 19 | 63.3|
| University                                  | 4  | 13.4|
| Mother’s marital status                     |     |   |
| Married                                     | 29 | 96.7|
| Divorced                                    | 1  | 3.3|
| Hearing sibling’s gender                    |     |   |
| Boy                                         | 11 | 36.7|
| Girl                                        | 19 | 63.3|
| Hearing sibling’s birth order               |     |   |
| First born                                  | 11 | 36.7|
| Second born                                 | 15 | 50 |
| Twins                                       | 4  | 13.3|
| D/hh child’s gender                         |     |   |
| Boy                                         | 14 | 46.7|
| Girl                                        | 16 | 53.3|
| D/hh child’s severity of hearing loss       |     |   |
| Severe hearing loss                         | 5  | 16.7|
| Moderate hearing loss                       | 8  | 26.6|

Note. D/hh, deaf or hard of hearing.
order, 11 (36.7%) were first born, 15 (50%) were second born, and 4 (13.3%) were of the same age as their d/hh siblings (twins). The d/hh children did not have any other disabilities. Fourteen were boys and sixteen were girls. Seventeen children were deaf (\(M = 98.76\) dB HL, \(SD = 3.68\)), 5 had severe hearing losses (\(M = 72.20\) dB HL, \(SD = 1.64\)), and 8 had moderate hearing losses (\(M = 47.25\) dB HL, \(SD = 6.13\)). All children communicated orally with their siblings and parents. The mean age difference between the d/hh siblings and their hearing siblings was 3.37 years of age (\(SD = 2.51\)). No further information is provided here about the d/hh children for reasons of confidentiality.

Instrumentation

Mothers’ parental typology was measured by the Greek version of Parenting Styles and Dimensions Questionnaire (PSDQ, Antonopoulou & Tsitsas, in press; Maridaki-Kassotaki, 2009; Robinson, Mandleco, Olsen & Hart, 2001). PSDQ is a self-report questionnaire that assesses parental typology according to the parenting styles model proposed by Baumrind (1989). It explores parent–child relationship, communication, and rearing methods and reveals four dominant parental types: (a) the “authoritative” parent, (b) the “authoritarian” parent, (c) the “permissive” parent, and (d) the “strict” parent. It consists of 29 items that are measured on a 4-point Likert-type scale (1 = never, 2 = sometimes, 3 = often, 4 = always). Based on the relative distribution of proposals, 13 items assess the authoritative mother, 7 items assess the authoritarian mother, 5 items assess the permissive mother, and 4 items assess the strict mother (Table 1A). Cronbach’s alphas for the authoritative, authoritarian, strict, and permissive style of the Greek PSDQ are .88, .83, .68 and .65, respectively (Antonopoulou & Tsitsas, in press). Each of the four aforementioned parenting style scales includes subscales tapering at distinct dimensions of each parenting style. The authoritative scale includes subscales for “Warmth and Support” (five items), “Reasoning/Induction” (4 items), and “Democratic Participation” (four items). The authoritarian scale yields subscales for “Physical Coercion” (two items), “Verbal Hostility” (one item), and “Non-reasoning/Punitive Strategies” (four items). The permissive scale yields subscales for “Indulgence” (three items) and “Ignoring Misbehavior” (three items). Finally, all four items of the strict scale comprise the “Reasoning/Verbal Aggression” dimension. The internal consistency reliability coefficients, Cronbach’s alpha, for this sample ranged between .63 and .88. These rates are quite high and confirm the credibility of the adjustment of the questionnaire in the Greek population.

Additionally, mothers were asked to rate sibling interactions using the sibling inventory of behavior (SIB, Schaeffer & Edgerton, 1981) adapted and translated to Greek by Kouvava and colleagues (2008). This particular inventory has been extensively used by a number of researchers (Hetherington & Clingempeel, 1992; Volling, McElwain & Miller, 2002). According to Volling and Blandon’s (2003) review of studies using the SIB in samples of parents, adolescents, and children, the scales of the SIB appear to be psychometrically sound. The reliability of these scales is robust with respect to Cronbach’s alpha estimates.

In responding to the SIB, mothers were asked, if they had more than one hearing child who met the criteria for this study, to choose one of the hearing children and evaluate his/her relationships with the d/hh child. More specific, on this 24-item scale, mothers had to rate (1 = never to 5 = always) the frequency with which their hearing child directs specific positive and negative behaviors toward the d/hh brother or sister. The questionnaire includes four subscales, which reflect mothers’ perceptions with regard to the degree of hearing siblings’ “acceptance” of disability, feelings of “hostility, support” of the d/hh brother or sister, and “embarrassment” due to the disability in the family (Table 1B). A total score for each scale was calculated as the mean rating across items on the scale. Cronbach’s alphas for the four subscales in this study ranged from .75 (hostility) to .92 (support).

Procedure

Home visits were scheduled with mothers during which one of the researchers explained mothers the purpose of the study and gave them instructions about the completion of the questionnaires. Each mother filled in the two questionnaires and if desired extra clarifications were given by the researcher, for example, regarding the wording of the questions, etc. Thus,
during home visits, separate ratings of the mothers’ perceptions about (a) the parenting approaches used with the d/hh child, (b) the parenting approaches used with the hearing brother or sister, and (c) siblings’ behavioral and emotional adjustment during their interaction was collected. Because mothers had to respond to the PSDQ twice, one for the d/hh child and one for the hearing sibling on two separate visits, the researcher visited each family two times; each visit lasted approximately 45 min. Confidentiality procedures were strictly followed.

Results

Table 2 presents mean scores and standard deviations of mother responses to the PSDQ with regard to the upbringing approaches and parenting behaviors used with the d/hh child and the hearing child. It is apparent that the dominant parenting style among the participants is the authoritative. Authoritative mothers tend not to differentiate between the d/hh child and the hearing child in terms of perceived parenting attitudes and behaviors. Statistically significant differences were revealed for the two other types of parenting style (authoritarian and strict, \( p < .01 \)). Mothers, who describe themselves either authoritarian or strict, tend to be more authoritarian or strict respectively with the hearing siblings than with the d/hh child.

Table 3 reports mothers’ ratings on the four aspects of sibling interactions—acceptance, hostility, support, and embarrassment as assessed by the SIB. Mean scores more than 3 (in the 5-point scale of SIB) reveal positive interactions and behaviors. Thus, mothers tend to believe that hearing siblings display positive behavior toward their d/hh siblings: they are neither embarrassed by the presence of their d/hh siblings nor hostile toward them; they accept and support them.

Table 4 refers to dimensions of parenting behaviors toward the d/hh child and the hearing sibling. Authoritative mothers tend to be more responsive to the d/hh child’s feelings and needs as compared with the hearing sibling, whereas they tend to encourage more the hearing child to understand the consequences of their own actions and behaviors than the d/hh child. These differences were significant at the .05 level. It is also apparent, that when it comes to authoritarian or strict parenting practices, the hearing child is the recipient of more maternal verbal and physical hostility than the d/hh sibling (\( p < .05 \)).

In order to identify links between mothers’ perceptions of their children’s relationships and mothers’ parenting practices with the d/hh child and the hearing sibling, Spearman correlations (\( \rho \)) were run (Table 5). Positive correlations were detected between mothers’ perceptions of positive sibling relationship (that their children’s relationship is governed by feelings of acceptance) and mothers’ authoritative parenting attitude to the d/hh child (\( \rho = .466, p < .01 \)) and the hearing sibling (\( \rho = .445, p < .05 \)). A positive correlation was also found between mothers’ beliefs that the hearing child supports the d/hh sibling in the family and

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Hearing sibling (( n = 30 ))</th>
<th>D/hh child (( n = 30 ))</th>
<th>( t )-test</th>
<th>( p ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Authoritative mother</td>
<td>4.208</td>
<td>0.47</td>
<td>4.255</td>
<td>0.49</td>
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<tr>
<td>Authoritarian mother</td>
<td>1.779</td>
<td>0.505</td>
<td>1.587</td>
<td>0.45</td>
</tr>
<tr>
<td>Permissive mother</td>
<td>2.626</td>
<td>0.68</td>
<td>2.540</td>
<td>0.62</td>
</tr>
<tr>
<td>Strict mother</td>
<td>3.773</td>
<td>0.82</td>
<td>3.513</td>
<td>0.77</td>
</tr>
</tbody>
</table>

*Note. Mean scores for the authoritarian and the strict mother are significantly higher for the hearing sibling as compared to the d/hh child.

D/hh, deaf or hard of hearing.

*Mean difference is significant at the .01 level (\( p < .01 \)).

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Mean score</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance</td>
<td>3.77</td>
<td>0.72</td>
<td>2.12</td>
<td>5.00</td>
</tr>
<tr>
<td>Hostility</td>
<td>2.55</td>
<td>0.66</td>
<td>1.29</td>
<td>5.00</td>
</tr>
<tr>
<td>Support</td>
<td>3.53</td>
<td>0.97</td>
<td>1.43</td>
<td>5.00</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>1.55</td>
<td>0.97</td>
<td>1.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

*Note. Scores range from 0 to 5, with higher mean scores representing more positive responses.*
mothers’ authoritative parenting attitude to the hearing sibling (rho = −.386, p < .05). Negative correlations were found between mothers’ perceptions of supportive sibling relationships and mothers’ authoritative parenting attitude to the d/hh child (rho = −.429, p < .05) and the hearing sibling (rho = −.361, p < .05).

In an attempt to assess whether mothers’ perceptions of sibling relationship in the family may be good predictors of mother parenting, binary regression analysis was conducted on presence versus absence of authoritative, authoritarian, strict, or permissive parenting style as the outcome measures, with the explanatory variables mothers’ beliefs on the extent to which siblings in the family “accept” and “support” each other or develop negative behaviors such as “hostility” and “feelings of embarrassment.”

Two significant effects emerged on mothers’ authoritative parenting employed with the hearing sibling for (a) mothers’ beliefs about supportive sibling relationship (beta = .411, exp(b) = 3.505, p = .024) accounting for 13.9% of the predicted change in variance and (b) mothers’ beliefs that siblings accept each other (beta = .461, exp(b) = 3.138, p = .01) accounting for 18.4% of the predicted change in variance. Similarly, a significant

<table>
<thead>
<tr>
<th>Authoritative parenting style</th>
<th>Hearing sibling (n = 30)</th>
<th>D/hh child (n = 30)</th>
<th>t-test</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsive to child’s feelings or needs (connection dimension—warmth and support)</td>
<td>4.21 0.94</td>
<td>4.48 0.829</td>
<td>−2.117</td>
<td>.043*</td>
</tr>
<tr>
<td>Helps child to understand the impact of behavior by encouraging child to talk about the consequences of his/her own actions (regulation dimension—reasoning/induction)</td>
<td>4.60 0.621</td>
<td>4.33 0.758</td>
<td>2.504</td>
<td>.018*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authoritarian parenting style</th>
<th>Hearing sibling (n = 30)</th>
<th>D/hh child (n = 30)</th>
<th>t-test</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explodes in anger toward the child (verbal hostility dimension)</td>
<td>1.83 0.747</td>
<td>1.50 0.731</td>
<td>2.276</td>
<td>.030*</td>
</tr>
<tr>
<td>Grabs child when being disobedient (physical coercion dimension)</td>
<td>1.57 0.935</td>
<td>1.23 0.504</td>
<td>2.605</td>
<td>.048*</td>
</tr>
<tr>
<td>Slaps child when the child misbehaves (physical coercion dimension)</td>
<td>1.47 0.629</td>
<td>1.23 0.504</td>
<td>2.041</td>
<td>.05*</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Strict parenting style</th>
<th>Hearing sibling (n = 30)</th>
<th>D/hh child (n = 30)</th>
<th>t-test</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanks when child is disobedient (reasoning/verbal hostility dimension)</td>
<td>3.40 1.221</td>
<td>2.97 1.129</td>
<td>2.213</td>
<td>.035*</td>
</tr>
</tbody>
</table>

Note: Scores range from 0 to 4, with higher mean scores representing more positive responses. D/hh, deaf or hard of hearing.

*Mean difference is significant at the .05 level (p < .05).

Table 5 Correlations between mothers’ perceptions of their children’s relationships and mothers’ parenting practices with the d/hh child and the hearing sibling

<table>
<thead>
<tr>
<th>Acceptance</th>
<th>Hostility</th>
<th>Support</th>
<th>Embarrassment</th>
</tr>
</thead>
<tbody>
<tr>
<td>D/hh child</td>
<td>Authoritative mother</td>
<td>0.466**</td>
<td>−0.320</td>
</tr>
<tr>
<td>Authoritarian mother</td>
<td>−0.386*</td>
<td>0.412*</td>
<td>−0.429*</td>
</tr>
<tr>
<td>Permissive mother</td>
<td>0.088</td>
<td>0.073</td>
<td>−0.032</td>
</tr>
<tr>
<td>Strict mother</td>
<td>0.096</td>
<td>0.175</td>
<td>−0.053</td>
</tr>
<tr>
<td>Hearing sibling</td>
<td>Authoritative mother</td>
<td>0.445*</td>
<td>−0.118</td>
</tr>
<tr>
<td>Authoritarian mother</td>
<td>−0.283</td>
<td>0.312</td>
<td>−0.361*</td>
</tr>
<tr>
<td>Permissive mother</td>
<td>0.106</td>
<td>−0.130</td>
<td>−0.001</td>
</tr>
<tr>
<td>Strict mother</td>
<td>0.155</td>
<td>0.068</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Note: D/hh, deaf or hard of hearing.

*p < .05, **p < .01.
effect was found on mothers’ authoritative parenting employed with the d/hh sibling for mothers’ beliefs about supportive sibling relationship (beta = .458, \( \exp(b) = 3.146, p = .011 \)) accounting for 18.2% of the predicted change in variance. A final significant effect was identified in mothers’ authoritarian parenting employed with the d/hh sibling for mothers’ beliefs about hostility in siblings’ relationship (beta = .399, \( \exp(b) = .911, p = .029 \)) accounting for 12.9% of the predicted change in variance.

The results have shown that mother perceptions of a positive relationship between the d/hh sibling was a highly significant factor in predicting authoritative maternal parenting style used with both the hearing child and the d/hh child. Similarly, mother perception of a negative relationship between the hearing and the d/hh sibling was a highly significant factor in predicting authoritarian maternal parenting style used with both the hearing child and the d/hh child.

**Discussion**

The main objective of this study was to describe the parenting styles of mothers who have one d/hh child and at least one hearing child in Cyprus. It revealed that the dominant parenting style for both the hearing and d/hh child among mothers was the authoritative type. Examples of behavior that relate to authoritative parenting style reported by mothers included explaining rules with children, being responsive to the child’s needs and emotions or encouraging expression of opinion in children. It is worth noting that this is a positive parenting style because previous studies have reported that it is often related to positive scholastic, social, emotional, and cognitive developmental outcomes in children and adolescents (Chao, 2001; Park & Bauer, 2002). The least prevalent parental types found for both hearing and d/hh children in this study were permissive and strict, which were reported in previous research to be linked with poor educational outcomes (Querido et al., 2002). Examples of permissive parenting, as reported by mothers, include little apparent control over children’s behavior, rare punishment, allow children to make their own decisions. Examples of strict parenting, according to mothers’ self-reports, include much emphasis on rules and criticism of misbehavior.

It was also discovered that mothers, who described themselves as either authoritarian or strict, tended to be more authoritarian or strict respectively with the hearing siblings than with the d/hh child; it was also reported that the hearing child was the recipient of more maternal verbal and physical hostility than the d/hh child when it came to parents who applied authoritarian or strict parenting practices. On the other hand, authoritative mothers were found to be more responsive to the d/hh child’s feelings and needs compared with the hearing sibling, and they tended to encourage more the hearing child to understand the consequences of their own actions and behaviors than the d/hh child. Previous research has shown that hearing parents of d/hh children were more likely to report the use of punitive measures and physical discipline methods with the d/hh child than with the hearing sibling (Knutson et al., 2004; Sullivan & Knutson, 2000).

Regarding the relationships between siblings and parental type, in this study links between mothers’ perceptions of the nature of their children’s interaction and mothers’ reported parenting styles used in the upbringing of the d/hh child and the hearing sibling were found. More specifically, authoritative mothers tended to perceive the relationship between siblings as positive, whereas authoritarian parenting employed by mothers with the d/hh sibling generated mothers’ beliefs that hostility existed in the siblings’ relationships. Previous studies have also found that parents’ behavior and feelings toward the d/hh child may influence the hearing siblings’ feelings toward their d/hh child (Bat-Chava & Martin, 2002; Fillery, 2000). When d/hh children were characterized by their parents as more competent than the hearing sibling, the relationships between the siblings tended to be more negative, than in families where parents did not make negative comparisons (Atkins, 1987; Bat-Chava & Martin, 2002; Fillery, 2000).

The contribution of this study must be considered in the light of certain methodological limitations. Firstly, the relatively small sample size mitigates the significance of the results that may have been obtained with a larger sample. However, all mothers with hearing and d/hh children who fulfilled the criteria of this study were contacted and almost all of them consented
to participate. Similar studies even in much bigger countries than Cyprus have also managed to enlist small numbers of participants (Hadjikakou & Nikolaraizi, 2008; Morton, 2000; Zaidman-Zait, 2007).

Secondly, our data were based on maternal reports. Several perspectives on the parental typology could have been obtained if father ratings and also child self-ratings had been included. Moreover, useful additional information on dominant parenting styles in parent–child interactions could have been gathered with systematic observations during home visits. Therefore, studies exploring similar issues in the future could involve multiple informants, as well. The findings cannot claim to have a wider applicability; however, given the scarcity of literature relating to the parental typology in families with d/hh children, the issues raised may be relevant to other families with d/hh members.

More specifically, information gained from this study may assist mental health professionals and teachers in their work with d/hh children and their families. Parent education, in terms of learning and practicing good parenting skills to bring up and manage both hearing and d/hh children, is essential. Parents may benefit from learning effective strategies to promote healthy relationships between d/hh and hearing siblings and create a positive family climate (Bat-Chava & Martin, 2002). Given that sibling interactions do not develop in isolation, but within complex family relationships, support services could be in place for both hearing siblings of d/hh children and parents. Last but not least, programs focusing on the development of effective communication strategies between siblings and d/hh and hearing parents in order to remove the communication barriers due to a child’s deafness would be helpful (Bat-Chava & Martin, 2002).

Conflict of Interest
No conflicts of interest were reported.

Acknowledgements
Special thanks are extended to all families who voluntarily participated in our study, trusted us, and shared very personal experiences with us. Without them, the data that form the basis of the study would not have been forthcoming.

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Antonopoulou, K., & Tsitsas, G. The investigation of Greek mothers’ parenting styles: Adaptation and standardization of the Parenting Styles & Dimensions Questionnaire (PSDQ). Epistimes Agogis. in press.


Appendix

Table 1A  Parenting style items of the Parenting Style and Dimensions Questionnaire

Authoritative mother (13 items)
1. Encourages child to talk about the child’s troubles
2. Responsive to child’s feelings or needs
3. Gives comfort and understanding when child is upset
4. Gives praise when child is good
5. Has warm and intimate times together with child
6. Helps child to understand the impact of behavior by encouraging child to talk about the consequences of his/her own actions
7. Encourages child to freely express (him/herself) even when disagreeing with parents
8. Allows child to give input into family rules
9. Takes child’s desires into account before asking the child to do something
10. Takes into account child’s preferences in making plans for the family
11. Gives child reasons why rules should be obeyed
12. Explains the consequences of the child’s behavior
13. Explains to child how I feel about the child’s good and bad behavior

Authoritarian mother (7 items)
1. Uses physical punishment as a way of disciplining our child
2. Spanks when our child is disobedient
3. Slaps child when the child misbehaves
4. Explodes in anger toward child
5. Punishes by taking privileges away from child with little if any explanations
6. Uses threats as punishment with little or no justification
7. Punishes by putting child off somewhere alone with little if any explanations

Permissive mother (5 items)
1. States punishments to child and does not actually do them
2. Threatens child with punishment more often than actually giving it
3. Gives into child when he or she causes a commotion about something
4. Finds it difficult to discipline child
5. Spoils child

Strict mother (4 items)
1. Yells or shouts when child misbehaves
2. Scolds and criticizes to make child improve
3. Scolds and criticizes when child’s behavior doesn’t meet our expectations
4. Emphasizes the reasons for rules

Table 1B  Items of the sibling inventory of behavior

Acceptance
1. Does things to please him/her
2. Teases or annoys him/her
3. Is willing to do favors for him/her
4. Tries to comfort him/her when he/she is unhappy or upset
5. Sees his/her good points more than his/her problems
6. Protects him/her from harm or teasing
7. Is pleased by progress he/she makes
8. Points out his/her disability (hearing loss) more than his/her strengths

Hostility
1. Gets angry with him/her
2. Acts jealous of the special attention he/she gets
3. Seems to forget the disability (hearing loss) when they are playing or joking together
4. Stays away from him/her if possible
5. Fusses and argues with him/her
6. Complaints about the trouble he/she makes
7. Frowns or pouts when he/she has to be with him/her

Support
1. Helps him/her in any way possible
2. Shows or tells him/her interesting things
3. Helps him/her adjust to new situations
4. Says nice things about him/her
5. Gets ideas for things they can do together
6. Teaches him/her new skills
7. Makes plans to include him/her

Embarrassment
1. Is embarrassed to be with him/her in public
2. Acts ashamed of him/her