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Katerina Antonopoulou
Department of Home Economics and Ecology, Harokopio University, Athens, Greece
Kika Hadjikakou
Ministry of Education and Culture, Cyprus
Xristina Dagla
Harokopio University, Greece
Katerina Maridaki-Kassotaki
Harokopio University, Greece

An Examination of the Link between Perceptions of Parental Typology and Behaviour in a Sample of Deaf/Hard of Hearing and Hearing Adolescents

Abstract

The present study examines differences in the perceptions of parental typology and behaviour between deaf/hard of hearing (d/hh) and hearing adolescents. The participants were 131 adolescents, 101 hearing and 30 d/hh. The participating adolescents responded to the Greek version of the following questionnaires: (a) the Strengths and Difficulties Questionnaire-SDQ (Goodman, 1997; Bibou-Nakou, Stogiannidou, Kioseoglou & Papageorgiou, 2002) and (b) the Parenting Styles and Dimensions Questionnaire-PSDQ (Antonopoulou & Tsitsas, 2011; Maridaki-Kassotaki, 2009; Robinson, Mandleco, Olsen & Hart, 2001). The results have shown that there are differences in perceptions of parental typology and behaviour between d/hh adolescents and their hearing peers. Specifically, it was found that hearing adolescents perceive their fathers as being more authoritarian and strict than d/hh adolescents do, and that d/hh adolescents have more difficulties in their peer relationships than their hearing counterparts. The results have revealed significant negative correlations between perceptions of authoritative parents and behavioural difficulties in both d/hh and hearing adolescents. Moreover, adolescents' perceptions of their fathers' and mothers' authoritative parental typology were found to be a good predictor of adolescents' prosocial behaviour, whereas perceptions of the strict father and mother were found to predict hyperactivity and conduct problems. The psycho-educational implications of the present findings are discussed.

Keywords: adolescence, parental typology, hearing difficulties, behaviour

Badanie związku między postrzeganiem typologii i zachowaniem rodziców w próbie niesłyszącej/niedosłyszącej oraz słyszącej młodzieży

Streszczenie

Niniejsze opracowanie analizuje różnice w postrzeganiu typologii rodzicielskiej i zachowaniu pomiędzy niesłyszącymi/niedosłyszącymi (d/hh) i słyszącymi adolescentami. Uczestnikami było 131 adolescentów, 101 słyszących i 30 d/hh. Uczestnicy wypełniali greckie wersje

dwóch kwestionariuszy: (a) Strengths and Difficulties Questionnaire-SDQ (Goodman, 1997; Bibou-Nakou, Stogiannidou, Kioseoglou & Papageorgiou, 2002) i (b) the Parenting Styles and Dimensions Questionnaire-PSDQ (Antonopoulou & Tsitsas, 2011; Maridaki-Kassotaki, 2009; Robinson, Mandleco, Olsen & Hart, 2001). Wyniki wykazały, że istnieją różnice w postrzeganiu typologii rodzicielskiej i zachowaniu pomiędzy adolescentami d/hh i ich słyszącymi rówieśnikami. W szczególności stwierdzono, że młodzież słysząca postrzegają swoich ojców jako bardziej autorytarnych i rygorystycznych niż adolescenci d/hh, i że adolescenci d/hh napotykają więcej trudności w relacjach z rówieśnikami niż ich słyszący rówieśnicy. Wyniki wykazały znaczące negatywne korelacje pomiędzy postrzeganiem autorytatywnych rodziców i trudności w zachowaniu w obu grupach adolescentów. Co więcej, Postrzeganie przez adolescentów ich ojców i matek jako autorytatywnych okazały się być dobrym predyktorem zachowań prospołecznych, natomiast postrzeganie ojców i matek jako rygorystycznych okazało się być predyktorem nadpobudliwości i problemów z zachowaniem. Omawiane są skutki psycho-edukacyjne poczynionych ustaleń.

Słowa kluczowe: adolescencja, typologia rodzicielska, trudności w słyszeniu, zachowanie

Introduction

In the last 30 years, research on parental typology has provided plenty of data on parenting attitudes and practice in the familial context (Baumrind, 1971; Darling & Steinberg, 1993; Maccoby & Martin, 1983). Parental typology is regarded as a major psychosocial construct which refers to child upbringing practices, emotional context, the communicative climate and behaviours that determine parent-child interaction (Darling & Steinberg, 1993). Parental typologies are classified into categories according to the level of parental control and involvement in the parent-child relationship. Thus, three distinctive parental typologies refer to (1) the authoritative parent, who is strict but caring and supporting, (2) the authoritarian parent, who is unreasonably strict and not emotionally involved with children and (3) the permissive parent, who is indifferent towards children's social and emotional needs (Baumrind, 1971, Maccoby & Martin, 1983).

A considerable body of research identifies and supports the critical role of parenting approaches and behaviours to children's overall development (Baumrind, 1991; Hakoama & Ready, 2011; Maccoby & Martin, 1983; Swick, 2005; Zahn-Waxler & Radke-Yarrow, 1990). In particular, there is empirical evidence on specific parenting behaviours that promote positive social adjustment in children and have positive impact on child cognitive ability, academic achievement, emotional stability and psychosocial capacity. Authoritative parental typology, for example, is found to relate positively to child and adolescent cognitive, social and emotional development. On the contrary, authoritarian and permissive parental typologies are usually linked with poor child outcomes (Antonopoulou, Alexopoulos, & Maridaki-Kassotaki, 2012; Baumrind, 1989; Chao, 2001; Querido, Warner, & Eyberg, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

The diagnosis of hearing loss is a critical life event for parents, and it is a known cause of high stress experiences (Hintermair, 2006). Although, the contribution of parents' involvement to child development has been widely recognized (Hakoama

& Ready, 2011), not much research work has been carried out on the parental typologies of parents who have children with disabilities, and more specifically on the parental typologies of parents of d/hh children.

The vast majority of studies involving both fathers and mothers of d/hh children, focus on stress in parenting. Specifically, findings from studies examining stress levels reported by parents of d/hh children have been inconsistent. Some evidence suggests that hearing parents of d/hh children feel more stress than hearing parents of hearing children, while some studies report no difference in stress levels between the two groups of parents (Hintermair, 2004; Meadow-Orlans, Spencer, & Koester, 2004; Pipp-Siegel, Sedey, & Yoshinaga-Itano, 2002; Quittner, Glueckauf, & Jackson, 1990; Spahn, Richter, Zschocke, Lo¨hle, & Wirsching, 2001).

Most relevant studies have revealed that the parents' hearing status, the child's communicative competence, and additional disabilities in children exhibit a clear relationship to parental stress. The studies have also found that child age, gender, hearing status, mode of communication, educational status, and income level all seem to be relatively poor indicators for parental stress (Meadow-Orlans, 1990; Morgan-Redshaw et al., 1990; Mapp & Hudson, 1997; Calderon & Greenberg, 1999; Hintermair, 2004; Pipp-Siegel et al., 2002; Hintermair, 2006).

It is accepted that parenting is influenced by culture and socioeconomic conditions of the family (Lamm & Keller, 2007). Although parental typologies vary from one culture to another, having a child with hearing loss affects all parents and therefore, it is important to clarify the impact of their children's hearing loss on their child rearing practices.

One of the few studies investigating child raising attitudes of fathers having or not having a child with hearing loss is the one carried out by Sahli (2011). In that study, 20 fathers of hearing children were matched with 20 fathers of deaf children. According to the results, overprotection scores of fathers who have a d/hh child were found higher on a statistically meaningful level than the scores of fathers who have hearing children. Additionally, the fathers of d/hh children got lower scores from the democratic/equality and strict discipline sub-dimensions as compared to the fathers with hearing children. Thus, the results of that study showed that the fathers who have a d/hh child are more protective of their children, and that they are less democratic and disciplined in their attitudes as compared to fathers of hearing children.

Another study (Antonopoulou, Hadjikakou, Stampoltzi, & Nicolaou, 2012b) examined differences in parental typology and disciplinary preference of hearing mothers towards their d/hh and hearing children. The results indicated that the dominant parental typology for both the hearing and d/hh children among the participating mothers was the authoritative one and the least prevalent parental typologies were the permissive and the strict. Moreover, mothers' perceptions of sibling relationship were found to be a significant factor in predicting mothers' reported parental typology.

Calderon, Bargones, and Sidman (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 of the ways d/hh children learn and communicate, lack of support and increased time demands related to support and intervention. Additionally, parental child-rearing practice in families with d/hh children and hearing siblings is affected by the nature of the relationship between the siblings and also by parental expectations and aspirations about the children's future life (Goring, 2001).

It has been suggested that parent-child relationship could play a significant role in the upbringing approaches used with children with disabilities in the family, (Knutson, Johnson & Sullivan, 2004; Verdugo, Bermejo, & Fuertes, 1995) as well as the child social adjustment capacity (Amato & Fowler, 2002). For example, the communicative difficulties between the d/hh child and the hearing parents may cause parents' to adopt strict or punitive measures of child discipline (Sullivan, Brookhouser, Scanlan, Knutson & Schulte, 1991). Moreover, hearing mothers tend to be *overly* controlling in interactions with their deaf children (Gregory, 1976) resulting in maternal intrusiveness, inflexibility, child independence and autonomy restriction as well as behaviour problems (Meadow-Orlans, 1990; Vaccari & Marschark, 1997). Family dysfunction and inconsistent or rejecting parenting cause low satisfaction with parent-child communication and are factors which are linked with poor social adjustment skills, peer rejection and friendship quality in d/hh children (Leigh, Maxwell-McCaw, Bat-Chava & Christiansen, 2009).

Given the limited number of studies examining parental typology, child social adjustment skills and hearing loss, the present study aims at exploring d/hh adolescents' perceptions of their mother's and father's current parental typologies in relation to their strengths and difficulties in social behaviour. Additionally, it examines types of communication with parents and differences in the perceptions of parental typology and behaviour (a) between d/hh adolescents and their hearing counterparts and (b) within the d/hh group as a result of the Cochlear Implant (CI) used.

Method

Participants

The participants in the current study comprised 131 pupils; 101 of them were hearing (M = 15.19 years old, SD = 0.41, age range: 15–17 years), and 30 were deaf/hard of hearing (d/hh) (M = 15.70 year old, SD = 2.27, age range: 14–21 years). There were no age differences between the two groups of participants (t_{129} = –0.58, p>.05). Regarding the d/hh population, 15 of them (50%) were hearing aid users, 8 (26.7%) wore cochlear implants, and 7 (23.3%) were not hearing aid users. Most of them (N = 11, 36.7%) were profoundly deaf, 8 (26.7%) had a severe hearing loss, 8 (26.7%) had a moderate hearing loss, and 3 (10%) had mild hearing loss. Thirteen (43.3%) of the d/hh students communicated orally with their parents, eleven

(36.7%) communicated both orally and in sign language, whereas six (20%) of them communicated in sign language with their parents. Likewise, 16 (53.3%) of the d/hh students communicated orally with their siblings, 8 (26.7%) both orally and in sign language, and 6 (20%) in sign language. Most participating students (N = 102, 77.9%), both hearing and d/hh, reported having married parents. Eight (6.11%) students were immigrants. Parental socioeconomic status was medium-level according to parent education and profession. Convenient sampling was applied for the purposes of this study.

Instrumentation

Adolescents' perceptions of parental typology were measured by the Greek version of the Parenting Styles & Dimensions Questionnaire-PSDQ (Antonopoulou & Tsitsas, 2011; Robinson, Mandleco, Olsen & Hart, 2001; Maridaki-Kassotaki, 2009). PSDQ is a self-report questionnaire which assesses perceptions of parental typology according to the parenting styles model proposed by Baumrind (1989). It explores perceptions of a parent-child relationship, communication and rearing methods and reveals four dominant parental typologies: (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, thirteen items assess the authoritative parent, seven items assess the authoritarian parent, five items assess the permissive parent and four items assess the strict parent. Cronbach's alpha for the authoritative, authoritarian, strict and permissive typology of the Greek PSDQ are .88, .83, .68 and .65 respectively for the mother version (Antonopoulou & Tsitsas, 2011) and .88, .85, .70 and .63 respectively for the father version (Maridaki-Kassotaki, 2009). The internal consistency reliability coefficients, Cronbach's alpha, for this sample ranged between .62 and .82 for the father version and between .59 and .83 for the mother version.

Additionally, adolescents completed the Greek version of the Strengths and Difficulties Questionnaire (SDQ-Hel) (Goodman, 1997; Bibou-Nakou, Stogiannidou, Kioseoglou & Papageorgiou, 2002), as a measure of behavioural and emotional adjustment. The SDQ includes 20 problem items across four domains of difficulties (emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems). The SDQ also includes a five-item prosocial behaviour scale. Each of the 25 items is rated on a 3-point scale from zero (not true of the child), through one (somewhat true of the child), to two (certainly true of the child). For each of the 5 SDQ scales, scores can range from 0 to 10 if all items are completed. Dimensional scores are obtained by summing the scores on items within each of the five domains (a total score is also derived by summing the scores on the four problem domains). Cronbach's alpha for the entire scale in this study was .81.

Procedure

The head teachers of 3 general public high schools and 4 public special schools for the deaf from Central and North Greece were contacted and explained the purpose of the present study. The head teachers asked parents to provide written informed consent in order for their children to be included in the study. One hundred and thirty-one parents signed the informed consent and an equal number of students were recruited. Adolescent students were then informed of the purpose of the study and given appropriate instructions on how to complete the questionnaires. The completion of the anonymous questionnaires took approximately 45 minutes.

Results

Table 1 presents the descriptive statistics of d/hh and hearing students' responses to the mother and father versions of the Parenting Style and Dimensions Questionnaire as well as mean scores differences.

Table 1. Means, standard deviations and mean differences of the participants' responses to the PSDQ for both mother and father

	D/hh students (n = 30)		Hearing students (n = 101)		Mean differences	
	mean	*SD*	mean	*SD*	t_{129}	*p*
Perceptions of mother typology						
Authoritative	3.18	0.62	3.16	0.56	–0.15	$.88_{(ns)}$
Authoritarian	2.99	0.46	2.95	0.54	–0.38	$.7_{(ns)}$
Permissive	3.26	0.67	3.27	0.76	0.09	$.93_{(ns)}$
Strict	2.18	0.63	2.29	0.75	0.67	$.49_{(ns)}$
Perceptions of father typology						
Authoritative	2.87	0.8	3	0.53	1.01	$.32_{(ns)}$
Authoritarian	2.64	0.71	2.87	0.49	1.98	$.04^{*}$
Permissive	2.96	0.87	3.12	0.7	1.04	$.3_{(ns)}$
Strict	1.92	0.6	2.35	0.77	2.69	0.008^{**}

$^{*}p < .05$, $^{**}p < .01$

The results indicate that hearing adolescents tend to perceive their fathers as being more strict and authoritarian than their d/hh peers do. No other significant difference in the participants' perceptions of mother and father parental typology was found. In addition, a repeated measure analysis between perceptions of the four maternal typologies showed that both d/hh and hearing adolescents achieved significantly higher scores in the permissive and the authoritative typologies (F[3, 87] = 28.37, $p < .001$, F[3, 300] = 67.13, $p < .001$, respectively). D/hh and hearing adolescents also achieved significantly higher scores in the permissive and authoritative father typologies (F[3, 87] = 15.71, $p < .001$, F[3, 300] = 42.07, $p < .001$, respectively).

Table 2 presents differences in d/hh and hearing students' behavioural strengths and difficulties.

Table 2. Means, standard deviations and mean differences of the participants' responses to the SDQ

	D/hh students (n = 30)		Hearing students (n = 101)		Mean differences	
	mean	*SD*	mean	*SD*	t_{129}	p
Emotional symptoms	4	2.13	3.52	2.51	–0.96	$0.34_{(ns)}$
Hyperactivity/inattention	3.9	1.79	3.99	2.5	0.18	$0.85_{(ns)}$
Conduct problems	3.67	1.97	3.45	2.36	–0.45	$0.66_{(ns)}$
Peer relationship problems	3.7	1.82	2.73	2.41	–2.04	0.04^{*}
Prosocial behaviour	8.03	1.71	7.3	2.74	–1.38	$0.17_{(ns)}$

$^{*}p < .05$

D/hh students appear to experience more difficulties with peer relationships than hearing students according to student self-reports. No other significant difference in behaviour was found between d/hh and hearing adolescents. Furthermore, a repeated measure analysis between the four areas of behavioural difficulties showed that hearing adolescents achieved a significantly lower score in the peer relationship problems sub-scale (F[3, 300] = 7.16, $p < .001$). With d/hh adolescents there were no significant differences in the four areas of behavioural difficulties.

In order to examine differences in parental typology perceptions and in adolescent behaviour of the participants with hearing loss, namely among hard of hearing participants (those with mild and moderate hearing losses, n = 10), deaf participants (severe and profound hearing loss, n = 12) and CI users (n = 8), a one way ANOVA was administered. The results are presented in Table 3.

Table 3. Means, standard deviations and mean differences of the d/hh participants' responses to the PSDQ and the SDQ as a result of degree of hearing

	Deaf students (n = 12)		Hard of hearing students (n = 10)		CI users (n = 8)		$F_{(2,29)}$
	mean	*SD*	mean	*SD*	mean	*SD*	
Perceptions of mother typology							
Authoritative	3.23	0.64	3.4	0.72	2.83	0.5	$1.72_{(ns)}$
Authoritarian	2.98	0.42	3.02	0.55	3.01	0.54	$0.01_{(ns)}$
Permissive	3.19	0.81	3.43	0.72	3.25	0.49	$0.25_{(ns)}$
Strict	2.28	0.76	2.34	0.36	1.84	0.52	$1.68_{(ns)}$
Perceptions of father typology							
Authoritative	2.76	0.89	3.07	0.8	2.68	0.76	$0.45_{(ns)}$
Authoritarian	2.45	0.66	2.71	0.85	2.96	0.65	$1.04_{(ns)}$
Permissive	2.63	0.92	3	0.83	3.53	0.73	$2.27_{(ns)}$
Strict	1.8	0.64	2.2	0.37	1.67	0.69	$1.71_{(ns)}$
Emotional symptoms	4.5	2.58	4.38	1.51	3.25	2.05	$0.88_{(ns)}$

Hyperactivity/inattention	4.17	2.17	4.63	1.41	3	1.31	$1.84_{(ns)}$
Conduct problems	3.67	1.23	4.38	2.38	2.75	2.37	$1.38_{(ns)}$
Peer relationship problems	3.83	1.94	3.25	1.98	4.13	1.73	$0.45_{(ns)}$
Prosocial behaviour	7.92	1.83	9.5	0.53	6.75	1.03	8.23^{**}

$^{**}p < .01$

According to d/hh adolescents' responses, a significant difference in prosocial behaviour was found among the three d/hh groups. Multiple post hoc comparisons using the Bonferroni test revealed that the hard of hearing group achieved a significantly higher score on the prosocial sub-scale of the SDQ than the deaf and the CI groups ($p < .001$). No other significant difference was found in parental typology perceptions or in d/hh adolescent behaviour as a result of CI use.

The same analysis was administered in order to examine differences in perceptions of parental typology and behavioural strengths and difficulties among the d/hh adolescents as a result of different modes of communication with parents. The results show that there are no differences in the examined variables among the 'oral' communication group ($n = 13$), the 'sign language' communication group ($n = 6$) and the 'both oral and signs' communication group ($n = 11$).

Table 4 shows the correlations between adolescents' perceptions of mother typology and strengths and difficulties in adolescent behaviour.

Table 4. Pearson correlations between d/hh and hearing adolescents' perceptions of mother typology and behavioural strengths and difficulties

	Mother							
	Authoritative		**Authoritarian**		**Permissive**		**Strict**	
	D/hh	**Hearing**	**D/hh**	**Hearing**	**D/hh**	**Hearing**	**D/hh**	**Hearing**
Emotional symptoms	-.17	.06	.03	-.01	-.22	.09	.05	.02
Hyperactivity/inattention	.27	-.09	-.25	.15	.1	-.19	**.52****	.32**
Conduct problems	.26	**-.26***	-.34	.05	-.06	.14	**.38***	.21*
Peer relationship problems	-.21	-.11	-.25	.05	-.18	-.02	.04	.15
Prosocial behaviour	**.39***	**.29****	.01	.12	-.17	**-.37****	-.03	-.01

$^{*}p < .05$, $^{**}p < .01$

The analysis show significant positive correlations between the maternal authoritative type as perceived by d/hh and hearing adolescents and the adolescents' prosocial behaviour. Positive correlations were also found between perceptions of the strict type of mother and adolescents' hyperactivity and conduct problems. Additionally, negative correlations were revealed between perceptions of the authoritative type of mother and conduct problems for the hearing group, as well as between perceptions of the permissive mother and the hearing adolescents' prosocial behaviour. No other significant correlations were found.

Table 5 shows the correlations between adolescents' perceptions of father typology and strengths and difficulties in adolescent behaviour.

Table 5. Pearson correlations between d/hh and hearing adolescents' perceptions of father typology and behavioural strengths and difficulties

	Father							
	Authoritative		Authoritarian		Permissive		Strict	
	D/hh	Hearing	D/hh	Hearing	D/hh	Hearing	D/hh	Hearing
Emotional symptoms	**-.37***	.06	-.15	.01	-.28	.01	-.21	.01
Hyperactivity/inattention	-.18	-.17	-.06	.18	**.39***	-.08	.04	.31**
Conduct problems	.14	-.18	**.41***	.09	.04	-.12	**.37***	.3**
Peer relationship problems	-.31	-.09	-.15	.03	-.01	-.05	-.07	.16
Prosocial behaviour	**.39****	**.30***	.09	.15	-.08	**-.35****	.09	-.07

*$p < .05$, **$p < .01$

A similar pattern of correlations with that for mother typology was revealed with adolescents' perceptions of father typology. More specifically, d/hh and hearing adolescents' perceptions of the strict paternal style were found to correlate positively with adolescent conduct problems. Adolescents' perceptions of the authoritative father, however, were correlated positively with adolescent prosocial behaviour. Two negative correlations were also revealed: one between d/hh adolescents' perceptions of the authoritative paternal style and adolescent emotional symptoms and one between hearing adolescents' perceptions of the permissive father and adolescent prosocial skills. Finally, three positive correlations were found between (a) the strict father typology according to hearing adolescents' perceptions and adolescent hyperactivity, (b) d/hh adolescents' perceptions of the permissive father and adolescent hyperactivity and (c) d/hh adolescents' perceptions of the authoritarian father and adolescent conduct problems. No other significant correlation was revealed.

In order to assess whether adolescents' perceptions of their fathers' parenting style (authoritarian, authoritative, permissive or strict) may be good predictors of adolescents' behavioural strengths and difficulties, linear regression analyses (enter method) was carried out (Table 6).

Significant positive effects emerged on both d/hh and hearing adolescents' tendency to be hyperactive for the perceived strict maternal style. Positive effects also emerged on adolescent conduct problems for perceived paternal and maternal strict behaviour. Furthermore, the regression analysis has shown that a high score on perceived paternal and maternal authoritative patterns of behaviour was a significant factor in predicting d/hh and hearing adolescents' prosocial behaviour. No other significant effects were found.

Table 6. Summary of linear regression analyses for predictor variables (adolescents' perceptions of parenting style) associated with adolescents' behavioural difficulties and strengths

Variable	B	ß	R^2	Adjusted R^2	*t*
Hyperactivity/inattention					
Strict mother (d/hh)	1.5	0.52	.27	.25	3.17**
Strict mother (hearing)	1.08	0.32	.1	.09	3.03**
Conduct problems					
Strict mother (d/hh)	1.19	0.38	.14	.11	2.1*
Strict mother (hearing)	0.66	0.21	.045	.034	2.11*
Strict father (d/hh)	1.071	0.34	.12	.084	1.86*
Strict father (hearing)	0.97	0.31	.093	.084	3.14**
Prosocial behaviour					
Authoritative mother (d/hh)	0.86	0.31	.097	.064	1.71*
Authoritative mother (hearing)	1.42	0.3	.09	.08	3.06**
Authoritative father (d/hh)	0.82	0.39	.15	.12	2.17*
Authoritative father (hearing)	1.56	0.3	.092	.083	3.12**

*$p < .05$, **$p < .01$

Discussion

The present study sought to examine possible links between d/hh and hearing adolescents' perceptions of their fathers' and mothers' parenting styles and adolescents' behavioural strengths and difficulties such as prosocial skills, emotional symptoms, conduct problems, hyperactivity and peer relationship problems. Additionally, it examined differences in the perceptions of parental typology and behaviour between d/hh and hearing adolescents. The findings suggest that both d/hh and hearing adolescents appear to describe their parents as being predominantly authoritative and permissive, while perceptions of their behavioural strengths and difficulties tend to be positive, with d/hh adolescents reporting more peer relationships difficulties than the hearing participants.

Previous research has also shown that d/hh adolescents experience more depression symptoms, anxiety disorders, and social-emotional behavioural problems than do hearing children (Brunnberg, Linden-Bostrom, & Berglund, 2007). Problems related to loneliness (Most, 2007) and depression (Theunissen, Rieffe, Kouwenberg, Soede, Briaire & Frijns, 2011) have also been reported within the d/hh population. Thus, mainly due to communication difficulties, d/hh adolescents face more challenges in their peer relationships than their hearing peers. A number of studies (Antia, Jones, Luckner, Kreimeyer & Reed, 2011; Bat-Chava & Deignan, 2001; Bat-Chava et al., 2005; Leigh et al., 2009; Most et al., 2011; Roberts & Rickards, 1994; Wolters et al., 2011) found a significant relationship between d/hh children's social

skills (e.g. popularity, relationships, and social interactions) and communication competence (e.g. oral communication, speech intelligibility, pragmatic language skills, and ability to improvise in conversations). On the other hand, self-esteem and social competence were positively related to effective home communication (Leigh et al., 2009; Hadjikakou & Nikolaraizi, 2008), that weakens language barriers between deaf children and hearing parents (Haualand, Grønningsæter & Hansen, 2003) and facilitates natural and meaningful interchanges (Wallis, Musselman & MacKay, 2004).

It was also found that the hard of hearing group achieved significantly higher score on the prosocial sub-scale of the SDQ than the deaf and the CI groups. Despite the fact that little is known about the impact of the degree of hearing loss on the development of prosocial skills in d/hh children, previous research (Roberts & Rickards, 1994; Antia et al., 2011) found that the degree of hearing loss is related to social behaviours and friendship characteristics.

The results of the present study revealed a link between perceptions of parental typology and behaviour for both the d/hh and the hearing adolescents. More specifically, d/hh and hearing adolescents' perceptions of the authoritative mother and father were found to be significant positive predictors of adolescents' prosocial skills whereas perceptions of the strict mother and father were found to be significant positive factors in predicting adolescents' hyperactivity and conduct problems. Thus, the study may provide some evidence of the positive influence of the supportive parent to adolescents' behaviour and social adjustment skills, and of the negative impact of the strict type of parent on adolescents' aspects of psychosocial development.

This pattern of results is in accordance with previous empirical evidence attesting to the association between what children believe about the way their parents bring them up and children's psychosocial characteristics. For example, the study carried out by Antonopoulou et al. (2012b) with hearing preadolescents showed that preadolescent views of specific attributes of the authoritative father such as warmth and support, reasoning and democratic participation could predict the development of high levels of empathy and self esteem in preadolescents. The same study revealed the negative impact of the authoritative parenting style, according to preadolescents' descriptions, on preadolescents' empathy and self-esteem. Additionally, studies which examined parents' self-descriptions of their parenting typology and how they link to several child outcomes, have suggested that a supportive parenting environment dominated by affection, support, praise, encouragement, love, concern, understanding, and acceptance has a positive impact on child emotional stability, psychosocial capacity, academic achievement and overall development (Baumrind, 1989; Chao, 2001; Querido, Warner & Eyberg, 2002; Steinberg, Mounts, Lamborn & Dornbusch, 1991).

The present study did not reveal any difference in the impact of adolescents' views about parental typology on adolescents' behavioural strengths and difficulties between the d/hh and the hearing groups. This may mean that the child hearing

status cannot influence the way the child understands parent-child relationship, but the nature of this relationship itself. Previous empirical evidence is limited. Only the study carried out by Sahli (2011) compares fathers of d/hh children with fathers of hearing children and shows that fathers of d/hh children are more protective and less democratic in their child-rearing practice. Nevertheless, the two studies cannot be compared since they involve different samples.

Further research is required to examine the extent to which a supportive parent is a necessary factor for d/hh and hearing adolescents to develop psychosocially and whether paternal practice differently affects child development as a function of child hearing status or the level of parenting stress and family functioning. Given the scarcity of relevant research on parenting styles in families of d/hh children, the present study may provide some support for the need to educate parents of d/hh children, through appropriate parental counselling programmes, on effective parenting strategies and positive parent-child relationship.

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