

Siblings in Greek families: raising a child with disabilities

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The study focuses on siblings of children with disabilities (CD) in order to investigate: (a) basic components of the sibling personality (self-concept, self-esteem, feelings of loneliness, main needs, nature of anxiety, and attitudes), (b) the representation of family functioning and parental figures, and of social environment, and (c) sibling relationship. The sample consisted of 20 families raising a CD and 20 families raising children without disabilities (CWD). The total number of participants was 151 individuals (80 parents and 71 children). The measures used were the following: (a) self-report measures: (1) Self-concept Scale for Children Lipsitt [SC], (2) Children's Loneliness Questionnaire [CLQ], (3) Hare Self-esteem Scale [HSS] and (4) Family Adaptability Cohesion Evaluation Scale (FACES-III); (b) projective tests: (1) Thematic Apperception Test [TAT], (2) Children's Apperception Test [CAT] and (3) *Le dessin de famille*; and (c) semi-structured but focused interviews with the parents. The findings suggest that there is no statistically significant difference between siblings in the areas of ambivalence towards their brother/sister, self-esteem, self-concept, feelings of loneliness, and the representation of family functioning and the paternal figure. There were statistically significant differences in the way they experienced sibling rivalry, maternal figures, and social environment. The study suggests that siblings of CD react in three ways towards their brother/sister: (a) they are protective, (b) distanced, and (c) present infantile behaviour.

Keywords: siblings; disability; Greek family; components of sibling personality; sibling relationship

Relationships among siblings are of high interest for family researchers (Seligman and Darling 2007) for many reasons: (a) the bonds of siblings constitute an individual's point of reference not only because they are often the longest relationships in an individual's lifetime, but also because they are the part of the family of origin that survives after the parents have passed away, and (b) siblings share the parental expectations of the future child during the mother's pregnancy and also the excitement that follows the birth of the newborn. It is also siblings who participate in the bereavement that follows the realization that the 'new baby' is a child with disabilities.

Findings concerning the impact of disability on siblings are contradictory. Some findings suggest that siblings of children with disabilities (CD) cope with the situation well, while others find that siblings are at 'high risk' (Stoneman and

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Berman 1993; Powell and Gallagher 1993). Living with a brother/sister with disabilities may have a negative impact on the sibling's bond and lead to negative psychological consequences for the siblings of the CD (Crnic, Friedrich, and Greenberg 1983; Byrne and Cunningham 1985). On the other hand, research findings suggest that the presence of a CD may have a positive effect on the personality of their siblings (Eisenberg, Baker, and Blacher 1998; Purcell and Floyd 1999; Cuskelly and Gunn 2000; Seligman and Darling 2007). In this case, siblings seem to adapt themselves to the condition of disability (Tritt and Esses 1988). Especially, where the parents are competent and supportive, siblings may also benefit from association with their brothers or sisters with disabilities because of increased opportunity to enact teaching, helping, and caregiving (Stoneman and Brody 1981; Wai-Ping Li-Tsang, Kwai-Sang Yau, and Kong Yuen 2001)

According to other findings, siblings of CD are far more responsible and mature for their age: an indication that they may be assigned more responsibility than they should for their age and therefore run the risk of being 'parentified' (Blacher 1984). Research findings indicate that these children exhibit high levels of altruism and tolerance to other people and also choose professions that are related to education and provision of services. Their self-esteem is high, probably due to the fact that the presence of a CD is there to remind them that their development is following its natural course (Woolfson 1991).

The concept of self-esteem refers to an individual's sense of his or her value or worth, or the extent to which a person values, approves of, appreciates, prizes, or likes him or herself (Blascovich and Tomaka 1991). According to research findings there are no differences in the self-esteem of siblings of children with or without disabilities (Hannah and Midlarsky 1999; Argirakouli and Zafeiropoulou 2003). Self-concept refers to the representation an individual has for himself; that is, how he perceives his body image as well as his social role (Coopersmith 1967). Researchers have often assumed that having a CD would damage children's self-concepts. Since 1990 (Stoneman 2001), researchers studying CD with a wide range of disabilities have overwhelmingly found no differences in self-concept or in perceived competence between groups of children who do and do not have a sibling with disabilities (e.g. McMahon et al. 2001; Roeyers and Busse 2003; Singhi, Malhi, and Dwarka 2002, as cited in Stoneman 2001).

Loneliness among these children has attracted research interest. Loneliness is an emotional state in which a person experiences a powerful feeling of emptiness and isolation. Loneliness is more than the feeling of wanting company or wanting to do something with another person. Loneliness has been defined as the aversive state experienced when a discrepancy exists between the interpersonal relationships one wishes to have, and those one perceives they currently have (Peplau and Pelman 1982). One of the main hypothesis has been that siblings of children with disabilities feel neglected, socially excluded, and lonely because parents spend more time with the CD than with his/her siblings. On the contrary, research findings suggest that siblings of CD do not experience higher levels of loneliness or social exclusion (Kaminsky and Dewey 2002), they develop a warm relationship with their siblings, and there are less possibilities of developing conflictual relationships characterized by jealousy (Nixon and Cummings 1999; Stoneman 2001).

Siblings of CD often describe their relationship with mixed feelings: on one hand they feel that their bond with the brother/sister with disabilities is very strong and on the other that it presents difficulties. It is a bond experienced with love and hate, acceptance and frustration. It has also been reported that siblings of CD present

stronger feelings towards their sibling compared to siblings of CWD (Contact a Family 2001). It can, therefore, be said that certain siblings adapt to the presence of the disability and some do not (Seligman and Darling 2007). Some of the factors that seem to affect the degree of adaptation are: the type of disability, the behaviour of the CD, the quality of the marital relationship, the quality of the parental relationship, the quality of the parental relationship with the child with disabilities, and the degree of the emotional maturity of the parental personality (Dale 1996).

The effect of chronic illness or disability on family functioning has been studied primarily from the point of view of the parents (Engstrom 1992). Few researchers have assessed siblings' perceptions of family functioning in families raising CD. However, some studies have examined siblings' perceptions of family relationships. Siblings of children with cystic fibrosis and asthma viewed the chronic conditions as having positive and negative effects (Derouin and Jessee 1996; Gallo and Szychlinski 2003). Many studies suggest that there are no differences in family functioning among families of children with or without disabilities (Dyson 1997; Lamb and Billings 1997; Magil-Evans et al. 2001).

It should be noted that research based on self-reported measures on the personality of siblings of a CD as well as the ways they experience their family and social environment is very limited. The present study aims to contribute to this area by focusing on how siblings of a child with disabilities experience their family (representation of family functioning and parental figures) and social environment (how siblings envisage their immediate relational network: extended family and friends) to depict the presence or absence of certain components of their personality (self-esteem, sources of anxiety, main needs, feelings of loneliness, feelings of rivalry), and also try to compare them to the siblings of children without disabilities.

The study aims to examine the following questions:

- (1) What kind of basic personality components (self-concept, self-esteem, feeling of loneliness, main needs, nature of anxiety, and attitudes) present in siblings?
- (2) How do siblings represent their family (family functioning, parental figures) and social environment?
- (3) What kind of sibling relationship do they present?
- (4) Are there any differences in the above parameters between siblings of children with or without disabilities?

Methodology

Participants

Research participants were 40 nuclear families: 20 raising a CD (experimental group) and 20 with a child without disability (CWD) (control group). All families were nuclear and intact. It was the first marriage of parents and all families had children of school age. All were of a middle socioeconomic class. This was assumed by information derived from the parents' occupation and income.

The total number of research participants was 151 persons (80 parents and 71 children: 20 CD and 51 siblings). Each research group had 47 children (total 94: 74 siblings and 20 CD). We collected information for all children from the parents; however, research instruments were administered to 51 out of 74 siblings. That is: 17 siblings of CD and 34 siblings of CWD. The administration of the tests to all siblings

Table 1. Siblings' demographics of birth order and education

	Sisters of a CD N = 10	Sisters of CWD N = 19	Brothers of a CD N = 7	Brothers of CWD N = 15
<i>Siblings' birth order</i>				
First child	5 (50%)	7 (37%)	2 (28.6%)	10 (66.7%)
Second child	5 (50%)	10 (53%)	4 (57.1%)	3 (20%)
Third child	–	2 (10%)	1 (14.3%)	2 (13.3%)
<i>Siblings' education</i>				
They do not follow school (age under four years)	1 (10%)	4 (21%)	–	–
Elementary school	4 (40%)	7 (37%)	4 (57.1%)	9 (60%)
High School	2 (20%)	4 (21%)	2 (28.6%)	4 (26.7%)
Lyceum	1 (10%)	2 (10.5%)	–	–
University	2 (20%)	2 (10.5%)	1 (14.3%)	2 (13.3%)

was not possible for two reasons: some siblings were too young to be administered the tests (1.5–3 years: 6 siblings of CD and 8 siblings of CWD) and some siblings resided abroad (4 siblings of CD and 5 siblings of CWD).

Siblings of CD were: 7 boys, age range: 7–18 (mean: 9, SD = 4.83 years) and 10 girls, age range: 4–21 (mean: 13.30, SD = 5.42 years). Siblings of CWD were: 15 boys, age range: 4–22 (mean: 10.60, SD = 5.10 years) and 19 girls, age range: 3–23 (mean: 13, SD = 6.01 years). Table 1 shows the demographic characteristics of siblings related to birth order and education.

The total number of CD was 20 (10 boys and 10 girls). Age range: 4 to 12 years (mean = 8.07, SD = 3.02 years). The types of disabilities were the following: 6 children with cerebral palsy (30%), 6 with mental disability (30%), 2 with autism (10%), 2 with multiple disabilities (10%), 2 with emotional and behavioural difficulties (10%), 1 with syndrome Klinefelter (5%), and 1 with syndrome Simpson-Golabi-Behmel (SGB) (5%). Diagnosis took place at different times of the child's life: 14 children (70%) were diagnosed immediately after birth, 4 (30%) during the preschool period, and 2 (10%) during primary school. The families were randomly selected. The selection took place in two phases: firstly, families raising a CD were randomly selected from archives/catalogues of the Association of Children with Disabilities of Dodecanese, and secondly, families with CWD were randomly selected from the directory of the 11 municipalities of Rhodes. The sample of families raising a CD was composed with the following criteria: (a) all families were intact, (b) the age of the CD varied between 7 and 12 years old, (c) the child lived with his/her family, (d) all the families of the sample were permanent residents of the locality (island of Rhodes), and (e) the child was the only individual in the family who presented the disability.

The participant families were at first contacted by phone and then visited at their home. At the initial visit parents signed a consent form. Participants were assured that their anonymity would be respected. At the completion of the research, a summary of the study and a thank-you note for their participation were sent to each family.

Measures

The data was collected with the following instruments:

(1) *Siblings 10 years old and over* (N = 22, 8 siblings of CD: 2 boys and 6 girls, and 14 siblings of CWD: 5 boys and 9 girls) were administered the following self-reported measures:

- (1) *Self-concept Scale for Children Lipsitt* [SC] (Lipsitt 1958). This scale evaluates the child's representation of self and consists of 22 descriptive adjectives tapping children's feelings about themselves, which are responded to on 5-point scales. Three of these adjectives (items 10, 17, and 20) are considered negative while the rest are positive. The SC is one of the few self-report measures available that can be used with children from approximately the fourth grade up. Higher scores on the SC reflect higher self-concept. No data on internal consistency has been reported. However, two-week test/retest correlations range from 0.73 to 0.91 indicating good stability.
- (2) *Children's Loneliness Questionnaire* [CLQ] (Asher and Wheeler 1985). This test evaluates the feelings of loneliness of children over eight years old. The CLQ includes 16 primary items focused on children's feelings of loneliness, social adequacy versus inadequacy, and subjective estimations of peer status. Eight 'filler' items that ask about children's hobbies and other activities are included to help children feel more relaxed and open about expressing their feelings. CLQ has excellent internal consistency with an alpha of 0.90 for the 16 primary items. A one-year test/retest correlation of 0.55 suggests fairly good long-term stability.
- (3) *Hare Self-esteem Scale* [HSS] (Hare 1985). The HSS is a 30-item instrument that measures self-esteem of school-age children 10 years and above. The HSS consists of three 10-item subscales that are arena-specific (peer, school, and home) and presented as distinct units. The sum of all 30 items is viewed as a general self-esteem measure. No internal consistency data has been reported. Test/retest correlations indicate fair stability with three-month correlations ranging from 0.56 to 0.65 for the three subscales and 0.74 for the general scale.
- (4) *Family Adaptability Cohesion Evaluation Scale (FACES-III)* (Olson 1986). The test was used as a self-report measure of functioning. FACES-III is a 20 item, paper-and-pencil scale, which estimates the real and ideal type of family functioning. Each item has a 5-point response option. FACES-III is designed to be given twice. One form asks each member to describe the family; the other asks how each member would like the family to be. The scale is first completed with the instruction to family members to '*Describe your family now*'; then they are asked to respond to, '*Ideally, how would you like your family to be?*' The scales have been standardized and consist of two dimensions, cohesion and adaptability. Adaptation and cohesion are classified into different categories. This scale speaks of four levels of family cohesion: connected, separated, enmeshed, or disengaged. There are also four levels of family adaptability: very flexible, flexible, structured, rigid or chaotic. This creates 16 possible family systems: four balanced on dimensions, four extreme on both dimensions, and eight on mid-range. A family can be described according to the combination of two dimensions' categories

(e.g. flexible separated or rigidly disengaged). Established norms indicate that high scores on the two dimensions refer to balanced types of families, moderate scores to mid-range types, and low scores to extreme types of families. The FACES-III scale has been translated into Greek by V. Papageorgiou and G. Simos and it has been standardized and adapted to Greek by A. Bibou, A. Stogiannidou, V. Papageorgiou, and G. Kioseoglou (2002) as cited in Stalikas, Triliva, and Roussi 2002). The reliability of internal consistency (Cronbach's alpha) was 0.97 for cohesion and 0.96 for adaptability.

- (5) *Thematic Apperception Test* [TAT] (Murray 1943). It is a projective test addressed to individuals up to 10 years old.

(II) *Siblings aged 3–10* (N = 29, 9 siblings of CD: 5 boys and 4 girls; and 20 siblings of CWD: 10 boys and 10 girls) were administered:

- (1) *Children's Apperception Test* [CAT] (Bellak and Sorel-Bellak 1968). The administration of the projective tests TAT and CAT focused on the following areas:
 - (a) self-representation: how do the subjects describe themselves,
 - (b) the main needs such as need for: dependence/protection, acceptance, autonomy/independence, achievement/evolution, play, recognition,
 - (c) the nature of the anxiety (e.g. fear of physical harm, of lacking or losing love, and of being deserted),
 - (d) the attitudes: the main stances (passivity, impulsivity) and the roles siblings undertake,
 - (e) the representation of parental figures, and
 - (f) the representation of social environment.
- (2) *The test: Le dessin de famille* (Corman 1990). This projective test is administered as follows: the administrator asks from each child to *imagine a family and draw it*. With this command the children are free to present how they see their own family, and how they represent a family as they experience it, through additions, omissions, modifications that potentially they would wish for their own family. When the children finish the drawing, an interview follows. The interview includes the following questions:
 - (a) Could you tell me who these people are? What are they doing? Where are they?
 - (b) Of all persons, who is the best? Why?
 - (c) Who is least good? Why?
 - (d) Who is most happy? Why?
 - (e) Who is the least happy? Why?
 - (f) If you were in this family, who would you like to be? Why?
- (3) The following parameters were examined in the family design test:
 - (a) the main figures,
 - (b) the indicators of preferences/identifications,
 - (c) the person with whom the child identifies,
 - (d) the persons who are undervalued or rejected,
 - (e) whether the family described by the child corresponds to the real one or is an imaginary one (that he/she would prefer),

- (f) comparison between the real family and the one described by the child, and
- (g) the sibling rivalry.

(III) Parents: Semi-structured but focused interviews were conducted with parents (Cox 1994). Qualitative interviews are a rich means of gathering information from families (Beitin 2008). Individual rather than joint interviews were conducted to ensure that all parents had ample opportunity to express their individual perspectives. Interviews were conducted using an interview guide (which it was constructed by the researchers) that contained questions addressing how parents describe their children's relationship.

The interviews were semi-structured. The questions asked were the following:

- How would you describe the relationship between your children?
- What are, in your opinion, the feelings they have towards each other?
- How do your children spend their free time?
- Does x [name of the child with disabilities] feel closer to any sibling in particular?
- Do any of the siblings feel closer to x [child with disabilities]?
- Who helps with the care of the child with disabilities?

Procedure

All the research process took place in the family's home. The projective testing was done by two experienced clinicians. The children were individually tested and their stories were transcribed verbatim. After the tests had been administered, each of the stories was carefully studied. The stories were analyzed independently by three psychologists specialized on projective tests. There was complete agreement among the psychologists in 93% of the stories analysis. For the purpose of this research, we focused on the content of the stories and especially on the sibling's representation of parental figures (mother and father). We followed the idiographic interpretation which refers to evaluating the unique features of the subject's view of the world and relationships (Encyclopedia of Mental Disorders 2007).

Semi-structured interviews lasted approximately two hours with each sibling and parents. All interviews were tape recorded (with the consent of parents), transcribed verbatim, and analyzed using the method of content analysis. The key phrases were first obtained by frequency counts from the transcribed scripts. Then, these phrases were collected and formulated into several themes such as: basic characteristics of siblings' personality, sibling relationship, and representation of family and social environment. Interviews were broken down into siblings (girl/boy) and family (with/without a CD). Reliability was established by having an independent researcher (family therapist) who reviewed the scripts again and re-evaluated the themes formulated by the two researchers in order to make sure it was coherent with the scripts and to identify inconsistencies or omissions. An independent sample t-test criterion for two independent samples, the chi-square test, and the two-way ANOVA were performed on the quantitative data.

Findings

The findings of this study refer to the following areas: (1) the basic components of siblings' personality, (2) the representation of family (family functioning and parental figures) and of social environment, and (3) the sibling relationship.

It should be noted that all the statistically significant findings are reported both in the tables and in the text. Findings which are not statistically significant are only presented in the tables.

(1) *Basic components of siblings' personality*

(a) *Siblings' self-esteem*

A t-test was performed on the HSS and showed that there was no statistically significant difference between the two research groups [$t(58) = 1.126$, n.s.]. There were no significant differences in the means of the self-esteem of siblings of both research groups which declare high degree of self-esteem. For siblings of CD: $M = 73.6$, $SD = 6.46$ and for siblings of CWD: $\mu = 73.6$, $SD = 4.86$. Analysis of two-way ANOVA showed that: (a) gender does not have a statistically significant effect on the self-esteem of siblings of both experimental and control groups [$F(1, 18) = 0.36$, n.s.] and (b) the variable 'group' in which siblings belong does not have a statistically significant effect on their self-esteem [$F(1, 18) = 0.27$, n.s.].

(b) *Siblings' self-concept*

The administration of the SC scale showed no statistically significant difference between the research groups in the way they estimate self-concept [$t(58) = 1.126$, n.s.]. For siblings of CD self-concept presents $M = 84.4$, $SD = 6.41$ and siblings of SWD: $\mu = 84.4$, $SD = 5.26$. Both scorings correspond to a high level of self-esteem. According to the analysis of two-way ANOVA: (a) the gender of the sibling has a statistically significant effect on the self-concept: Females present higher scores independently to whether they are sisters of a sibling with or without disabilities [$F(1, 18) = 5.72$, $p = 0.028$], (b) the variable 'group' in which siblings belong does not have a statistically significant effect on their self-concept [$F(1, 18) = 0.669$ n.s.], and (c) the interaction between independent variables on the values of the dependent ones of the SC scale was not statistically significant, although sex seems to have a different effect when correlated to group (siblings of children with and without disabilities) for this particular scale [$F(1, 18) = 2.093$, n.s.].

The *self-concept* of siblings aged 3–10 in the projective tests is described as undifferentiated (33.3% for siblings of CD and 60.5% for siblings of CWD), safe (22.2% and 30%), unhappy (33.3% and 15%), and inciting (11.1%, a sibling of a CD). Other descriptions reported by siblings of SWD are: inadequate (5%), adequate (10%) and independent (5%). The siblings (in both groups) aged 10–22 years old describe themselves as safe (37.5% and 21.5%), independent (25% and 7.1%), and unsafe (12.5% and 7.1%). Other descriptions included adequate, lonely (12.5% for siblings of CD), and thoughtful and weak (21.5% and 14% for siblings of CWD).

(c) Feelings of loneliness

There was no statistically significant difference in the way both research groups experience *loneliness* [$t(20) = 1.135$, n.s.]. The scores of the CLQ showed that low levels of loneliness were experienced. The means do not present statistically significant differences: $M = 34.1$, $SD = 13.0$ for siblings of CD and $M = 29.8$, $SD = 4.85$ for siblings of CWD. A two-way ANOVA was performed on the CLQ scores and revealed that: (a) the sex of the sibling has statistically no significant effect on the degree of loneliness they experience [$F(1, 18) = 1.042$, n.s.], (b) the variable 'group' in which siblings belong did not have a statistically significant effect on the degree of loneliness [$F(1, 18) = 0.243$, n.s.], and (c) the interaction between independent variables on the values of the dependent ones of the CLQ was not statistically significant although sex seemed to have a different effect when correlated to each group in this particular questionnaire [$F(1, 18) = 1.052$, n.s.].

(d) Siblings' main needs

The *main needs of the siblings* of the age group 3–10 years are: need for dependence/protection (33.3% and 25%), for primary needs (for food and clothing) (11.1% and 55%), avoidance of fear (33.3% and 20%), and for acceptance and play (11.1% for siblings of CD). Siblings aged 10–22 mostly need dependence/protection (25% and 42.3%), avoidance of fear (12.5% and 14%), autonomy/independence (12.5% and 14%), and acceptance (12.5% and 14%). Other needs for siblings of CD are for primary needs and for achievement/evolution (12.5), while for siblings of CWD are for play and recognition (7.1%).

(e) Siblings' nature of anxiety

The content of *the siblings' anxieties* (aged 3–10 years) are the following: the loss of material goods (11.1% and 60%), the loss of love (11.1 and 20%), a possible attack (44.5% and 20%), of illness/death (22.2% for siblings of CD) and natural damage/destroy (11.1% for siblings of CD). The content of anxiety of siblings aged 10–22 years old is linked to: failure (50% and 28.6%), the loss of love (25% and 50%), the loss of material goods (12.5% and 14%), the illness/death (12.5% for siblings of CD) and the disapproval (7.1% for siblings of CWD).

(f) Siblings' attitudes

The *attitude of siblings* in families raising a CWD is more passive than in the siblings of CD. Specifically, the attitude of siblings aged 3–10 years is: passive (55.5% and 80%), impulsive/instinctive (22.2% and 15%), with realism (11.1% and 5%) and energetic (11.1% for siblings of CD). Siblings aged 10–22 years old present the following attitudes: passive (50% and 71.5%), impulsive/instinctive (25% and 14%), energetic (25% for siblings of CD), and with realism (7.1% for siblings of CWD).

(2) Representation of the family (family functioning and parental figures)**(a) Family functioning**

Data analysis concerning *how siblings (aged 10–22 years old) describe their family* showed that they graded the family functioning as follows:

- *Cohesion* as: disengaged (50%), connected (37%), separated (13%) (siblings of CD); and connected (42.3%), disconnected (35.7%), separated (21.5%) (siblings of CWD).
- *Adaptability* as: structured (62.5%), very flexible (25%), flexible (12.5%) (siblings of CD); and structured (64.3%), flexible (21.5%), rigid (7.1%), and very flexible (7.1%) (siblings of CWD).
- *Type of family* as: mid-range type of family (50%), balanced type (50%) (siblings of CD); and ‘balanced’ (57.2%), mid-range type of family (35.7%), extreme type (7.1%) (siblings of CWD).

Data analysis concerning *how siblings wish their family to be* showed that they graded the ideal family functioning as follows:

- *Cohesion* as: enmeshed (37.5%), connected (25%), separated (25%), disconnected (12.5%) (siblings of CD, $M = 3.8$, $SD = 1.98$); and connected (35.7%), separated (28.6%) enmeshed (21.5%), disconnected (14%) (siblings of CWD).
- *Adaptability* as: structured (50%), very flexible (12.5%), flexible (37.5%) (siblings of CD, $M = 4.50$, $SD = 1.69$); and structured (21.5%), flexible (28.6%), rigid (7.1%) and very flexible (42.3%) (siblings of CWD).
- *Type of family* as: balanced type (75%), mid-range type of family (25%) (siblings CD); and balanced (86%), mid-range type of family (14%) (siblings of CWD).

A two-way ANOVA was performed on the FACES-III scores in cohesion and revealed that: (a) the sex of the sibling has statistically no significant effect on the cohesion dimension that they experience [$F(1, 18) = 1.266$, n.s], (b) the variable ‘group’ in which siblings belong did not have a statistically significant effect on the above dimension [$F(1, 18) = 0.865$, n.s], and (c) the interaction between independent variables on the values of the dependent ones of the FACES relating to the total gradation of cohesion was not statistically significant [$F(1, 18) = 0.023$, n.s].

A two-way ANOVA was performed on the FACES scores relating to total gradation of the adaptability and revealed that: (a) the sex of the sibling has statistically no significant effect on the adaptability they experience [$F(1, 18) = 0.01$, n.s], (b) the variable ‘group’ in which siblings belong did not have a statistically significant effect on the adaptability [$F(1, 18) = 1.116$, n.s], and (c) the interaction between independent variables on the values of the dependent ones of the FACES was not statistically significant although gender seemed to have a different effect when correlated to each group in this particular dimension [$F(1, 18) = 0.588$, n.s]. A t-test was performed on the total number of siblings relating the type of family (real and ideal), and showed that there was statistically significant difference between siblings of CD and those of CWD concerning the gradation between the real and ideal family functioning [$t(21) = -3.564$, $p = 0.002$]. However, although there is

significant difference, the means (4.2 and 5.2) and SDs (1.32 and 1.31) correspond to the same family type: balanced.

Additionally, the chi-square analysis in the *le test de dessin de famille* showed that there is no statistically significant difference in the types of families drawn by siblings of both research groups [$\chi^2(1) = 0.235$, n.s.]. The percentage of siblings (in both groups) who designed an imaginary family was higher (65%) compared to those of the real one (55.5%). Higher percentage of siblings of CD draw the real family (44.5%) compared to siblings of CWD (35.7%).

(b) *Representations of parental figures*

Siblings aged 3–10 years old describe mainly *the maternal figure* as follows: Indifferent (11.1% for siblings of CWD and 35% for siblings of SCD), overprotective (44.5% and 5%), and passive (11.1% and 20%). Siblings aged 10–22 years old represent the maternal figure mainly as indifferent (12.5% and 35.7%), overprotective (25% and 21.5%), authoritarian/domineering and sad (25% only for siblings of CD), and passive (21.5%, only for siblings of CWD) (Table 2).

Siblings of both groups (aged 3–10 years) describe the *paternal figure* as indifferent (33.3% and 35%), overprotective (44.5% and 10%), powerful/strong (11.1% and 20%), and hostile (11.1% and 15%). Siblings of CWD report as well as the following: cooperative (10%), happy (5%), and friendly (5%). Siblings' aged group 11–22 years represent paternal figure as: indifferent (37.5% and 28.6%), authoritarian/domineering (25% and 28.6%), tired (25% and 14%), and overprotective (12.5% and 7.1%). Other representations are: happy, friendly, and without ambition (7.1% for siblings of CWD).

The *main figures* drawn by siblings of CD (aged 3–10 years) are: the mother (44.5%), the father, the child itself, the sibling with disability, a friend, and an imagery sibling (11.1% for the previous parameters). Siblings of CWD draw as main figure: themselves (30%), the mother (25%), the father (20%), the siblings (10%), and a friend (5%).

Table 2. Maternal figure

Maternal figure	Siblings aged group 3–10 years		Siblings aged group 10–22 years	
	Siblings of CD N = 9	Siblings of CWD N = 20	Siblings of CD N = 8	Siblings of CWD N = 14
Indifferent	1 (11.1%)	7 (35%)	1 (12.5%)	5 (35.7%)
Overprotective	4 (44.5%)	1 (5%)	2 (25%)	3 (21.5%)
Passive	1 (11.1%)	4 (20%)	–	3 (21.5%)
Cooperative/Helpful	–	6 (30%)	–	1 (7.1%)
Authoritarian/ Domineering	1 (11.1%)	1 (5%)	2 (25%)	–
Powerful/Strong	1 (11.1%)	–	1 (12.5%)	–
Energetic	–	1 (5%)	–	1 (7.1%)
Sad	–	–	2 (25%)	–
Tired	1 (11.1%)	–	–	–
Without ambitions	–	–	–	1 (7.1%)
Total	9 (100%)	20 (100%)	8 (100%)	14 (100%)

Table 3. Conception of social environment

Social environment	Siblings aged group 3–10 years		Siblings aged group 10–22 years	
	Siblings of CD N = 9	Siblings of CWD N = 20	Siblings of CD N = 8	Siblings of CWD N = 14
Indifferent	3 (33.3%)	13 (65%)	2 (25%)	7 (50.5%)
Hostile	5 (55.6%)	5 (25%)	4 (50%)	3 (21.5%)
Friendly	–	1 (5%)	–	2 (14%)
Passive	1 (11.1%)	–	1 (12.5%)	2 (14%)
Happy	–	1 (5%)	–	–
Sad	–	–	1 (12.5%)	–
Total	9 (100%)	20 (100%)	8 (100%)	14 (100%)

(c) Representations of social environment

Social environment is experienced mainly as hostile by siblings aged 3–10 years old (55.6% in families raising a CD and 25% in families raising CWD) and indifferent (33.3% and 65%). Siblings aged 10–22 years old experience social environment mostly as hostile (50% and 21.5%), indifferent (25% and 50.5%), and passive (12.5% and 14%) (Table 3).

(3) Siblings' relationship

Results suggest that there is a significant difference in the rate of *rivalry* between siblings (of CD or CWD). Due to the importance of this finding and given the fact that the number of siblings of CD was small (N = 9), the chi-square test was used and a statistically important difference was found between the two groups, as far as sibling rivalry is concerned [$\chi^2(1) = 4.488$, $p = 0.034$]. The percentage of siblings of CD who experience sibling rivalry was 55.5%, while the corresponding percentage of siblings of CWD was 90%.

Sibling rivalry as reported by parents seems to be much higher in the families of children without disabilities (Table 4). As typically expressed by a father of a CD,

Table 4. Siblings' relationship as reported by parents

Siblings' relationship	Father of a CD N = 20	Mother of a CD N = 20	Mother of CWD N = 20	Mother of CWD N = 20
Protective relationship	7 (35%)	7 (35%)	3 (15%)	4 (20%)
Relationship of ambivalence: love and rivalry	6 (30%)	6 (30%)	5 (25%)	6 (30%)
Rivalry	–	1 (5%)	8 (40%)	7 (35%)
Competitive relationship	1 (5%)	1 (5%)	4 (20%)	3 (15%)
Distance from the child with disabilities	3 (15%)	3 (15%)	–	–
Siblings in parental role/ Parentified	2 (10%)	1 (5%)	–	–
Complaints' expression for their neglect/Infantilized	1 (5%)	1 (5%)	–	–
Total	20 (100%)	20 (100%)	20 (100%)	20 (100%)

'...they seem to be in a continuous rivalry. The little one feels very jealous towards the older one'. Also, siblings of CD are mainly *protective* towards their brother/sister, while in families with CWD the percentage of protective behaviour of siblings is much lower. A father of a CD reports: 'They get on quite well, the elder ones [siblings] love him [CD], take care of him. Luckily, they have a very good relationship'. A mother with a child with disabilities says: 'I believe they are getting on very well. She [CD], as she is younger, sees her brother as if he were God. He is particularly attached to her, too'. An approximately equal percentage of parents describe the siblings' relationship as an ambivalent one: between love and rivalry or a relation of rivalry. A mother with a CD reports: 'I think that the elder ones feel annoyed by the little one [CD]. At the same time I feel they love her... but there are times when they reprimand her because she doesn't understand how much she annoys them'. A father with a CD says: 'You know... they sometimes fight... then they are together again... loving each other again. You know, like all children do'. Another kind of sibling interaction that parents (mainly with CWD) report is that of competitive relationship.

In the semi-structured interviews of parents of CD, three dimensions of the siblings' interactions may be discerned:

- *Distanced*: Siblings are not involved in the care of the CD (15%). Their interaction with their sibling with disabilities is limited and they seem to adopt a distanced attitude. Siblings seem to impose strict boundaries towards the CD. Parents feel that the CD is excluded, while sibling's behaviour is interpreted as: '...they keep a distance from their brother as if it were not their problem'. A mother with a CD reports: 'They [siblings]... see Maria [CD]... as if she were a toy. Sometimes they will play with her for a little while and then they will be absorbed with their own interests and friends. They do not spend time with her, not really... while she... she really longs to be with them. She is so happy when they are around and spend time with her'.
- *Parentified*: Siblings (mainly female ones) are assigned a parental role. A mother of a CD says: 'Helen takes care of the little one [CD] a lot. When I am at work she is the one who takes care of all his needs. She is really doing a great job'. A father of a CD reports: 'The older one [sibling] takes care of the little one [sister with disabilities]. She is like a second mother to her. Not only taking care of her but also protecting her'.
- *Infantilized*: Siblings present regressed, dependent behaviour. This infantile behaviour is related to the fact that they feel excluded from parental love. A mother reports: 'The little one is constantly complaining. He always tells me that I do not love him enough, that I do not pay enough attention to him and that I love John [CD] much more'.

Discussion

According to the findings of the study there are no differences in the self-esteem of siblings of both research groups. This is consistent with findings of other studies (Lobato 1990; Hannah and Midlarsky 1999; Auletta and DeRossa 1991; Argirakouli and Zafeiropoulou 2003).

There were no differences in the self-concept of siblings relating to age and family. Both research groups seem to share a common *self-concept*: Siblings represent themselves mainly as undifferentiated, unhappy, and safe.

Similarly, there were no statistically significant differences as far as *feelings of loneliness* are concerned. This finding is consistent with those of other studies (Kaminsky and Dewey 2002) but not consistent with others which suggest that the existence of a CD has a negative effect on siblings (Crnic, Friedrich, and Greenberg 1983; Byrne and Cunningham 1985).

The main needs for siblings aged 3–10 in families without a CD are centred around the need of material goods while for the siblings in families with a CD is centred around the avoidance of fear. This finding indicates that children in families raising a CD may experience more anxiety compared to families raising CWD. Siblings aged 10–22 of both research groups share the common need for protection and dependence. This finding suggests that the existence of a CD does not affect the main needs of the elder siblings.

The differences in the nature of *anxieties* of siblings are the following: Siblings aged 3–10 in families with CD are anxious about a possible attack and an illness or death, while siblings of CWD are anxious about losing material goods and love. Young siblings of CD seem to experience a greater number of stressors. This finding is consistent with those of other studies (Baker et al. 1997; Hodapp, Fidler, and Smith 1998; Dyson 2001). They seem to experience higher levels of stress and feel more threatened (fear of illness or death). They also seem to project this threat into the external reality (in the form of a possible attack). This interpretation is further strengthened by the finding that social environment is experienced by CD as hostile. Siblings (aged 10–22) of families with a CD seem to experience higher levels of anxiety associated with failure. This possibly indicates that siblings of children with disabilities are in a ‘homeostatic’ or ‘reparative’ role: parental expectations for success which cannot be fulfilled by the child with disabilities are bound to be oriented towards the siblings who are not faced with the limitations imposed by the condition of the disability.

The attitude of siblings in the projective test appears to be much more passive for the siblings of CWD compared to siblings of CD. This finding suggests that siblings are assigned and perform opposite roles to the CD. This can possibly be correlated with the fact that some siblings are assigned parental roles.

The representation of family functioning showed that there was no a statistically significant difference between the two research groups. This finding is consistent with other studies which support that there are no differences in family functioning among families raising CD or CWD (Dyson 1997; Lamb and Billings 1997; Magil-Evans et al. 2001). All siblings estimate that their family is balanced and they equally wish it to be so. Therefore, siblings estimate and wish their family to function in the ‘*healthy zone*’ according to the revised edition of Olson Circumplex Model (Olson 1991).

The predominant figure in the family drawings of the siblings of CD (aged 3–10) is the mother while siblings of CWD present as main figures, themselves, the mother, and the father. Parental figures, as found in the projective tests, differ as follows: The maternal figure is described mainly as overprotective. There is much less reference to the maternal figure as authoritarian, powerful, indifferent or sad. The maternal figure of siblings of CWD appears mainly as indifferent, cooperative, passive and overprotective. The presentation of the paternal figure is described by the majority of

the children as indifferent. Thus, the mother appears to be a highly invested figure, experienced to a much higher degree as overprotective in the families raising a CD compared to families of CWD. This finding can be related to the condition of the disability (McKeith 1973; Dale 1996). The father is experienced as indifferent by siblings of all families. This finding may be related to the role of father in the Greek family. In Greek families, the father's role in the upbringing of children is peripheral. On the contrary, the mother is expected to have the main responsibility for the upbringing of children (Georgas 1999).

Finally, the *social environment* is experienced mainly as hostile by siblings of CD of both age groups. This finding is not consistent with those of other studies (McKinney and Peterson 1987; Sloper et al. 1991; Sloper and Turner 1993; Dale 1996). This may be explained by the fact that Greek families with a CD have limited networks of support and are marginalized by Greek society (Antzakli-Xanthopoulou 2003; Tsibidaki 2007; Tsibidaki and Tsamparli 2007). Their main networks of support are restricted to family of origin, friends, religion, other families with a CD and specialists. The families raising a CD do not feel sufficiently supported by social structures (school, intervention centres). This is due to the fact that the geographically remote regions of Greece suffer from a lack of infrastructure to support these families. Therefore, these families feel anxiety and anger because of the lack of social support (services, specialized personnel) and discriminatory practices. Siblings (of both age groups) in the families raising CWD experience social environment as indifferent.

The findings of the study related to sibling's relationship (as reported by parents) suggest that siblings of CD have ambivalent feelings and, at the same time, they are protective towards their brother/sister. The reactions of siblings, as reported by parents in their semi-structured interviews, can be categorized as follows:

- *Siblings are distanced.* Their involvement with their brother/sister with disabilities is very limited. A possible interpretation of the sibling's reaction is that by imposing clear and strict boundaries they safeguard their autonomy by safeguarding their own vital space. This attitude may partly be due to the difference in age. Another possible interpretation is that the condition of the disability could be experienced as a source of anxiety and therefore threatening to the autonomy of the sibling due to the excessive demands for care imposed by its existence. Further research is necessary in order to bring to light this interpretation.
- *Siblings are parentified.* This parentification is associated with the sex, since females are usually in this role. Furthermore females are the main providers of care in the Greek family.
- *Sibling's behaviour can be qualified as 'needy'.* The continuous complaining can be related to regressive behaviour. Their dependent behaviour is possibly related either to the fact that they feel frustrated and threatened because they feel they do not receive enough attention and care from parents. It appears, therefore, that siblings of children with disabilities may relate in different ways to their brother/sister. This finding is consistent to those of other studies (Stoneman, Brody, and Davis 2002).

An important finding (projective tests) of the study is that there is a statistically significant difference in *sibling rivalry*. Siblings of CWD present higher levels of

rivalry compared to siblings of CD. Also, a greater percentage of parents of CWD refer to the rivalry of their children while this reference by parents of CD is lower. This finding is consistent with those of other studies (Nixon and Cummings 1991; Stoneman 2001). A possible interpretation of this finding is that the condition of the disability makes it more difficult for siblings to express feelings of rivalry. They seem to either regress to needy behaviour, to take up parental roles, or to keep at a distance. Open sibling rivalry presupposes two rivals perceived as 'equally' strong. The child with disabilities is often experienced as the 'weak' member of the family.

Limitations

There are limitations associated with this study, and therefore results should be interpreted with appropriate caution. First, the sample was heterogeneous as far as the age group of siblings is concerned. This is so because in the Greek family the majority of children live in the family home till very late (usually they leave when they get married). Second, the study's sample inclusion criteria indicated that only one child in the family was diagnosed with severe disabilities; results may vary if more than one member has disabilities. Therefore, generalizing the results to other families with siblings of CD should be approached cautiously, and replication studies are encouraged. Third, most of the contingency tables that appear here have a large number of expected frequencies below five. Even though it is acceptable in larger contingency tables to have up to 20% of expected frequencies below five, the result is a loss of statistical power (Field 2005). Therefore, the chi-square tests performed on the data in the tables are not reported because they may not be accurate. Equally, it is worth commented that due to small Ns our non-significant findings may not be conclusive. Finally, alternative instruments could be used. Specifically, because this study was mostly based on qualitative data (projective tests, self-perception tests), a quantitative study with siblings and especially other data instruments (e.g. siblings' relation questionnaires or interviews) is needed.

Conclusions and implications for practice

The findings of the present study suggest that siblings of CD are not at risk as far as their self-esteem, self-concept, feelings of loneliness, and representation of family functioning is concerned. Still, they seem to be at risk associated with the following findings: The fact that they have difficulties in expressing rivalry means that they are not in contact with their hostile feelings and therefore they may face difficulties in managing the 'normal' expression of hostility. Equally, the fact that they present regressive (needy) behaviour or take up parental roles or keep at a distance may hinder their maturational process towards individuation. The family practitioners, clinicians, and educators will have to take into consideration the above findings when working with a family raising a CD. Finally, future research efforts should be directed to the area of siblings and document further the already expressed position that siblings should be involved in the provision and treatment of the CD.

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